SOUTHERN ILLINOIS UNIVERSITY

WEED CONTROL ANNUAL REPORTS

2013

DEPARTMENT OF PLANT, SOIL AND AGRICULTURAL SYSTEMS

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CARBONDALE AGRONOMY RESEARCH CENTER

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GENERAL STATEMENT

These reports are published for the purpose of providing current information to industry collaborators, colleagues at other universities, and other people interested in weed science conducted at Southern Illinois University.

Results from these studies are intended as a source of information on the performance of commercially available and experimental herbicides, safeners, adjuvants, etc. It is not intended to serve as a recommendation or endorsement of specific practices or products. Current recommendations for weed control in Illinois are available from University of Illinois Extension.

Data or information in these reports is not for publication or reproduction without the consent of the authors. If you have any questions or suggestions for improving our data reporting or discover errors, we would appreciate your comments.

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The following firms provided financial support for the conduct of these studies for which we are sincerely grateful. Without this support, it would be impossible to conduct a meaningful program in weed control or other aspects of crop production.

AMVAC

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Asgrow

BASF Corp.

Bayer CropScience

Cheminova

Croda

DeKalb

Dow AgroSciences

Drexel

DuPont Agr. Products

Exacto

FMC Corp.

Helena Chemical Co.

Illinois Soybean Association (ISA)

ISK Biosciences

Makhteshim Agan (MANA)

Monsanto

North Central Soybean Research Program

Nufarm Americas Inc.

Pioneer Hi-Bred International

Precision Labs

Sipcam

Syngenta

United Agri-Products/ Loveland

United Soybean Board (USB)

United Suppliers

Valent U.S.A.

Wilbur-Ellis

Winfield Solutions

List of Studies

Adjuvant Studies, Corn or Soybean

United Suppliers Water Conditioners with Glyphosate. 1
Winfield Solutions - AMS Replacements with Glyphosate. 7
Winfield Solutions - Adjuvants with Sterling Blue and Glyphosate. 14
Winfield Solutions - Adjuvants with Rugged and Glyphosate. 20
Glyphosate plus Laudis Adjuvant Evaluation. 26
Adjuvant Evaluation with Clethodim and Glyphosate. 33

No-Till Corn Weed Control Studies

DuPont Crop Protection Demonstration in Corn. 40
Wilbur-Ellis No-Till Corn Burndown Programs. 62
Fierce and Harrow in No-Till Corn. 70

No-Till Soybean Weed Control Studies

Wilbur-Ellis No-Till Soybean Burndown Programs. 79
DPX-R5W13 Burndown and Residual in No-Till Soybean. 85
Evaluation of Crusher Applied Preplant in No-Till Soybean. 93

Corn, Tilled Weed Control Studies

General Corn Herbicide Comparison. 99
DuPont Corn Programs. 117
Loveland Herbicide Evaluation in Corn. 122
Impact Sequential and One-Pass Programs. 130
Instigate Programs in Corn. 140
Broadleaf Weed Control with F9387 in Corn. 147

Soybean, Tilled Weed Control Studies

Weed Control in Liberty Link Soybeans. 155
Marvel Evaluation in Soybean. 169
Duration of Weed Control from Residual Herbicides. 183
Statement Preemergence in Soybean. 191
Preemergence Weed Control in Soybean with Sipcam Products - Site 2. 199
Valor and Fierce Evaluations in Soybean. 206
DuPont Soybean Programs. 214
PRE/POST Programs in Soybean - Syngenta, Dow. 226
Zidua Combinations with Dupont Herbicides in Soybean. 233
Weed Control with MANA Soybean Programs. 241
MANA Postemergence Concepts in Soybean. 258
MANA Preemergence Concepts in Soybeans. 271
Potential for Soybean Injury from Metsulfuron Application in Wheat. 286
Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1. 301
Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15. 320

Insecticides and Fungicides

Double-Crop Soybean Fungicide and Insecticide Demonstration - Dupont. 339

Wheat Fungicides and Weed Control

DuPont Fungicides in Winter Wheat - Demonstration. 344
Evaluation of Metsulfuron for Weed Control in Wheat. 351
Annual Bluegrass Control in Wheat. 358

Glyphosate-Resistant Marestail, Waterhemp or Palmer Amaranth Control

General Evaluation of Fall Herbicicdes in Soybean. 363
Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean. 373
General Evaluation of Fall Herbicides in Corn. 390
Horseweed Control from Authority Combinations. 400
Winfield Solutions Burndown Weed Control. 409
Fierce plus Dicamba or 2,4-D Burndown Programs. 414
BASF Burndown Programs in Soybean. 422
Preemergence Weed Control in Soybean with Sipcam Products - Site 1. 430
General Evaluation of Soil Residual Herbicides in Soybean. 436
General Evaluation of Soil Residual Herbicides in Soybean - Palmer. 441
General Soybean Programs. 446
Glyphosate-Resistant Weed Programs in Soybean - Syngenta. 458
Authority Product Understanding. 470
BASF Soybean Residual Programs. 482
Soybean Response to Glyphosate Tank-Mixtures: Weed Control. 490
Bayer Waterhemp Control Systems. 504
Surestart Combinations Applied Early Postemergence in Corn. 510
Anthem Tank Mixtures in Corn. 520
Impact Tank-Mixes. 531
F9387 Tankmixtures in Corn. 537
BASF Two-Pass Weed Control in Corn. 547
Cobra versus Competitive Programs. 553
Herbicide Response Screen. 559
Palmer Amaranth Control with MANA Soybean Programs. 565
Preemergence Palmer Amaranth Control with Fierce. 575
Postemergence Palmer Amaranth Control with Cobra. 580
Palmer Amaranth Control with Statement Postemergence. 585
Winfield Solutions Adjuvant by Nozzle Evaluation with Dicamba. 592
Winfield Solutions Adjuvant by Nozzle Evaluation with Acifluorfen. 597
Winfield Solutions Adjuvant by Nozzle Evaluation with Fomesafen. 603
Adjuvant Evaluation for Glyphosate and PPO Herbicides on Glyphosate-Resistant Waterhemp. . 609
Sharpen with Experimental United Suppliers Adjuvants. 617
Adjuvants for Enhanced Roundup / Clarity Efficacy in Fall Burndown. 625
Adjuvants for Enhanced Roundup / Sharpen Efficacy in Fall Burndown. 630

Indexes

Index of Weeds by Common Name 635
Index of Weeds by Five-Letter Code 636
Index of Herbicides, Fungicides, Insecticides, Foliar Nutrients and Soil Amendments 637
Index of Adjuvants 640
Index of Other Experimental Details 641
Index of Crops 641
Index of Trial ID 642
Index of Company Submitted Protocols 643

Adjuvant Studies, Corn or Soybean

Southern Illinois University

United Suppliers Water Conditioners with Glyphosate.

Trial ID: 13-10B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-13-13
Completion Date: 8-29-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Determine the influence of water conditioners on the efficacy of glyphosate.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 7-13-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 3 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 4 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	NON-CROP	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 100 LB/A

Soil Description

% OM: 2.8 **Texture:** SIL silt loam
pH: 6.4 **Soil Name:** Pierron
CEC: 9

Additional Measured Elements

Element	Quantity	Unit
P1	80	lb/A
K	335	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

United Suppliers Water Conditioners with Glyphosate.

Trial ID: 13-10B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-30-13					7	DAY	61	86	F
2.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
3.	7-7-13					7	DAY	62	94	F
4.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
5.	7-14-13					7	DAY	64	94	F
6.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
7.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
8.	7-21-13					7	DAY	56	91	F
9.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
10.	7-28-13					7	DAY	52	87	F
11.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
12.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
13.	8-4-13					7	DAY	62	87	F
14.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
15.	8-11-13					7	DAY	54	85	F
16.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
17.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
18.	8-18-13					7	DAY	61	91	F

Application Description

	A
Application Date:	8-1-13
Appl. Start Time:	8:00
Appl. Stop Time:	9:00
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	75 F
% Relative Humidity:	82
Wind Velocity, Unit:	3 MPH
Wind Direction:	NW
Dew Presence (Y/N):	Y
Soil Temperature, Unit:	74 F
Soil Moisture:	NORMAL
% Cloud Cover:	0
Next Moisture Occurred On:	8-2-13
Time to Next Moisture, Unit:	35 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	V2
Stage Minimum, Percent:	V2
Stage Maximum, Percent:	V2
Height, Unit:	5 IN
Height Minimum, Maximum:	4 5

United Suppliers Water Conditioners with Glyphosate.

Trial ID: 13-10B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	SETFA W
Stage Majority, Percent:	4
Stage Minimum, Percent:	1
Stage Maximum, Percent:	6
Height, Unit:	4 IN
Height Minimum, Maximum:	1 6
Density, Unit:	1 FT2
Pest 2 Code, Type, Scale:	ABUTH W
Stage Majority, Percent:	4
Stage Minimum, Percent:	COTY
Stage Maximum, Percent:	6
Height, Unit:	3.5 IN
Height Minimum, Maximum:	0.5 6
Density, Unit:	6 FT2
Pest 3 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	6
Stage Minimum, Percent:	COTY
Stage Maximum, Percent:	12
Height, Unit:	4 IN
Height Minimum, Maximum:	0.5 6
Density, Unit:	1 FT2
Pest 4 Code, Type, Scale:	IPOHE W
Stage Majority, Percent:	8
Stage Minimum, Percent:	COTY
Stage Maximum, Percent:	20
Height, Unit:	4 IN
Height Minimum, Maximum:	0.5 8
Density, Unit:	1 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	40 PSI
Nozzle Type:	TTI
Nozzle Size:	110015
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	10 GPA

United Suppliers Water Conditioners with Glyphosate.

Trial ID: 13-10B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 8-15-13 Injury Percent 14 DA-A	GLXMA 8-29-13 Injury Percent 28 DA-A	SETFA 8-15-13 Control Percent 14 DA-A	SETFA 8-29-13 Control Percent 28 DA-A	ABUTH 8-15-13 Control Percent 14 DA-A	ABUTH 8-29-13 Control Percent 28 DA-A
1	DEIONIZED WATER									0 a	0 a	96 ab	97 ab	63 c	58 de
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A						
2	DEIONIZED WATER									0 a	0 a	97 a	97 ab	57 cd	48 ef
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A						
	NIS	100	SL	0.25	% v/v	1	qt/100 gal	4-6"W	A						
3	HARD WATER (1000 PPM)									0 a	0 a	94 b	94 bc	38 e	32 h
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A						
4	HARD WATER (1000 PPM)									0 a	0 a	97 a	97 ab	40 e	37 gh
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A						
	NIS	100	SL	0.25	% v/v	1	qt/100 gal	4-6"W	A						
5	HARD WATER (1000 PPM)									0 a	0 a	97 a	97 ab	83 b	86 ab
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A						
	NIS	100	SL	0.25	% v/v	1	qt/100 gal	4-6"W	A						
	AMS	100	SL	2.5	% v/v	2.5	gal/100 gal	4-6"W	A						
6	HARD WATER (1000 PPM)									0 a	0 a	96 ab	96 ab	82 b	83 bc
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A						
	UAD-1309	100	SL	2	% v/v	2	gal/100 gal	4-6"W	A						
7	HARD WATER (1000 PPM)									0 a	0 a	97 a	98 a	94 a	95 a
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A						
	UAD-1318	100	SL	2	% v/v	2	gal/100 gal	4-6"W	A						
8	HARD WATER (1000 PPM)									0 a	0 a	96 ab	96 ab	50 d	45 fg
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A						
	UAD-1326	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
9	HARD WATER (1000 PPM)									0 a	0 a	91 c	91 c	53 d	45 fg
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A						
	UAD-1349	100	SL	0.25	% v/v	1	qt/100 gal	4-6"W	A						
10	HARD WATER (1000 PPM)									0 a	0 a	96 ab	96 ab	59 cd	53 def
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A						
	UAD-1350	100	SL	0.25	% v/v	1	qt/100 gal	4-6"W	A						
11	HARD WATER (1000 PPM)									0 a	0 a	96 ab	95 ab	63 c	60 d
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A						
	UAD-1352	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
12	HARD WATER (1000 PPM)									0 a	0 a	97 a	96 ab	84 ab	81 bc
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A						
	UAD-1313	100	SL	0.75	% v/v	3	qt/100 gal	4-6"W	A						
13	HARD WATER (1000 PPM)									0 a	0 a	98 a	98 a	83 b	75 c
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A						
	UAD-1355	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
14	NONTREATED									0 a	0 a	0 d	0 d	0 f	0 i
	LSD (P=.05)									0.0	0.0	2.6	3.0	9.6	11.0
	Standard Deviation									0.0	0.0	1.6	1.8	5.7	6.5
	CV									0.0	0.0	1.76	2.01	9.4	11.48
	Replicate F									0.000	0.000	3.729	3.583	3.521	0.469
	Replicate Prob(F)									1.0000	1.0000	0.0377	0.0422	0.0443	0.6311
	Treatment F									0.000	0.000	801.833	616.552	56.047	46.130
	Treatment Prob(F)									1.0000	1.0000	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

United Suppliers Water Conditioners with Glyphosate.

Trial ID: 13-10B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 8-15-13 Control Percent 14 DA-A	AMATA 8-29-13 Control Percent 28 DA-A	IPOHE 8-15-13 Control Percent 14 DA-A	IPOHE 8-29-13 Control Percent 28 DA-A
1	DEIONIZED WATER												
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A	60 de	63 ef	54 c	55 c
2	DEIONIZED WATER									69 cd	70 c-f	68 b	68 ab
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A				
	NIS	100	SL	0.25	% v/v	1	qt/100 gal	4-6"W	A				
3	HARD WATER (1000 PPM)									55 e	50 g	55 c	55 c
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A				
4	HARD WATER (1000 PPM)									60 de	62 f	68 b	69 ab
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A				
	NIS	100	SL	0.25	% v/v	1	qt/100 gal	4-6"W	A				
5	HARD WATER (1000 PPM)									80 b	80 bc	68 b	71 ab
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A				
	NIS	100	SL	0.25	% v/v	1	qt/100 gal	4-6"W	A				
	AMS	100	SL	2.5	% v/v	2.5	gal/100 gal	4-6"W	A				
6	HARD WATER (1000 PPM)									78 bc	74 b-e	68 b	70 ab
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A				
	UAD-1309	100	SL	2	% v/v	2	gal/100 gal	4-6"W	A				
7	HARD WATER (1000 PPM)									92 a	92 a	82 a	80 a
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A				
	UAD-1318	100	SL	2	% v/v	2	gal/100 gal	4-6"W	A				
8	HARD WATER (1000 PPM)									60 de	50 g	64 bc	68 b
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A				
	UAD-1326	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A				
9	HARD WATER (1000 PPM)									62 de	50 g	62 bc	60 bc
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A				
	UAD-1349	100	SL	0.25	% v/v	1	qt/100 gal	4-6"W	A				
10	HARD WATER (1000 PPM)									67 d	60 fg	63 bc	65 bc
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A				
	UAD-1350	100	SL	0.25	% v/v	1	qt/100 gal	4-6"W	A				
11	HARD WATER (1000 PPM)									67 d	67 def	68 b	62 bc
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A				
	UAD-1352	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A				
12	HARD WATER (1000 PPM)									78 bc	77 bcd	62 bc	60 bc
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A				
	UAD-1313	100	SL	0.75	% v/v	3	qt/100 gal	4-6"W	A				
13	HARD WATER (1000 PPM)									78 bc	82 ab	70 b	72 ab
	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	4-6"W	A				
	UAD-1355	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A				
14	NONTREATED									0 f	0 h	0 d	0 d
LSD (P=.05)										9.6	10.9	11.6	11.8
Standard Deviation										5.7	6.5	6.9	7.1
CV										8.85	10.36	11.35	11.56
Replicate F										2.418	0.700	4.697	1.909
Replicate Prob(F)										0.1089	0.5056	0.0181	0.1684
Treatment F										41.545	34.811	22.178	21.461
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

United Suppliers Water Conditioners with Glyphosate.

Trial ID: 13-10B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: United Suppliers (AD 13002).
2. Ratings: CI/WC at 14 and 28 DA-A.
3. Mixing instructions, Use hardwater for most treatments, deionized water for the rest.
HARD WATER (1000 PPM) = Ca + Mg hard water.
HARD WATER MIXING INSTRUCTIONS:
To make 3 gallons of 1000 ppm Ca + Mg hard water use the formula:
13.45 g of $CaCl_2$-$2H_2O$ (Calcium Chloride Dihydrate)
4.62 g of $MgCl_2$-$6H_20$ (Magnesium Chloride Hexahydrate)
3 gallons distilled water
Be sure to use the dihydrate form of the calcium chloride and the hexahydrate form of the magnesium chloride.
Be sure to stir in the salts to insure that the solutions are all homogeneous before use.
4. Spraying instructions, must use TTI110015 tips and 40 PSI.
5. No yield.

Winfield Solutions - AMS Replacements with Glyphosate.

Trial ID: 13-10A-E100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-13-13
Completion Date: 8-28-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the efficacy of experimental adjuvant replacements for ammonium sulfate with Touchdown Hi-Tech.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 7-13-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 2 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 3 Type: W **Code:** SETFA Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 4 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	NON-CROP	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 100 LB/A

Soil Description

% OM: 2.8 **Texture:** SIL silt loam
pH: 6.5 **Soil Name:** Pierron
CEC: 9

Additional Measured Elements

Element	Quantity	Unit
P1	87	lb/A
K	340	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Winfield Solutions - AMS Replacements with Glyphosate.

Trial ID: 13-10A-E100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-9-13					7	DAY	59	94	F
3.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
4.	6-16-13					7	DAY	61	90	F
5.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
6.	6-23-13					7	DAY	64	92	F
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
9.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
10.	6-30-13					7	DAY	61	86	F
11.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
12.	7-7-13					7	DAY	62	94	F
13.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
14.	7-14-13					7	DAY	64	94	F
15.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
16.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
17.	7-21-13					7	DAY	56	91	F
18.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
19.	7-28-13					7	DAY	52	87	F
20.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
21.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
22.	8-4-13					7	DAY	62	87	F
23.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
24.	8-11-13					7	DAY	54	85	F
25.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
26.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
27.	8-18-13					7	DAY	61	91	F

Application Description

	A
Application Date:	7-31-13
Appl. Start Time:	20:00
Appl. Stop Time:	20:45
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	LXF
Air Temperature, Unit:	72 F
% Relative Humidity:	100
Wind Velocity, Unit:	6 MPH
Wind Direction:	N
Dew Presence (Y/N):	N
Soil Temperature, Unit:	75 F
Soil Moisture:	NORMAL
% Cloud Cover:	75
Next Moisture Occurred On:	8-2-13
Time to Next Moisture, Unit:	2 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	V2
Stage Minimum, Percent:	V2
Stage Maximum, Percent:	V2
Height, Unit:	6 IN
Height Minimum, Maximum:	4 6

Winfield Solutions - AMS Replacements with Glyphosate.

Trial ID: 13-10A-E100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ABUTH W
Stage Majority, Percent:	6
Stage Minimum, Percent:	COTY
Stage Maximum, Percent:	6
Height, Unit:	4 IN
Height Minimum, Maximum:	1 5
Density, Unit:	2 FT2
Pest 2 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	10
Stage Minimum, Percent:	COTY
Stage Maximum, Percent:	16
Height, Unit:	4 IN
Height Minimum, Maximum:	0.5 6
Density, Unit:	5 FT2
Pest 3 Code, Type, Scale:	SETFA W
Stage Majority, Percent:	4
Stage Minimum, Percent:	1
Stage Maximum, Percent:	6
Height, Unit:	4 IN
Height Minimum, Maximum:	1 6
Density, Unit:	5 FT2
Pest 4 Code, Type, Scale:	IPOHE W
Stage Majority, Percent:	10
Stage Minimum, Percent:	COTY
Stage Maximum, Percent:	12
Height, Unit:	4 IN
Height Minimum, Maximum:	1 5
Density, Unit:	1 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Winfield Solutions - AMS Replacements with Glyphosate.

Trial ID: 13-10A-E100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 8-7-13 Injury Percent 7 DA-A	GLXMA 8-14-13 Injury Percent 14 DA-A	GLXMA 8-28-13 Injury Percent 28 DA-A	ABUTH 8-7-13 Control Percent 7 DA-A	ABUTH 8-14-13 Control Percent 14 DA-A	ABUTH 8-28-13 Control Percent 28 DA-A
1	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	0 a	0 a	0 a	75 e	85 b	81 c
2	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	0 a	0 a	0 a	90 a-d	96 a	97 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
3	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	0 a	0 a	0 a	92 ab	97 a	97 a
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
4	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	0 a	0 a	0 a	92 abc	96 a	95 ab
	CLASS ACT NG	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A						
5	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	0 a	0 a	0 a	93 a	97 a	95 ab
	AG 08034	100	SL	2	% v/v	2	% v/v	4-6"W	A						
6	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	0 a	0 a	0 a	91 a-d	97 a	96 ab
	AG 08034	100	SL	1	% v/v	1	% v/v	4-6"W	A						
7	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	0 a	0 a	0 a	87 d	95 a	95 ab
	AG 07043	100	SL	1	% v/v	1	% v/v	4-6"W	A						
8	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	0 a	0 a	0 a	91 a-d	96 a	97 ab
	AG 11011	100	SL	1	% v/v	1	% v/v	4-6"W	A						
9	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	0 a	0 a	0 a	89 bcd	95 a	95 ab
	AG 11011	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A						
10	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	0 a	0 a	0 a	93 ab	96 a	96 ab
	AG 13061	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A						
11	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	0 a	0 a	0 a	88 cd	94 a	95 ab
	AG 13062	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A						
12	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	0 a	0 a	0 a	88 d	94 a	94 b
	AG 13063	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A						
13	NONTREATED									0 a	0 a	0 a	0 f	0 c	0 d
LSD (P=.05)										0.0	0.0	0.0	4.0	3.2	2.4
Standard Deviation										0.0	0.0	0.0	2.3	1.9	1.4
CV										0.0	0.0	0.0	2.85	2.15	1.64
Replicate F										0.000	0.000	0.000	1.207	1.243	0.088
Replicate Prob(F)										1.0000	1.0000	1.0000	0.3166	0.3065	0.9161
Treatment F										0.000	0.000	0.000	344.746	591.353	1032.664
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Winfield Solutions - AMS Replacements with Glyphosate.

Trial ID: 13-10A-E100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 8-7-13 Control Percent 7 DA-A	AMATA 8-14-13 Control Percent 14 DA-A	AMATA 8-28-13 Control Percent 28 DA-A	SETFA 8-7-13 Control Percent 7 DA-A	SETFA 8-14-13 Control Percent 14 DA-A	SETFA 8-28-13 Control Percent 28 DA-A
1	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	63 e	67 d	58 d	91 b	93 c	92 b
2	TOUCHDOWN HI-TECH N-PAK AMS	5 100	SL SL	0.375 2.5	lb ae/a % v/v	9.6 2.5	fl oz/a % v/v	4-6"W 4-6"W	A A	88 a	92 a	90 a	94 a	97 b	97 a
3	TOUCHDOWN HI-TECH CLASS ACT NG	5 100	SL SL	0.375 2.5	lb ae/a % v/v	9.6 2.5	fl oz/a % v/v	4-6"W 4-6"W	A A	87 a	90 ab	90 a	95 a	99 a	99 a
4	TOUCHDOWN HI-TECH CLASS ACT NG	5 100	SL SL	0.375 1.25	lb ae/a % v/v	9.6 1.25	fl oz/a % v/v	4-6"W 4-6"W	A A	83 abc	88 abc	88 ab	95 a	99 a	99 a
5	TOUCHDOWN HI-TECH AG 08034	5 100	SL SL	0.375 2	lb ae/a % v/v	9.6 2	fl oz/a % v/v	4-6"W 4-6"W	A A	82 abc	91 a	91 a	95 a	99 a	99 a
6	TOUCHDOWN HI-TECH AG 08034	5 100	SL SL	0.375 1	lb ae/a % v/v	9.6 1	fl oz/a % v/v	4-6"W 4-6"W	A A	85 ab	91 a	88 ab	95 a	99 a	99 a
7	TOUCHDOWN HI-TECH AG 07043	5 100	SL SL	0.375 1	lb ae/a % v/v	9.6 1	fl oz/a % v/v	4-6"W 4-6"W	A A	77 cd	80 c	78 bc	94 a	99 a	99 a
8	TOUCHDOWN HI-TECH AG 11011	5 100	SL SL	0.375 1	lb ae/a % v/v	9.6 1	fl oz/a % v/v	4-6"W 4-6"W	A A	78 bcd	81 bc	78 bc	95 a	98 ab	98 a
9	TOUCHDOWN HI-TECH AG 11011	5 100	SL SL	0.375 1.25	lb ae/a % v/v	9.6 1.25	fl oz/a % v/v	4-6"W 4-6"W	A A	85 ab	85 abc	83 ab	95 a	98 ab	99 a
10	TOUCHDOWN HI-TECH AG 13061	5 100	SL SL	0.375 0.5	lb ae/a % v/v	9.6 0.5	fl oz/a % v/v	4-6"W 4-6"W	A A	87 a	88 abc	86 ab	95 a	99 a	99 a
11	TOUCHDOWN HI-TECH AG 13062	5 100	SL SL	0.375 0.5	lb ae/a % v/v	9.6 0.5	fl oz/a % v/v	4-6"W 4-6"W	A A	72 d	80 c	73 c	95 a	99 a	99 a
12	TOUCHDOWN HI-TECH AG 13063	5 100	SL SL	0.375 0.5	lb ae/a % v/v	9.6 0.5	fl oz/a % v/v	4-6"W 4-6"W	A A	84 ab	87 abc	79 bc	94 a	98 ab	99 a
13	NONTREATED									0 f	0 e	0 e	0 c	0 d	0 c
LSD (P=.05)										7.6	9.4	9.9	1.2	2.0	2.0
Standard Deviation										4.5	5.6	5.9	0.7	1.2	1.2
CV										6.02	7.12	7.77	0.81	1.28	1.32
Replicate F										0.860	0.972	2.969	2.000	0.133	0.883
Replicate Prob(F)										0.4360	0.3926	0.0705	0.1573	0.8758	0.4266
Treatment F										82.084	57.735	51.921	4128.821	1658.448	1571.595
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Winfield Solutions - AMS Replacements with Glyphosate.

Trial ID: 13-10A-E100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOHE	IPOHE	IPOHE
Pest Code										IPOHE	IPOHE	IPOHE
Crop Code												
Rating Date										8-7-13	8-14-13	8-28-13
Rating Type										Control	Control	Control
Rating Unit										Percent	Percent	Percent
Rating Timing												
Trt-Eval Interval										7 DA-A	14 DA-A	28 DA-A
1	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	73 d	63 c	60 d
2	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	88 a	79 a	80 ab
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A			
3	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	82 abc	72 ab	79 ab
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A			
4	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	78 bcd	72 ab	79 ab
	CLASS ACT NG	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A			
5	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	85 ab	75 ab	82 a
	AG 08034	100	SL	2	% v/v	2	% v/v	4-6"W	A			
6	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	85 ab	78 a	85 a
	AG 08034	100	SL	1	% v/v	1	% v/v	4-6"W	A			
7	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	86 ab	73 ab	81 a
	AG 07043	100	SL	1	% v/v	1	% v/v	4-6"W	A			
8	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	84 ab	72 ab	79 ab
	AG 11011	100	SL	1	% v/v	1	% v/v	4-6"W	A			
9	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	80 a-d	69 bc	76 ab
	AG 11011	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A			
10	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	87 a	78 a	84 a
	AG 13061	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A			
11	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	75 cd	68 bc	67 cd
	AG 13062	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A			
12	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A	83 abc	75 ab	72 bc
	AG 13063	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A			
13	NONTREATED									0 e	0 d	0 e
LSD (P=.05)										8.3	7.7	9.1
Standard Deviation										4.9	4.6	5.4
CV										6.51	6.8	7.59
Replicate F										0.998	0.648	0.292
Replicate Prob(F)										0.3835	0.5319	0.7492
Treatment F										66.390	61.252	52.196
Treatment Prob(F)										0.0001	0.0001	0.0001

Southern Illinois University

Winfield Solutions - AMS Replacements with Glyphosate.

Trial ID: 13-10A-E100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: CI/WC at 7, 14, and 28 DA-A.
3. Target velvetleaf.
4. No yield.

Winfield Solutions - Adjuvants with Sterling Blue and Glyphosate.

Trial ID: 13-10C-E100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-12-13
Completion Date: 8-30-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the influence of adjuvants on the efficacy of Sterling Blue plus glyphosate.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: NONE - Non-crop
Variety: NON-CROP
Planting Method: NA

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 2 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 3 Type: W **Code:** IPOSS
Common Name: morningglory, species
Description: Mixture of IPOHE and IPOLA

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.9 **Texture:** SIL silt loam
pH: 6.7 **Soil Name:** Pierron
CEC: 9

Additional Measured Elements

Element	Quantity	Unit
P1	52	lb/A
K	297	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Winfield Solutions - Adjuvants with Sterling Blue and Glyphosate.

Trial ID: 13-10C-E100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
2.	7-7-13					7	DAY	62	94	F
3.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
4.	7-14-13					7	DAY	64	94	F
5.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
6.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
7.	7-21-13					7	DAY	56	91	F
8.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
9.	7-28-13					7	DAY	52	87	F
10.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
11.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
12.	8-4-13					7	DAY	62	87	F
13.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
14.	8-11-13					7	DAY	54	85	F
15.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
16.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
17.	8-18-13					7	DAY	61	91	F

Application Description

	A
Application Date:	8-2-13
Appl. Start Time:	8:00
Appl. Stop Time:	8:45
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	74 F
% Relative Humidity:	87
Wind Velocity, Unit:	4 MPH
Wind Direction:	S
Dew Presence (Y/N):	Y
Soil Temperature, Unit:	74 F
Soil Moisture:	NORMAL
% Cloud Cover:	100
Next Moisture Occurred On:	8-2-13
Time to Next Moisture, Unit:	12 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Winfield Solutions - Adjuvants with Sterling Blue and Glyphosate.

Trial ID: 13-10C-E100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	14
Stage Minimum, Percent:	COTY
Stage Maximum, Percent:	20
Height, Unit:	4 IN
Height Minimum, Maximum:	0.5 6
Density, Unit:	5 FT2
Pest 2 Code, Type, Scale:	ABUTH W
Stage Majority, Percent:	4
Stage Minimum, Percent:	COTY
Stage Maximum, Percent:	6
Height, Unit:	4 IN
Height Minimum, Maximum:	1 6
Density, Unit:	1 FT2
Pest 3 Code, Type, Scale:	IPOSS W
Stage Majority, Percent:	8
Stage Minimum, Percent:	COTY
Stage Maximum, Percent:	10
Height, Unit:	4 IN
Height Minimum, Maximum:	1 5
Density, Unit:	0.1 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Winfield Solutions - Adjuvants with Sterling Blue and Glyphosate.

Trial ID: 13-10C-E100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 8-9-13 Control Percent 7 DA-A	AMATA 8-16-13 Control Percent 14 DA-A	AMATA 8-30-13 Control Percent 28 DA-A	ABUTH 8-9-13 Control Percent 7 DA-A	ABUTH 8-16-13 Control Percent 14 DA-A	ABUTH 8-30-13 Control Percent 28 DA-A
1	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	62 e	78 b	81 b	43 c	55 b	72 d
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
2	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	81 abc	94 a	95 a	70 a	68 a	86 a
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
3	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	85 a	96 a	96 a	65 ab	70 a	86 a
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
4	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	82 abc	93 a	95 a	62 ab	67 a	81 abc
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A						
5	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	83 ab	92 a	92 a	63 ab	67 a	84 a
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	AG 08034	100	SL	2	% v/v	2	% v/v	4-6"W	A						
6	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	78 a-d	93 a	93 a	57 b	65 a	82 ab
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	AG 08034	100	SL	1	% v/v	1	% v/v	4-6"W	A						
7	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	77 a-d	93 a	88 ab	60 ab	67 a	72 cd
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	AG 07043	100	SL	1	% v/v	1	% v/v	4-6"W	A						
8	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	75 bcd	92 a	93 a	62 ab	67 a	75 bcd
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	AG 11011	100	SL	1	% v/v	1	% v/v	4-6"W	A						
9	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	83 ab	93 a	94 a	65 ab	70 a	78 a-d
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	AG 11011	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A						
10	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	73 cd	93 a	93 a	60 ab	66 a	73 cd
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	AG 13061	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A						
11	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	77 a-d	91 a	91 a	60 ab	68 a	72 d
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	AG 13062	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A						
12	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	70 de	88 a	89 a	58 b	67 a	74 bcd
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	AG 13063	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A						
13	NONTREATED									0 f	0 c	0 c	0 d	0 c	0 e
	LSD (P=.05)									8.8	8.3	7.9	10.3	9.1	9.0
	Standard Deviation									5.2	4.9	4.7	6.1	5.4	5.3
	CV									7.35	5.85	5.56	10.91	8.84	7.41
	Replicate F									2.052	1.222	1.191	0.156	1.370	1.078
	Replicate Prob(F)									0.1505	0.3122	0.3214	0.8566	0.2733	0.3560
	Treatment F									54.414	81.515	89.790	25.836	36.050	52.468
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Winfield Solutions - Adjuvants with Sterling Blue and Glyphosate.

Trial ID: 13-10C-E100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOSS 8-9-13 Control Percent 7 DA-A	IPOSS 8-16-13 Control Percent 14 DA-A	IPOSS 8-30-13 Control Percent 28 DA-A
1	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	57 e	67 c	87 bc
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A			
2	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	84 a	74 ab	87 bc
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A			
3	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	73 b	72 abc	90 a
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A			
4	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	73 b	77 a	89 ab
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A			
	CLASS ACT NG	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A			
5	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	63 de	72 abc	88 abc
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A			
	AG 08034	100	SL	2	% v/v	2	% v/v	4-6"W	A			
6	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	65 cd	67 c	86 c
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A			
	AG 08034	100	SL	1	% v/v	1	% v/v	4-6"W	A			
7	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	72 bc	71 abc	87 bc
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A			
	AG 07043	100	SL	1	% v/v	1	% v/v	4-6"W	A			
8	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	73 b	74 ab	88 abc
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A			
	AG 11011	100	SL	1	% v/v	1	% v/v	4-6"W	A			
9	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	73 b	74 ab	88 abc
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A			
	AG 11011	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A			
10	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	68 bcd	71 abc	89 ab
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A			
	AG 13061	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A			
11	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	68 bcd	70 bc	86 bc
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A			
	AG 13062	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A			
12	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	67 bcd	68 c	86 bc
	STERLING BLUE	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A			
	AG 13063	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A			
13	NONTREATED									0 f	0 d	0 d
LSD (P=.05)										7.0	6.3	3.0
Standard Deviation										4.2	3.8	1.8
CV										6.47	5.69	2.2
Replicate F										1.048	0.235	0.349
Replicate Prob(F)										0.3661	0.7925	0.7088
Treatment F										72.075	85.396	561.314
Treatment Prob(F)										0.0001	0.0001	0.0001

Southern Illinois University

Winfield Solutions - Adjuvants with Sterling Blue and Glyphosate.

Trial ID: 13-10C-E100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: WC at 7, 14, and 28 DA-A.
3. No yield (non-crop).
4. At trial initiation, on 7-12-13, all emerged weeds were controlled with tillage.
5. IPOSS = Morningglory species including IPOHE (ivyleaf morningglory) and IPOLA (pitted morningglory).
6. Not harvested (non-crop).

Winfield Solutions - Adjuvants with Rugged and Glyphosate.

Trial ID: 13-10C-M100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-12-13
Completion Date: 8-18-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the influence of adjuvants on the efficacy of Rugged plus glyphosate.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: NONE - Non-crop
Variety: NON-CROP
Planting Method: NA

Pest Description

Pest 1 Type: W **Code:** SETFA Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 3 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 4 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.9 **Texture:** SIL silt loam
pH: 6.7 **Soil Name:** Pierron
CEC: 9

Additional Measured Elements

Element	Quantity	Unit
P1	52	lb/A
K	297	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Winfield Solutions - Adjuvants with Rugged and Glyphosate.

Trial ID: 13-10C-M100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
2.	7-7-13					7	DAY	62	94	F
3.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
4.	7-14-13					7	DAY	64	94	F
5.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
6.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
7.	7-21-13					7	DAY	56	91	F
8.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
9.	7-28-13					7	DAY	52	87	F
10.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
11.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
12.	8-4-13					7	DAY	62	87	F
13.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
14.	8-11-13					7	DAY	54	85	F
15.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
16.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
17.	8-18-13					7	DAY	61	91	F

Application Description

	A
Application Date:	8-4-13
Appl. Start Time:	14:30
Appl. Stop Time:	15:00
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	NTH
Air Temperature, Unit:	78 F
% Relative Humidity:	58
Wind Velocity, Unit:	3 MPH
Wind Direction:	NE
Dew Presence (Y/N):	N
Soil Temperature, Unit:	74 F
Soil Moisture:	NORMAL
% Cloud Cover:	100
Next Moisture Occurred On:	8-8-13
Time to Next Moisture, Unit:	4 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Winfield Solutions - Adjuvants with Rugged and Glyphosate.

Trial ID: 13-10C-M100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	SETFA W
Stage Majority, Percent:	4
Stage Minimum, Percent:	2
Stage Maximum, Percent:	8
Height, Unit:	6 IN
Height Minimum, Maximum:	2 8
Density, Unit:	3 FT2
Pest 2 Code, Type, Scale:	ABUTH W
Stage Majority, Percent:	6
Stage Minimum, Percent:	4
Stage Maximum, Percent:	8
Height, Unit:	4 IN
Height Minimum, Maximum:	1 6
Density, Unit:	1 FT2
Pest 3 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	4
Stage Minimum, Percent:	COTY
Stage Maximum, Percent:	18
Height, Unit:	1 IN
Height Minimum, Maximum:	0.5 6
Density, Unit:	10 FT2
Pest 4 Code, Type, Scale:	IPOHE W
Stage Majority, Percent:	12
Stage Minimum, Percent:	4
Stage Maximum, Percent:	14
Height, Unit:	4 IN
Height Minimum, Maximum:	1 5
Density, Unit:	1 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Winfield Solutions - Adjuvants with Rugged and Glyphosate.

Trial ID: 13-10C-M100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 8-11-13 Control Percent 7 DA-A	SETFA 8-18-13 Control Percent 14 DA-A	SETFA 9-1-13 Control Percent 28 DA-A	ABUTH 8-11-13 Control Percent 7 DA-A	ABUTH 8-18-13 Control Percent 14 DA-A	ABUTH 9-1-13 Control Percent 28 DA-A
1	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	95 c	99 a	99 a	83 bc	90 c	93 e
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
2	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	98 ab	99 a	99 a	92 a	97 ab	97 bc
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
3	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	99 a	99 a	99 a	94 a	98 a	98 a
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
4	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	98 ab	99 a	99 a	92 a	97 ab	97 bc
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A						
5	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	99 ab	99 a	99 a	92 a	97 ab	97 ab
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 08034	100	SL	2	% v/v	2	% v/v	4-6"W	A						
6	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	98 ab	99 a	99 a	85 b	96 ab	97 bc
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 08034	100	SL	1	% v/v	1	% v/v	4-6"W	A						
7	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	98 ab	99 a	99 a	82 bc	96 ab	96 bc
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 07043	100	SL	1	% v/v	1	% v/v	4-6"W	A						
8	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	98 ab	99 a	99 a	84 b	95 b	96 c
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 11011	100	SL	1	% v/v	1	% v/v	4-6"W	A						
9	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	98 ab	99 a	99 a	82 bc	96 ab	97 bc
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 11011	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A						
10	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	96 bc	99 a	99 a	80 c	96 ab	96 bc
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 13061	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A						
11	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	98 ab	99 a	99 a	83 bc	90 c	95 d
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 13062	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A						
12	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	97 abc	99 a	99 a	83 bc	89 c	94 de
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 13063	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A						
13	NONTREATED									0 d	0 a	0 a	0 d	0 d	0 f
LSD (P=.05)										2.4	0.0	0.0	4.0	2.7	1.3
Standard Deviation										1.4	0.0	0.0	2.4	1.6	0.8
CV										1.56	0.0	0.0	3.01	1.86	0.85
Replicate F										3.905	0.000	0.000	1.710	1.642	0.316
Replicate Prob(F)										0.0340	1.0000	1.0000	0.2022	0.2146	0.7322
Treatment F										1119.343	0.000	0.000	311.373	796.855	3767.512
Treatment Prob(F)										0.0001	1.0000	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Winfield Solutions - Adjuvants with Rugged and Glyphosate.

Trial ID: 13-10C-M100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 8-11-13 Control Percent 7 DA-A	AMATA 8-18-13 Control Percent 14 DA-A	AMATA 9-1-13 Control Percent 28 DA-A	IPOHE 8-11-13 Control Percent 7 DA-A	IPOHE 8-18-13 Control Percent 14 DA-A	IPOHE 9-1-13 Control Percent 28 DA-A
1	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	90 c	95 e	95 d	91 bc	99 a	99 a
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
2	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	91 bc	97 a	97 a	94 abc	99 a	99 a
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
3	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	95 ab	97 a	97 ab	97 a	99 a	99 a
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
4	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	93 abc	97 ab	97 ab	95 ab	99 a	99 a
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A						
5	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	96 a	97 ab	97 a	95 ab	99 a	99 a
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 08034	100	SL	2	% v/v	2	% v/v	4-6"W	A						
6	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	93 abc	97 ab	96 a-d	92 bc	99 a	99 a
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 08034	100	SL	1	% v/v	1	% v/v	4-6"W	A						
7	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	93 abc	96 cde	95 cd	93 abc	98 a	98 a
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 07043	100	SL	1	% v/v	1	% v/v	4-6"W	A						
8	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	96 a	97 abc	96 abc	89 c	98 a	98 a
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 11011	100	SL	1	% v/v	1	% v/v	4-6"W	A						
9	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	93 abc	97 abc	97 a	95 ab	99 a	99 a
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 11011	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A						
10	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	92 abc	96 cde	96 bcd	94 ab	99 a	99 a
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 13061	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A						
11	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	91 bc	96 bcd	96 a-d	92 bc	99 a	99 a
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 13062	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A						
12	TOUCHDOWN HI-TECH	5	SL	0.1875	lb ae/a	4.8	fl oz/a	4-6"W	A	90 c	96 de	95 d	94 ab	99 a	99 a
	RUGGED	3.49	EC	0.218	lb ae/a	8	fl oz/a	4-6"W	A						
	AG 13063	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A						
13	NONTREATED									0 d	0 f	0 e	0 d	0 b	0 b
	LSD (P=.05)									4.4	1.0	1.3	4.7	0.8	0.7
	Standard Deviation									2.6	0.6	0.8	2.8	0.5	0.4
	CV									3.04	0.64	0.88	3.25	0.52	0.48
	Replicate F									0.318	1.520	0.545	0.904	1.500	2.182
	Replicate Prob(F)									0.7303	0.2390	0.5866	0.4181	0.2433	0.1347
	Treatment F									295.637	6712.401	3492.833	258.289	10150.289	12002.501
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Winfield Solutions - Adjuvants with Rugged and Glyphosate.

Trial ID: 13-10C-M100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: WC at 7, 14, and 28 DA-A.
3. No yield (non-crop).
4. At trial initiation, on 7-12-13, all emerged weeds were controlled with tillage.
5. Not harvested (non-crop).

Southern Illinois University

Glyphosate plus Laudis Adjuvant Evaluation.

Trial ID: 13-21M-M120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-14-13
Completion Date: 8-2-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate crop tolerance and weed control from combinations of glyphosate plus Laudis with United Suppliers adjuvants.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33 **BBCH Scale:** BCOR
Description: SS RIB
Planting Date: 6-14-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** PANDI Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Pest 2 Type: W **Code:** XANST Xanthium strumarium L.
Common Name: cocklebur, common

Pest 3 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 4 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 5 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 0 LB/A, K2O 150 LB/A

Soil Description

% OM: 3.4 **Texture:** SIL silt loam
pH: 6.5 **Soil Name:** Bethalto
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	71	lb/A
K	297	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Glyphosate plus Laudis Adjuvant Evaluation.

Trial ID: 13-21M-M120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-9-13					7	DAY	59	94	F
3.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
4.	6-16-13					7	DAY	61	90	F
5.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
6.	6-23-13					7	DAY	64	92	F
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
9.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
10.	6-30-13					7	DAY	61	86	F
11.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
12.	7-7-13					7	DAY	62	94	F
13.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
14.	7-14-13					7	DAY	64	94	F
15.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
16.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
17.	7-21-13					7	DAY	56	91	F
18.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
19.	7-28-13					7	DAY	52	87	F
20.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
21.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
22.	8-4-13					7	DAY	62	87	F
23.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
24.	8-11-13					7	DAY	54	85	F
25.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
26.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
27.	8-18-13					7	DAY	61	91	F

Application Description

	A
Application Date:	7-5-13
Appl. Start Time:	13:00
Appl. Stop Time:	14:00
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	78 F
% Relative Humidity:	74
Wind Velocity, Unit:	4 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	74 F
Soil Moisture:	ABONOR
% Cloud Cover:	75
Next Moisture Occurred On:	7-10-13
Time to Next Moisture, Unit:	5 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD
Stage Scale Used:	DESC
Stage Majority, Percent:	V6
Stage Minimum, Percent:	V5
Stage Maximum, Percent:	V6
Height, Unit:	14 IN
Height Minimum, Maximum:	12 14

Glyphosate plus Laudis Adjuvant Evaluation.

Trial ID: 13-21M-M120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	PANDI W
Stage Majority, Percent:	5
Stage Minimum, Percent:	2
Stage Maximum, Percent:	6
Height, Unit:	5 IN
Height Minimum, Maximum:	1 7
Density, Unit:	10 FT2
Pest 2 Code, Type, Scale:	XANST W
Stage Majority, Percent:	8
Stage Minimum, Percent:	4
Stage Maximum, Percent:	10
Height, Unit:	6 IN
Height Minimum, Maximum:	4 8
Density, Unit:	3 FT2
Pest 3 Code, Type, Scale:	AMBTR W
Stage Majority, Percent:	8
Stage Minimum, Percent:	4
Stage Maximum, Percent:	18
Height, Unit:	6 IN
Height Minimum, Maximum:	4 12
Density, Unit:	1 FT2
Pest 4 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	10
Stage Minimum, Percent:	4
Stage Maximum, Percent:	16
Height, Unit:	6 IN
Height Minimum, Maximum:	1 8
Density, Unit:	1 FT2
Pest 5 Code, Type, Scale:	IPOHE W
Stage Majority, Percent:	3
Stage Minimum, Percent:	COTY
Stage Maximum, Percent:	6
Height, Unit:	4 IN
Height Minimum, Maximum:	1 6
Density, Unit:	0.1 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	ALTEVE
Operation Pressure, Unit:	50 PSI
Nozzle Type:	AI
Nozzle Size:	11003
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

Glyphosate plus Laudis Adjuvant Evaluation.

Trial ID: 13-21M-M120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 7-12-13 Injury Percent 7 DA-A	ZEAMD 7-19-13 Injury Percent 14 DA-A	ZEAMD 8-2-13 Injury Percent 28 DA-A	PANDI 7-12-13 Control Percent 7 DA-A	PANDI 7-19-13 Control Percent 14 DA-A	PANDI 8-2-13 Control Percent 28 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	0 a	0 a	0 a	94 ab	96 ab	93 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
2	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	0 a	0 a	0 a	95 ab	95 b	95 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	SUCCEED	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
3	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	0 a	0 a	0 a	97 ab	97 ab	95 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	BETWEEN	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
4	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	0 a	0 a	0 a	94 ab	96 ab	93 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	TRANSLATE	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
5	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	0 a	0 a	0 a	93 b	95 b	93 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1305	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
6	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	0 a	0 a	0 a	96 ab	96 ab	96 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1306	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
7	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	0 a	0 a	0 a	96 ab	97 a	96 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1307	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
8	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	0 a	0 a	0 a	96 ab	97 ab	95 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1308	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
9	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	0 a	0 a	0 a	95 ab	96 ab	96 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1314	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
10	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	0 a	0 a	0 a	96 ab	97 a	95 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1316	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
11	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	0 a	0 a	0 a	97 ab	97 ab	95 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1317	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
12	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	0 a	0 a	0 a	96 ab	97 ab	95 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1348	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
13	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	0 a	0 a	0 a	98 a	97 a	96 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1353	100	SL	12	fl oz/a	12	fl oz/a	4-6"W	A						
14	NONTREATED									0 a	0 a	0 a	0 c	0 c	0 b
LSD (P=.05)										0.0	0.0	0.0	3.7	2.2	3.6
Standard Deviation										0.0	0.0	0.0	2.6	1.5	2.6
CV										0.0	0.0	0.0	2.96	1.73	2.9
Replicate F										0.000	0.000	0.000	0.674	1.479	0.711
Replicate Prob(F)										1.0000	1.0000	1.0000	0.5732	0.2352	0.5513
Treatment F										0.000	0.000	0.000	379.686	1111.414	394.277
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Glyphosate plus Laudis Adjuvant Evaluation.

Trial ID: 13-21M-M120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	XANST 7-12-13 Control Percent 7 DA-A	XANST 7-19-13 Control Percent 14 DA-A	XANST 8-2-13 Control Percent 28 DA-A	AMBTR 7-12-13 Control Percent 7 DA-A	AMBTR 7-19-13 Control Percent 14 DA-A	AMBTR 8-2-13 Control Percent 28 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	98 ab	99 a	98 ab	88 bc	97 c	96 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
2	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	97 ab	99 a	97 ab	87 c	98 abc	98 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	SUCCEED	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
3	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	98 a	99 a	97 ab	91 abc	98 a	97 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	BETWEEN	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
4	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	97 ab	99 a	98 ab	90 abc	98 ab	96 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	TRANSLATE	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
5	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	97 b	99 a	99 a	87 c	98 ab	98 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1305	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
6	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	98 ab	99 a	99 a	93 a	98 abc	97 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1306	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
7	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	97 ab	99 a	99 ab	90 abc	98 abc	99 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1307	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
8	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	98 a	99 a	99 a	90 abc	98 abc	99 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1308	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
9	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	97 ab	99 a	98 ab	93 ab	98 ab	99 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1314	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
10	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	98 ab	99 a	97 b	94 a	98 a	97 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1316	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
11	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	98 ab	99 a	98 ab	87 c	98 ab	96 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1317	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
12	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	98 ab	99 a	99 a	91 abc	98 abc	97 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1348	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
13	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	98 a	99 a	98 ab	92 abc	97 bc	98 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1353	100	SL	12	fl oz/a	12	fl oz/a	4-6"W	A						
14	NONTREATED									0 c	0 b	0 c	0 d	0 d	0 b
LSD (P=.05)										1.0	0.5	2.2	5.2	1.1	3.4
Standard Deviation										0.7	0.4	1.5	3.7	0.8	2.4
CV										0.76	0.4	1.7	4.39	0.85	2.6
Replicate F										3.038	2.167	5.308	7.423	10.031	2.282
Replicate Prob(F)										0.0403	0.1074	0.0036	0.0005	0.0001	0.0942
Treatment F										5673.529	21203.502	1151.481	173.666	4589.389	490.787
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Glyphosate plus Laudis Adjuvant Evaluation.

Trial ID: 13-21M-M120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code									AMATA	AMATA	AMATA	IPOHE	IPOHE	IPOHE
Crop Code														
Rating Date									7-12-13	7-19-13	8-2-13	7-12-13	7-19-13	8-2-13
Rating Type									Control	Control	Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing														
Trt-Eval Interval									7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	76 b	81 b	87 b	45 de	66 d	89 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
2	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	76 b	86 ab	93 a	43 e	74 abc	89 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	SUCCEED	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
3	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	91 a	94 a	96 a	56 a	76 ab	93 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	BETWEEN	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
4	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	85 ab	95 a	95 a	58 a	76 ab	91 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	TRANSLATE	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
5	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	81 ab	89 ab	95 a	48 b-e	70 bcd	88 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1305	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
6	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	81 ab	95 a	96 a	55 ab	75 ab	90 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1306	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
7	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	86 ab	89 ab	93 a	51 a-d	72 a-d	90 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1307	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
8	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	80 ab	88 ab	94 a	58 a	73 abc	91 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1308	100	SL	1	% v/v	4	qt/100 gal	4-6"W	A						
9	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	83 ab	87 ab	96 a	46 cde	68 cd	92 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1314	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
10	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	86 ab	93 a	95 a	55 ab	76 ab	92 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1316	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
11	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	83 ab	88 ab	94 a	54 abc	71 a-d	89 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1317	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
12	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	80 ab	83 b	94 a	54 abc	71 a-d	90 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1348	100	SL	0.5	% v/v	2	qt/100 gal	4-6"W	A						
13	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	4-6"W	A	85 ab	89 ab	94 a	59 a	78 a	94 a
	LAUDIS	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	4-6"W	A						
	UAD-1353	100	SL	12	fl oz/a	12	fl oz/a	4-6"W	A						
14	NONTREATED									0 c	0 c	0 c	0 f	0 e	0 b
LSD (P=.05)										12.5	10.6	4.7	7.9	6.4	7.8
Standard Deviation										8.7	7.4	3.3	5.5	4.5	5.4
CV										11.39	8.98	3.77	11.36	6.69	6.47
Replicate F										1.114	1.680	1.348	8.484	10.900	0.349
Replicate Prob(F)										0.3550	0.1871	0.2728	0.0002	0.0001	0.7898
Treatment F										26.362	42.481	234.875	29.111	76.247	79.504
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Glyphosate plus Laudis Adjuvant Evaluation.

Trial ID: 13-21M-M120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: United Suppliers (AD 13004).
2. CI/WC 7, 14, and 28 DA-A.
3. Spray with ATV at 10 mph.
4. No yield.

Adjuvant Evaluation with Clethodim and Glyphosate.

Trial ID: 13-21M-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-14-13
Completion Date: 7-18-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate volunteer corn and weed control from Drexel adjuvants in combination with clethodim plus glyphosate.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33
Description: SS RIB
Planting Date: 6-14-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ZEAMX Zea mays L.
Common Name: corn, volunteer
Description: Roundup Ready corn

Pest 2 Type: W **Code:** XANST Xanthium strumarium L.
Common Name: cocklebur, common

Pest 3 Type: W **Code:** SETFA Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 4 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 5 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 6 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 0 LB/A, K2O 150 LB/A

Soil Description

% OM: 3.4 **Texture:** SIL silt loam
pH: 6.5 **Soil Name:** Bethalto
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	71	lb/A
K	297	lb/A

Adjuvant Evaluation with Clethodim and Glyphosate.

Trial ID: 13-21M-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-9-13					7	DAY	59	94	F
3.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
4.	6-16-13					7	DAY	61	90	F
5.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
6.	6-23-13					7	DAY	64	92	F
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
9.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
10.	6-30-13					7	DAY	61	86	F
11.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
12.	7-7-13					7	DAY	62	94	F
13.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
14.	7-14-13					7	DAY	64	94	F
15.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
16.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
17.	7-21-13					7	DAY	56	91	F
18.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
19.	7-28-13					7	DAY	52	87	F
20.	7-30-13	0.46	IN	RAIN	rain	1	DAY			

Application Description

	A
Application Date:	7-4-13
Appl. Start Time:	13:00
Appl. Stop Time:	13:40
Application Method:	Spray
Application Timing:	6"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	82 F
% Relative Humidity:	55
Wind Velocity, Unit:	2 MPH
Wind Direction:	E
Dew Presence (Y/N):	N
Soil Temperature, Unit:	74 F
Soil Moisture:	ABONOR
% Cloud Cover:	25
Next Moisture Occurred On:	7-10-13
Time to Next Moisture, Unit:	6 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD
Stage Scale Used:	DESC
Stage Majority, Percent:	V5
Stage Minimum, Percent:	V4
Stage Maximum, Percent:	V5
Height, Unit:	12 IN
Height Minimum, Maximum:	10 12

Adjuvant Evaluation with Clethodim and Glyphosate.

Trial ID: 13-21M-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ZEAMX W
Stage Majority, Percent:	5
Stage Minimum, Percent:	4
Stage Maximum, Percent:	5
Height, Unit:	12 IN
Height Minimum, Maximum:	10 12
Density, Unit:	0.64 FT2
Pest 2 Code, Type, Scale:	XANST W
Stage Majority, Percent:	6
Stage Minimum, Percent:	4
Stage Maximum, Percent:	10
Height, Unit:	6 IN
Height Minimum, Maximum:	3 8
Density, Unit:	3 FT2
Pest 3 Code, Type, Scale:	SETFA W
Stage Majority, Percent:	6
Stage Minimum, Percent:	3
Stage Maximum, Percent:	8
Height, Unit:	6 IN
Height Minimum, Maximum:	4 8
Density, Unit:	1 FT2
Pest 4 Code, Type, Scale:	AMBTR W
Stage Majority, Percent:	8
Stage Minimum, Percent:	6
Stage Maximum, Percent:	12
Height, Unit:	8 IN
Height Minimum, Maximum:	4 10
Density, Unit:	1 FT2
Pest 5 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	10
Stage Minimum, Percent:	3
Stage Maximum, Percent:	12
Height, Unit:	6 IN
Height Minimum, Maximum:	1 8
Density, Unit:	10 FT2
Pest 6 Code, Type, Scale:	IPOHE W
Stage Majority, Percent:	4
Stage Minimum, Percent:	4
Stage Maximum, Percent:	6
Height, Unit:	3.5 IN
Height Minimum, Maximum:	2 4
Density, Unit:	0.1 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Adjuvant Evaluation with Clethodim and Glyphosate.

Trial ID: 13-21M-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMX 7-7-13 Control Percent 3 DA-A	ZEAMX 7-11-13 Control Percent 7 DA-A	ZEAMX 7-18-13 Control Percent 14 DA-A	XANST 7-7-13 Control Percent 3 DA-A	XANST 7-11-13 Control Percent 7 DA-A	XANST 7-18-13 Control Percent 14 DA-A
1	NONTREATED									0 c	0 c	0 c	0 b	0 b	0 a
2	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	6"W	A	58 ab	75 b	86 b	96 a	99 a	99 a
	IMITATOR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6"W	A						
	DRX 101	100	SL	1	pt/a	0.83	% v/v	6"W	A						
3	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	6"W	A	62 a	75 b	86 b	96 a	99 a	99 a
	IMITATOR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6"W	A						
	DRX 102	100	SL	0.5	pt/a	0.417	% v/v	6"W	A						
4	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	6"W	A	50 b	76 b	86 b	97 a	99 a	99 a
	IMITATOR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	6"W	A						
5	SELECT MAX	0.97	EC	0.094	lb ai/a	12.4	fl oz/a	6"W	A	67 a	82 a	96 a	96 a	99 a	99 a
	IMITATOR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6"W	A						
LSD (P=.05)										9.6	3.0	1.8	1.6	0.6	0.0
Standard Deviation										5.1	1.6	1.0	0.9	0.3	0.0
CV										10.74	2.58	1.36	1.11	0.4	0.0
Replicate F										0.839	0.503	6.000	1.455	6.000	0.000
Replicate Prob(F)										0.4670	0.6225	0.0256	0.2892	0.0256	1.0000
Treatment F										85.581	1419.643	5090.286	7593.728	58510.006	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Adjuvant Evaluation with Clethodim and Glyphosate.

Trial ID: 13-21M-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 7-7-13 Control Percent 3 DA-A	SETFA 7-11-13 Control Percent 7 DA-A	SETFA 7-18-13 Control Percent 14 DA-A	AMBTR 7-7-13 Control Percent 3 DA-A	AMBTR 7-11-13 Control Percent 7 DA-A	AMBTR 7-18-13 Control Percent 14 DA-A
1	NONTREATED									0 c	0 b	0 a	0 c	0 b	0 b
2	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	6"W	A	89 a	99 a	99 a	92 a	97 a	99 a
	IMITATOR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6"W	A						
	DRX 101	100	SL	1	pt/a	0.83	% v/v	6"W	A						
3	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	6"W	A	88 a	99 a	99 a	91 a	97 a	99 a
	IMITATOR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6"W	A						
	DRX 102	100	SL	0.5	pt/a	0.417	% v/v	6"W	A						
4	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	6"W	A	82 b	99 a	99 a	86 b	97 a	98 a
	IMITATOR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	6"W	A						
5	SELECT MAX	0.97	EC	0.094	lb ai/a	12.4	fl oz/a	6"W	A	89 a	99 a	99 a	90 a	98 a	99 a
	IMITATOR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6"W	A						
LSD (P=.05)										5.6	0.5	0.0	3.2	0.8	1.0
Standard Deviation										3.0	0.3	0.0	1.7	0.4	0.5
CV										4.25	0.33	0.0	2.34	0.55	0.65
Replicate F										0.053	1.000	0.000	4.994	1.455	1.000
Replicate Prob(F)										0.9487	0.4096	1.0000	0.0391	0.2892	0.4096
Treatment F										520.727	88061.509	0.000	1718.900	31006.003	21979.002
Treatment Prob(F)										0.0001	0.0001	1.0000	0.0001	0.0001	0.0001

Adjuvant Evaluation with Clethodim and Glyphosate.

Trial ID: 13-21M-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 7-7-13 Control Percent 3 DA-A	AMATA 7-11-13 Control Percent 7 DA-A	AMATA 7-18-13 Control Percent 14 DA-A	IPOHE 7-7-13 Control Percent 3 DA-A	IPOHE 7-11-13 Control Percent 7 DA-A	IPOHE 7-18-13 Control Percent 14 DA-A
1	NONTREATED									0 b	0 b	0 b	0 b	0 b	0 b
2	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	6"W	A	93 a	97 a	92 a	40 a	58 a	85 a
	IMITATOR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6"W	A						
	DRX 101	100	SL	1	pt/a	0.83	% v/v	6"W	A						
3	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	6"W	A	90 a	95 a	92 a	35 a	60 a	87 a
	IMITATOR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6"W	A						
	DRX 102	100	SL	0.5	pt/a	0.417	% v/v	6"W	A						
4	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	6"W	A	94 a	97 a	94 a	37 a	55 a	84 a
	IMITATOR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	6"W	A						
5	SELECT MAX	0.97	EC	0.094	lb ai/a	12.4	fl oz/a	6"W	A	89 a	95 a	92 a	38 a	58 a	83 a
	IMITATOR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6"W	A						
LSD (P=.05)										8.9	4.8	4.7	9.5	8.4	6.7
Standard Deviation										4.7	2.5	2.5	5.0	4.5	3.6
CV										6.44	3.29	3.4	16.8	9.65	5.25
Replicate F										0.361	0.450	1.026	2.557	3.083	1.361
Replicate Prob(F)										0.7075	0.6527	0.4010	0.1385	0.1017	0.3098
Treatment F										226.385	867.576	812.397	33.607	101.125	340.796
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Adjuvant Evaluation with Clethodim and Glyphosate.

Trial ID: 13-21M-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Drexel.
2. Ratings: WC at 3, 7, and 14 DA-A.
3. No yield.
4. Following the 6"W application the first rainfall event, beginning 6 days later, was 0.20 inch over 1 day.
5. Not harvested.

No-Till Corn Weed Control Studies

Southern Illinois University

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 4-26-13
Completion Date: 11-8-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Demonstrate the performance of DuPont crop protection products in corn.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: P1221 AMX **BBCH Scale:** BCOR
Description: LL/RR2
Planting Date: 6-15-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** HORPU Hordeum pusillum Nutt.
Common Name: barley, little

Pest 2 Type: W **Code:** ALLVI Allium vineale L.
Common Name: garlic, wild

Pest 3 Type: W **Code:** RANAB Ranunculus abortivus L.
Common Name: buttercup, smallflower

Pest 4 Type: W **Code:** STEME Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 5 Type: W **Code:** SENGL Senecio glabellus Poir.
Common Name: groundsel, cressleaf

Pest 6 Type: W **Code:** GGGAN
Common Name: grasses, annual
Description: Mixture of SETFA 50% and PANDI 50%

Pest 7 Type: W **Code:** CYPES Cyperus esculentus L.
Common Name: nutsedge, yellow

Pest 8 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 9 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest10 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest11 Type: W **Code:** IPOSS
Common Name: morningglory, species
Description: Mixture of IPOHE and IPOLA

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 31 FT **Total Plot Length:** 31 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 200 LB/A

Soil Description

% OM: 3 **Texture:** SIL silt loam
pH: 6.5 **Soil Name:** Bethalto
CEC: 11

Additional Measured Elements

Element	Quantity	Unit
P1	41	lb/A
K	234	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	3-31-13					7	DAY	27	71	F
2.	4-7-13					7	DAY	34	82	F
3.	4-10-13	1.4	IN	RAIN	rain	2	DAY			
4.	4-14-13					7	DAY	31	82	F
5.	4-16-13	1.05	IN	RAIN	rain	2	DAY			
6.	4-18-13	5.2	IN	RAIN	rain	1	DAY			
7.	4-21-13					7	DAY	35	72	F
8.	4-23-13	1.35	IN	RAIN	rain	2	DAY			
9.	4-27-13	0.3	IN	RAIN	rain	2	DAY			
10.	4-28-13					7	DAY	41	83	F
11.	5-3-13	3.07	IN	RAIN	rain	4	DAY			
12.	5-5-13					7	DAY	46	80	F
13.	5-9-13	0.35	IN	RAIN	rain	2	DAY			
14.	5-12-13					7	DAY	39	92	F
15.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
16.	5-19-13					7	DAY	45	88	F
17.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
18.	5-26-13					7	DAY	56	86	F
19.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
20.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
21.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
22.	6-2-13					7	DAY	50	80	F
23.	6-9-13					7	DAY	59	94	F
24.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
25.	6-16-13					7	DAY	61	90	F
26.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
27.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
28.	6-23-13					7	DAY	64	92	F
29.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
30.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
31.	6-30-13					7	DAY	61	86	F
32.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
33.	7-7-13					7	DAY	62	94	F
34.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
35.	7-14-13					7	DAY	64	94	F
36.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
37.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
38.	7-21-13					7	DAY	56	91	F
39.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
40.	7-28-13					7	DAY	52	87	F
41.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
42.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
43.	8-4-13					7	DAY	62	87	F
44.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
45.	8-11-13					7	DAY	54	85	F
46.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
47.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
48.	8-18-13					7	DAY	61	91	F
49.	8-25-13					7	DAY	62	100	F
50.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
51.	9-1-13					7	DAY	57	92	F
52.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Description

	A	B	C	D
Application Date:	4-26-13	6-15-13	6-28-13	7-5-13
Appl. Start Time:	8:00	7:00	7:00	13:30
Appl. Stop Time:	8:30	7:30	7:30	13:50
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	EPP14	PRE	EPOST	POST
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	RFK	NTH	KNW	LXF
Air Temperature, Unit:	52 F	70 F	79 F	77 F
% Relative Humidity:	62	51	77	76
Wind Velocity, Unit:	3 MPH	2 MPH	3 MPH	3 MPH
Wind Direction:	S	E	W	W
Dew Presence (Y/N):	N	Y	N	N
Soil Temperature, Unit:	52 F	74 F	78 F	74 F
Soil Moisture:	ABONOR	NORMAL	ABONOR	ABONOR
% Cloud Cover:	100	100	10	40
Next Moisture Occurred On:	4-27-13	6-15-13	6-29-13	7-10-13
Time to Next Moisture, Unit:	19 HR	13 HR	32 HR	5 DAY

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	ZEAMD	ZEAMD	ZEAMD	ZEAMD
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	V2	V5
Stage Minimum, Percent:			V2	V4
Stage Maximum, Percent:			V2	V5
Height, Unit:			6 IN	11 IN
Height Minimum, Maximum:			6 8	9 11

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	HORPU W	HORPU W	HORPU W	HORPU W
Stage Majority, Percent:	6	NA	NA	NA
Stage Minimum, Percent:	5			
Stage Maximum, Percent:	6			
Height, Unit:	8 IN			
Height Minimum, Maximum:	8 10			
Density, Unit:	2 FT2			
Pest 2 Code, Type, Scale:	ALLVI W	ALLVI W	ALLVI W	ALLVI W
Stage Majority, Percent:	4	NA	NA	NA
Stage Minimum, Percent:	3			
Stage Maximum, Percent:	4			
Height, Unit:	24 IN			
Height Minimum, Maximum:	22 26			
Density, Unit:	0.1 FT2			
Pest 3 Code, Type, Scale:	RANAB W	RANAB W	RANAB W	RANAB W
Stage Majority, Percent:	10+	NA	NA	NA
Stage Minimum, Percent:	10			
Stage Maximum, Percent:	10+			
Height, Unit:	12 IN			
Height Minimum, Maximum:	10 12			
Density, Unit:	2 FT2			
Pest 4 Code, Type, Scale:	STEME W	STEME W	STEME W	STEME W
Stage Majority, Percent:	10+	NA	NA	NA
Stage Minimum, Percent:	10			
Stage Maximum, Percent:	10+			
Height, Unit:	5 IN			
Height Minimum, Maximum:	4 6			
Density, Unit:	2 FT2			

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest 5 Code, Type, Scale:	SENGL W	SENGL W	SENGL W	SENGL W
Stage Majority, Percent:	10+	NA	NA	NA
Stage Minimum, Percent:	10			
Stage Maximum, Percent:	10+			
Height, Unit:	18 IN			
Height Minimum, Maximum:	10 20			
Density, Unit:	0.1 FT2			
Pest 6 Code, Type, Scale:	GGGAN W	GGGAN W	GGGAN W	GGGAN W
Stage Majority, Percent:	NA	NA	3	4
Stage Minimum, Percent:			1	2
Stage Maximum, Percent:			4	5
Height, Unit:			3 IN	4 IN
Height Minimum, Maximum:			1 3	2 4
Density, Unit:			0.1 FT2	0.01 FT2
Pest 7 Code, Type, Scale:	CYPES W	CYPES W	CYPES W	CYPES W
Stage Majority, Percent:	NA	3	6	12
Stage Minimum, Percent:		2	4	4
Stage Maximum, Percent:		3	8	20
Height, Unit:		4 IN	6 IN	6 IN
Height Minimum, Maximum:		1 6	4 6	4 10
Density, Unit:		1 FT2	1 FT2	0.5 FT2
Pest 8 Code, Type, Scale:	AMATA W	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	NA	6	20
Stage Minimum, Percent:			4	4
Stage Maximum, Percent:			6	40
Height, Unit:			4 IN	6 IN
Height Minimum, Maximum:			2 4	1 12
Density, Unit:			0.01 FT2	0.01 FT2
Pest 9 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	NA	4	4
Stage Minimum, Percent:			2	2
Stage Maximum, Percent:			4	6
Height, Unit:			3 IN	1.5 IN
Height Minimum, Maximum:			2 4	1 2
Density, Unit:			0.01 FT2	0.01 FT2
Pest10 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	6	6	8
Stage Minimum, Percent:		2	4	4
Stage Maximum, Percent:		6	6	10
Height, Unit:		6 IN	3 IN	6 IN
Height Minimum, Maximum:		2 8	2 4	2 8
Density, Unit:		0.1 FT2	0.1 FT2	0.05 FT2
Pest11 Code, Type, Scale:	IPOSS W	IPOSS W	IPOSS W	IPOSS W
Stage Majority, Percent:	NA	NA	4	5
Stage Minimum, Percent:			2	2
Stage Maximum, Percent:			4	5
Height, Unit:			2 IN	3 IN
Height Minimum, Maximum:			1 2	1 3
Density, Unit:			0.01 FT2	0.01 FT2

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	10 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 11-8-13 Yield bu/A	HORPU 5-17-13 Control Percent 21 DA-A	ALLVI 5-17-13 Control Percent 21 DA-A	RANAB 5-17-13 Control Percent 21 DA-A	STEME 5-17-13 Control Percent 21 DA-A	SENGL 5-17-13 Control Percent 21 DA-A
1	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	24 a	99 a	95 a	99 a	99 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.2	lb ai/a	7	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	3.44	lb ai/a	2.5	qt/a	PRE	B						
2	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	29 a	99 a	95 a	99 a	99 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
3	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	20 a	99 a	95 a	99 a	99 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
4	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	54 a	99 a	95 a	99 a	99 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
5	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	61 a	99 a	95 a	99 a	99 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	48 a	99 a	95 a	99 a	99 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	TRIPLEFLEX	4.25	EC	1.06	lb ai/a	2	pt/a	EPOST	C						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
7	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPP14	A	27 a	99 a	95 a	99 a	99 a	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
8	PRINCEP CALIBER 90	90	WG	1	lb ai/a	1.11	lb/a	EPP14	A	22 a	99 a	95 a	99 a	99 a	99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPP14	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
9	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	22 a	99 a	95 a	99 a	99 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=6,16,24,23,31,38,45,52

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD	HORPU	ALLVI	RANAB	STEME	SENGL
	Pest Code														
	Crop Code									ZEAMD					
	Rating Date									11-8-13	5-17-13	5-17-13	5-17-13	5-17-13	5-17-13
	Rating Type									Yield	Control	Control	Control	Control	Control
	Rating Unit									bu/A	Percent	Percent	Percent	Percent	Percent
	Rating Timing														
	Trt-Eval Interval										21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A
10	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	23 a	99 a	95 a	99 a	99 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						
11	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	9 a	99 a	95 a	99 a	99 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	BURNDOWN ONLY														
	LSD (P=.05)									43.4	0.0	0.0	0.0	0.0	0.0
	Standard Deviation									24.1	0.0	0.0	0.0	0.0	0.0
	CV									78.43	0.0	0.0	0.0	0.0	0.0
	Replicate F									1.440	0.000	0.000	0.000	0.000	0.000
	Replicate Prob(F)									0.2782	1.0000	1.0000	1.0000	1.0000	1.0000
	Treatment F									1.341	0.000	0.000	0.000	0.000	0.000
	Treatment Prob(F)									0.3178	1.0000	1.0000	1.0000	1.0000	1.0000

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-28-13 Injury Percent 0 DA-C	ZEAMD 7-5-13 Injury Percent 0 DA-D	ZEAMD 7-12-13 Injury Percent 7 DA-D	ZEAMD 7-26-13 Injury Percent 28 DA-C	ZEAMD 8-2-13 Injury Percent 28 DA-D	ZEAMD 8-23-13 Injury Percent 56 DA-C	ZEAMD 8-30-13 Injury Percent 56 DA-D
1	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 a	0 c	5 ab	0 a	0 a	0 a	0 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A							
	INSTIGATE	45.84	WG	0.2	lb ai/a	7	oz/a	PRE	B							
	CINCH ATZ	5.5	SC	3.44	lb ai/a	2.5	qt/a	PRE	B							
2	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 a	0 c	8 a	10 a	8 a	0 a	0 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A							
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B							
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	B							
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D							
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D							
3	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 a	0 c	7 a	0 a	0 a	0 a	0 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A							
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B							
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B							
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D							
4	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 a	0 c	3 ab	0 a	0 a	0 a	0 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A							
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B							
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D							
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D							
5	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 a	0 c	8 a	9 a	3 a	0 a	0 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A							
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B							
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B							
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D							
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 a	4 a	0 b	0 a	0 a	0 a	0 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A							
	TRIPLEFLEX	4.25	EC	1.06	lb ai/a	2	pt/a	EPOST	C							
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C							
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C							
7	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPP14	A	0 a	0 c	7 a	12 a	8 a	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A							
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D							
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D							
8	PRINCEP CALIBER 90	90	WG	1	lb ai/a	1.11	lb/a	EPP14	A	0 a	0 c	0 b	8 a	3 a	0 a	0 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPP14	A							
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A							
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D							
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D							
9	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 a	0 c	0 b	0 a	0 a	0 a	0 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A							
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C							
	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPOST	C							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C							

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-28-13 Injury Percent 0 DA-C	ZEAMD 7-5-13 Injury Percent 0 DA-D	ZEAMD 7-12-13 Injury Percent 7 DA-D	ZEAMD 7-26-13 Injury Percent 28 DA-C	ZEAMD 8-2-13 Injury Percent 28 DA-D	ZEAMD 8-23-13 Injury Percent 56 DA-C	ZEAMD 8-30-13 Injury Percent 56 DA-D
10	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 a	3 b	0 b	8 a	3 a	0 a	0 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A							
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	EPOST	C							
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C							
11	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 a	0 c	0 b	0 a	0 a	0 a	0 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A							
	BURNDOWN ONLY															
LSD (P=.05)										0.0	0.8	5.9	10.4	6.4	0.0	0.0
Standard Deviation										0.0	0.4	3.4	5.9	3.6	0.0	0.0
CV										0.0	64.78	103.07	141.95	168.4	0.0	0.0
Replicate F										0.000	0.650	0.456	1.678	1.394	0.000	0.000
Replicate Prob(F)										1.0000	0.5382	0.6434	0.2248	0.2829	1.0000	1.0000
Treatment F										0.000	36.823	3.058	2.066	2.078	0.000	0.000
Treatment Prob(F)										1.0000	0.0001	0.0312	0.1102	0.1084	1.0000	1.0000

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GGGAN 6-28-13 Control Percent 0 DA-C	GGGAN 7-5-13 Control Percent 0 DA-D	GGGAN 7-26-13 Control Percent 28 DA-C	GGGAN 8-2-13 Control Percent 28 DA-D	GGGAN 8-23-13 Control Percent 56 DA-C	GGGAN 8-30-13 Control Percent 56 DA-D
1	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	97 a	93 ab	77 b	68 c	55 c	53 c
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.2	lb ai/a	7	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	3.44	lb ai/a	2.5	qt/a	PRE	B						
2	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	97 a	96 a	97 a	97 a	90 ab	87 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
3	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	95 a	91 abc	96 a	93 ab	80 b	75 b
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
4	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	96 a	93 a	97 a	97 a	97 a	97 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
5	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	94 a	92 ab	96 a	95 ab	92 ab	92 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 b	83 bc	94 a	89 b	92 ab	90 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	TRIPLEFLEX	4.25	EC	1.06	lb ai/a	2	pt/a	EPOST	C						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
7	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPP14	A	94 a	82 c	97 a	97 a	96 a	95 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
8	PRINCEP CALIBER 90	90	WG	1	lb ai/a	1.11	lb/a	EPP14	A	95 a	92 ab	97 a	96 a	96 a	93 ab
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPP14	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
9	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 b	96 a	96 a	95 ab	93 ab	89 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
Pest Code										GGGAN	GGGAN	GGGAN	GGGAN	GGGAN	GGGAN
Crop Code															
Rating Date										6-28-13	7-5-13	7-26-13	8-2-13	8-23-13	8-30-13
Rating Type										Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										0 DA-C	0 DA-D	28 DA-C	28 DA-D	56 DA-C	56 DA-D
10	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 b	93 a	97 a	96 a	93 ab	90 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						
11	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 b	0 d	0 c	0 d	0 d	0 d
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	BURNDOWN ONLY														
LSD (P=.05)										4.0	9.9	6.4	6.9	13.5	19.4
Standard Deviation										2.3	5.8	3.8	4.1	7.9	11.4
CV										3.87	6.99	4.38	4.82	9.83	14.54
Replicate F										1.604	1.053	0.663	0.633	2.295	2.793
Replicate Prob(F)										0.2258	0.3675	0.5264	0.5414	0.1267	0.0851
Treatment F										1260.255	69.439	180.048	154.795	41.068	19.109
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CYPES 6-28-13 Control Percent 0 DA-C	CYPES 7-5-13 Control Percent 0 DA-D	CYPES 7-26-13 Control Percent 28 DA-C	CYPES 8-2-13 Control Percent 28 DA-D	CYPES 8-23-13 Control Percent 56 DA-C	CYPES 8-30-13 Control Percent 56 DA-D
1	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	98 a	97 a	83 bc	87 a-d	85 ab	85 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.2	lb ai/a	7	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	3.44	lb ai/a	2.5	qt/a	PRE	B						
2	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	97 a	96 a	91 ab	89 a-d	85 ab	85 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
3	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	92 ab	88 ab	82 c	81 cd	67 c	65 c
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
4	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	82 bc	77 bc	95 a	94 a	95 a	94 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
5	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	77 cd	77 bc	94 a	92 ab	91 ab	87 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 f	68 cd	83 bc	85 bcd	83 ab	80 b
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	TRIPLEFLEX	4.25	EC	1.06	lb ai/a	2	pt/a	EPOST	C						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
7	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPP14	A	70 de	57 d	94 a	93 ab	89 ab	87 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
8	PRINCEP CALIBER 90	90	WG	1	lb ai/a	1.11	lb/a	EPP14	A	63 e	57 d	95 a	94 ab	93 a	90 ab
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPP14	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
9	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 f	72 c	92 a	90 abc	87 ab	85 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
Pest Code										CYPES	CYPES	CYPES	CYPES	CYPES	CYPES
Crop Code															
Rating Date										6-28-13	7-5-13	7-26-13	8-2-13	8-23-13	8-30-13
Rating Type										Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										0 DA-C	0 DA-D	28 DA-C	28 DA-D	56 DA-C	56 DA-D
10	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 f	67 cd	82 c	80 d	78 bc	77 bc
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						
11	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 f	0 e	0 d	0 e	0 d	0 d
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	BURNDOWN ONLY														
LSD (P=.05)										11.2	12.6	7.9	9.5	13.4	13.9
Standard Deviation										6.6	7.4	4.6	5.6	7.9	8.2
CV										12.47	10.76	5.71	6.92	10.18	10.73
Replicate F										3.616	4.163	2.601	1.463	0.036	0.717
Replicate Prob(F)										0.0457	0.0308	0.0991	0.2554	0.9651	0.5003
Treatment F										128.816	39.072	105.165	71.235	34.723	31.349
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 6-28-13 Control Percent 0 DA-C	AMATA 7-5-13 Control Percent 0 DA-D	AMATA 7-26-13 Control Percent 28 DA-C	AMATA 8-2-13 Control Percent 28 DA-D	AMATA 8-23-13 Control Percent 56 DA-C	AMATA 8-30-13 Control Percent 56 DA-D
1	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	99 a	95 b	95 b	89 b	88 b
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.2	lb ai/a	7	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	3.44	lb ai/a	2.5	qt/a	PRE	B						
2	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	99 a	99 a	99 a	98 a	97 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
3	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	99 a	99 a	98 a	95 a	93 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
4	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	70 b	67 c	99 a	99 a	98 a	98 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
5	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	87 ab	88 ab	99 a	98 a	98 a	97 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 c	78 bc	98 ab	97 ab	95 a	95 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	TRIPLEFLEX	4.25	EC	1.06	lb ai/a	2	pt/a	EPOST	C						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
7	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPP14	A	70 b	63 c	97 ab	97 ab	97 a	97 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
8	PRINCEP CALIBER 90	90	WG	1	lb ai/a	1.11	lb/a	EPP14	A	76 b	68 c	99 a	99 a	96 a	95 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPP14	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
9	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 c	97 ab	99 a	99 a	98 a	98 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 6-28-13 Control Percent 0 DA-C	AMATA 7-5-13 Control Percent 0 DA-D	AMATA 7-26-13 Control Percent 28 DA-C	AMATA 8-2-13 Control Percent 28 DA-D	AMATA 8-23-13 Control Percent 56 DA-C	AMATA 8-30-13 Control Percent 56 DA-D
10	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 c	98 ab	99 a	98 a	98 a	98 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						
11	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 c	0 d	0 c	0 c	0 c	0 c
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	BURNDOWN ONLY														
LSD (P=.05)										18.0	20.0	2.9	2.5	5.6	6.0
Standard Deviation										10.6	11.7	1.7	1.5	3.3	3.5
CV										19.36	15.04	1.91	1.68	3.77	4.03
Replicate F										1.155	0.907	0.840	1.240	1.218	2.491
Replicate Prob(F)										0.3351	0.4197	0.4463	0.3108	0.3168	0.1082
Treatment F										53.317	19.013	903.608	1176.175	234.015	204.964
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 6-28-13 Control Percent 0 DA-C	ABUTH 7-5-13 Control Percent 0 DA-D	ABUTH 7-26-13 Control Percent 28 DA-C	ABUTH 8-2-13 Control Percent 28 DA-D	ABUTH 8-23-13 Control Percent 56 DA-C	ABUTH 8-30-13 Control Percent 56 DA-D
1	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	99 a	93 b	95 d	89 c	89 b
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.2	lb ai/a	7	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	3.44	lb ai/a	2.5	qt/a	PRE	B						
2	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	99 a	99 a	98 ab	92 abc	91 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
3	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	99 a	97 a	96 bcd	92 bc	92 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
4	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	96 a	95 ab	99 a	98 a	97 ab	97 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
5	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	99 a	98 a	97 abc	94 abc	92 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 c	98 a	99 a	98 a	98 a	98 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	TRIPLEFLEX	4.25	EC	1.06	lb ai/a	2	pt/a	EPOST	C						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
7	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPP14	A	70 b	63 c	98 a	98 ab	98 a	97 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
8	PRINCEP CALIBER 90	90	WG	1	lb ai/a	1.11	lb/a	EPP14	A	76 ab	73 bc	98 a	98 ab	98 a	97 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPP14	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
9	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 c	99 a	98 a	96 a-d	93 abc	92 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
Pest Code										ABUTH	ABUTH	ABUTH	ABUTH	ABUTH	ABUTH
Crop Code															
Rating Date										6-28-13	7-5-13	7-26-13	8-2-13	8-23-13	8-30-13
Rating Type										Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										0 DA-C	0 DA-D	28 DA-C	28 DA-D	56 DA-C	56 DA-D
10	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 c	98 a	97 a	95 cd	93 abc	91 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						
11	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 c	0 d	0 c	0 e	0 d	0 c
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	BURNDOWN ONLY														
LSD (P=.05)										25.3	24.2	2.3	2.5	5.9	7.4
Standard Deviation										14.9	14.2	1.4	1.5	3.4	4.3
CV										25.62	16.95	1.53	1.65	4.01	5.09
Replicate F										0.481	0.244	2.082	1.330	2.664	3.291
Replicate Prob(F)										0.6252	0.7860	0.1509	0.2868	0.0942	0.0581
Treatment F										30.019	13.728	1411.580	1211.545	207.382	128.999
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 6-28-13 Control Percent 0 DA-C	AMBTR 7-5-13 Control Percent 0 DA-D	AMBTR 7-26-13 Control Percent 28 DA-C	AMBTR 8-2-13 Control Percent 28 DA-D	AMBTR 8-23-13 Control Percent 56 DA-C	AMBTR 8-30-13 Control Percent 56 DA-D
1	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	98 a	97 b	94 d	92 b	92 c
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.2	lb ai/a	7	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	3.44	lb ai/a	2.5	qt/a	PRE	B						
2	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	99 a	98 ab	98 ab	97 a	97 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
3	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	99 a	98 ab	97 a-d	94 ab	93 bc
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
4	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	63 b	63 b	98 ab	99 a	98 a	98 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
5	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	99 a	98 ab	98 abc	97 a	96 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 c	94 a	98 ab	98 ab	97 a	97 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	TRIPLEFLEX	4.25	EC	1.06	lb ai/a	2	pt/a	EPOST	C						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
7	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPP14	A	73 b	67 b	99 a	99 a	98 a	98 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
8	PRINCEP CALIBER 90	90	WG	1	lb ai/a	1.11	lb/a	EPP14	A	63 b	53 b	98 ab	98 ab	97 a	96 ab
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPP14	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
9	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 c	98 a	97 ab	95 bcd	95 ab	96 abc
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
Pest Code										AMBTR	AMBTR	AMBTR	AMBTR	AMBTR	AMBTR
Crop Code															
Rating Date										6-28-13	7-5-13	7-26-13	8-2-13	8-23-13	8-30-13
Rating Type										Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										0 DA-C	0 DA-D	28 DA-C	28 DA-D	56 DA-C	56 DA-D
10	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 c	97 a	96 b	94 cd	94 ab	95 abc
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						
11	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 c	0 c	0 c	0 e	0 c	0 d
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	BURNDOWN ONLY														
LSD (P=.05)										19.6	20.8	2.1	3.5	3.7	4.2
Standard Deviation										11.5	12.2	1.2	2.0	2.2	2.5
CV										21.25	15.51	1.36	2.31	2.5	2.86
Replicate F										1.813	1.593	1.294	0.492	0.706	0.356
Replicate Prob(F)										0.1889	0.2281	0.2963	0.6189	0.5055	0.7048
Treatment F										46.022	19.665	1772.694	622.977	528.397	404.294
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOSS 6-28-13 Control Percent 0 DA-C	IPOSS 7-5-13 Control Percent 0 DA-D	IPOSS 7-26-13 Control Percent 28 DA-C	IPOSS 8-2-13 Control Percent 28 DA-D	IPOSS 8-23-13 Control Percent 56 DA-C	IPOSS 8-30-13 Control Percent 56 DA-D
1	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	98 a	91 ab	89 a	88 ab	87 abc
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.2	lb ai/a	7	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	3.44	lb ai/a	2.5	qt/a	PRE	B						
2	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	98 a	95 ab	88 a	77 b	75 c
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
3	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	98 a	92 ab	90 a	77 b	77 bc
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
4	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	73 ab	63 bc	96 a	94 a	94 a	95 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
5	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	99 a	95 a	93 ab	92 a	93 a	93 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	B						
	CINCH ATZ	5.5	SC	2.06	lb ai/a	1.5	qt/a	PRE	B						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 d	78 ab	88 b	86 a	86 ab	86 abc
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	TRIPLEFLEX	4.25	EC	1.06	lb ai/a	2	pt/a	EPOST	C						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
7	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPP14	A	43 c	42 c	94 ab	91 a	92 a	93 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
8	PRINCEP CALIBER 90	90	WG	1	lb ai/a	1.11	lb/a	EPP14	A	53 bc	53 bc	93 ab	91 a	85 ab	86 abc
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPP14	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	D						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	POST	D						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	D						
9	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 d	93 a	94 ab	90 a	85 ab	82 abc
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	EPOST	C						
	CINCH ATZ	5.5	SC	1.38	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
Pest Code										IPOSS	IPOSS	IPOSS	IPOSS	IPOSS	IPOSS
Crop Code															
Rating Date										6-28-13	7-5-13	7-26-13	8-2-13	8-23-13	8-30-13
Rating Type										Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										0 DA-C	0 DA-D	28 DA-C	28 DA-D	56 DA-C	56 DA-D
10	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 d	97 a	93 ab	94 a	92 a	90 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	EPOST	C						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	EPOST	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPOST	C						
11	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP14	A	0 d	0 d	0 c	0 b	0 c	0 d
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	EPP14	A						
	BURNDOWN ONLY														
LSD (P=.05)										28.5	27.2	7.2	9.1	13.1	13.6
Standard Deviation										16.7	16.0	4.2	5.4	7.7	8.0
CV										32.56	21.55	4.99	6.5	9.71	10.19
Replicate F										2.033	1.912	0.771	0.017	2.535	2.991
Replicate Prob(F)										0.1571	0.1738	0.4756	0.9832	0.1044	0.0731
Treatment F										21.579	11.916	132.938	78.631	36.800	33.720
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

DuPont Crop Protection Demonstration in Corn.

Trial ID: 13-11B-E70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-13-296).
2. Ratings: CI 0 DA-C and 0 DA-D, 7-14DA-C and 7-14 DA-D.
   WC 0 DA-C and 0 DA-D, 28 DA-C, 28 DA-D, 56 DA-C, and 56 DA-D.
3. Special instructions at application A; Abundit Extra and 2,4-D can be applied from
   a bulk can except for treatments 7 and 8. Application A is 10 ft wide.
   The planned planting date (5-10-13) was delayed (6-15-13) due to wet soil conditions.
   Prior to planting a blanket PRE application of Abundit Extra (32 floz/A) plus N-Pak (2.5%)
   was applied to control weeds that had emerged since the EPP14 application (4-26-13).
4. Blanket late POST application of Aproach (6 floz/A) plus Prevathon (14 floz/A), no adjuvants,
   at VT to all plots 10 ft wide.
5. Yield?
6. GGGAN = Annual grasses including 50% SETFA (giant foxtail) and 50% PANDI (fall panicum).
   IPOSS = Morningglory species including 70% IPOHE (ivyleaf morningglory)
   and 30% IPOLA (pitted morningglory).
7. Missing crop injury data in some plots was due to delayed emergence due to standing water.
   Corn yield was reduced due to reduced stand caused by early season standing water.
8. Harvested 11-8-13, (2) 30 inch rows by 28 ft.

Wilbur-Ellis No-Till Corn Burndown Programs.

Trial ID: 13-11A-E120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-13-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate and compare adjuvants with alternative herbicides for burndown applications in corn.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33 **BBCH Scale:** BCOR
Description: SS RIB
Planting Date: 6-15-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** HORPU Hordeum pusillum Nutt.
Common Name: barley, little

Pest 2 Type: W **Code:** SENGL Senecio glabellus Poir.
Common Name: groundsel, cressleaf

Pest 3 Type: W **Code:** STEME Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 4 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 5 Type: W **Code:** PANDI Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Pest 6 Type: W **Code:** CYPES Cyperus esculentus L.
Common Name: nutsedge, yellow

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 31 FT **Total Plot Length:** 31 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 0 LB/A, K2O 100 LB/A

Soil Description

% OM: 2.9 **Texture:** SIL silt loam
pH: 6.8 **Soil Name:** Pierron
CEC: 9

Additional Measured Elements

Element	Quantity	Unit
P1	72	lb/A
K	345	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Wilbur-Ellis No-Till Corn Burndown Programs.

Trial ID: 13-11A-E120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-7-13					7	DAY	34	82	F
2.	4-10-13	1.4	IN	RAIN	rain	2	DAY			
3.	4-14-13					7	DAY	31	82	F
4.	4-16-13	1.05	IN	RAIN	rain	2	DAY			
5.	4-18-13	5.2	IN	RAIN	rain	1	DAY			
6.	4-21-13					7	DAY	35	72	F
7.	4-23-13	1.35	IN	RAIN	rain	2	DAY			
8.	4-27-13	0.3	IN	RAIN	rain	2	DAY			
9.	4-28-13					7	DAY	41	83	F
10.	5-3-13	3.07	IN	RAIN	rain	4	DAY			
11.	5-5-13					7	DAY	46	80	F
12.	5-9-13	0.35	IN	RAIN	rain	2	DAY			
13.	5-12-13					7	DAY	39	92	F
14.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
15.	5-19-13					7	DAY	45	88	F
16.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
17.	5-26-13					7	DAY	56	86	F
18.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
19.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
20.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
21.	6-2-13					7	DAY	50	80	F
22.	6-9-13					7	DAY	59	94	F
23.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
24.	6-16-13					7	DAY	61	90	F
25.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
26.	6-23-13					7	DAY	64	92	F
27.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
28.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
29.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
30.	6-30-13					7	DAY	61	86	F

Application Description

	A
Application Date:	5-13-13
Appl. Start Time:	12:00
Appl. Stop Time:	13:00
Application Method:	Spray
Application Timing:	14EPP
Application Placement:	BROFOL
Applied By:	RFK
Air Temperature, Unit:	66 F
% Relative Humidity:	33
Wind Velocity, Unit:	1 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	60 F
Soil Moisture:	ABONOR
% Cloud Cover:	0
Next Moisture Occurred On:	5-16-13
Time to Next Moisture, Unit:	3 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Wilbur-Ellis No-Till Corn Burndown Programs.

Trial ID: 13-11A-E120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	HORPU W
Stage Majority, Percent:	6
Stage Minimum, Percent:	5
Stage Maximum, Percent:	6
Height, Unit:	12 IN
Height Minimum, Maximum:	10 12
Density, Unit:	3 FT2
Pest 2 Code, Type, Scale:	SENGL W
Stage Majority, Percent:	10+
Stage Minimum, Percent:	10
Stage Maximum, Percent:	10+
Height, Unit:	20 IN
Height Minimum, Maximum:	12 40
Density, Unit:	0.1 FT2
Pest 3 Code, Type, Scale:	STEME W
Stage Majority, Percent:	10+
Stage Minimum, Percent:	10
Stage Maximum, Percent:	10+
Height, Unit:	4 IN
Height Minimum, Maximum:	2 6
Density, Unit:	1 FT2
Pest 4 Code, Type, Scale:	AMBTR W
Stage Majority, Percent:	6
Stage Minimum, Percent:	5
Stage Maximum, Percent:	6
Height, Unit:	4 IN
Height Minimum, Maximum:	3 4
Density, Unit:	0.01 FT2
Pest 5 Code, Type, Scale:	PANDI W
Stage Majority, Percent:	NA
Pest 6 Code, Type, Scale:	CYPES W
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	17 GPA

Wilbur-Ellis No-Till Corn Burndown Programs.

Trial ID: 13-11A-E120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	HORPU 5-27-13 Control Percent 14 DA-A	HORPU 6-10-13 Control Percent 28 DA-A	SENGL 5-27-13 Control Percent 14 DA-A	STEME 5-27-13 Control Percent 14 DA-A	AMBTR 5-27-13 Control Percent 14 DA-A	AMBTR 6-10-13 Control Percent 28 DA-A	AMBTR 6-24-13 Control Percent 42 DA-A
1	LUMAX EZ	3.764	SE	1.41	lb ai/a	3	pt/a	14EPP	A	6 de	99 a	99 a	99 a	90 a	81 a	71 ab
	WE1442-1	100	SL	40	fl oz/a	40	fl oz/a	14EPP	A							
2	LUMAX EZ	3.764	SE	1.41	lb ai/a	3	pt/a	14EPP	A	13 d	99 a	99 a	99 a	90 a	86 a	73 ab
	WE1258-1	100	SL	1	pt/a	1	pt/a	14EPP	A							
3	LUMAX EZ	3.764	SE	1.41	lb ai/a	3	pt/a	14EPP	A	13 d	99 a	99 a	99 a	90 a	91 a	75 a
	WE1177-1	100	SL	8	fl oz/a	8	fl oz/a	14EPP	A							
4	LUMAX EZ	3.764	SE	1.41	lb ai/a	3	pt/a	14EPP	A	6 de	99 a	99 a	99 a	90 a	88 a	78 a
	WE1095-1	100	SL	10	fl oz/a	10	fl oz/a	14EPP	A							
5	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	99 a	99 a	99 a	99 a	0 c	0 c	23 d
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A							
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A							
	WE1442-1	100	SL	40	fl oz/a	40	fl oz/a	14EPP	A							
6	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	96 ab	99 a	99 a	99 a	90 a	54 b	53 bc
	AATREX NINE-O	90	WG	0.315	lb ai/a	0.35	lb/a	14EPP	A							
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A							
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A							
	WE1442-1	100	SL	40	fl oz/a	40	fl oz/a	14EPP	A							
7	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	97 ab	99 a	99 a	99 a	0 c	0 c	13 de
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A							
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A							
	WE1258-1	100	SL	1	pt/a	1	pt/a	14EPP	A							
8	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	62 c	99 a	99 a	99 a	90 a	20 c	45 c
	AATREX NINE-O	90	WG	0.315	lb ai/a	0.35	lb/a	14EPP	A							
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A							
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A							
	WE1258-1	100	SL	1	pt/a	1	pt/a	14EPP	A							
9	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	92 ab	99 a	99 a	99 a	0 c	0 c	20 de
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A							
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A							
	WE1177-1	100	SL	8	fl oz/a	8	fl oz/a	14EPP	A							
10	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	85 b	99 a	99 a	99 a	90 a	76 a	60 abc
	AATREX NINE-O	90	WG	0.315	lb ai/a	0.35	lb/a	14EPP	A							
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A							
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A							
	WE1177-1	100	SL	8	fl oz/a	8	fl oz/a	14EPP	A							
11	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	99 a	99 a	99 a	99 a	0 c	0 c	8 de
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A							
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A							
	WE1095-1	100	SL	10	fl oz/a	10	fl oz/a	14EPP	A							
12	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	94 ab	99 a	99 a	99 a	90 a	76 a	50 c
	AATREX NINE-O	90	WG	0.315	lb ai/a	0.35	lb/a	14EPP	A							
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A							
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A							
	WE1095-1	100	SL	10	fl oz/a	10	fl oz/a	14EPP	A							
13	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	99 a	99 a	99 a	99 a	0 c	0 c	10 de
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A							
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A							
	WE1279-2	100	SL	5	fl oz/a	5	fl oz/a	14EPP	A							

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Wilbur-Ellis No-Till Corn Burndown Programs.

Trial ID: 13-11A-E120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code										HORPU	HORPU	SENGL	STEME	AMBTR	AMBTR	AMBTR
Crop Code																
Rating Date										5-27-13	6-10-13	5-27-13	5-27-13	5-27-13	6-10-13	6-24-13
Rating Type										Control	Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing																
Trt-Eval Interval										14 DA-A	28 DA-A	14 DA-A	14 DA-A	14 DA-A	28 DA-A	42 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
14	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	95 ab	99 a	99 a	99 a	45 b	73 ab	63 abc
	AATREX NINE-O	90	WG	0.315	lb ai/a	0.35	lb/a	14EPP	A							
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A							
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A							
	WE1279-2	100	SL	5	fl oz/a	5	fl oz/a	14EPP	A							
15	NONTREATED									0 e	0 a	0 a	0 a	0 c	0 c	0 e
LSD (P=.05)										12.3	0.0	0.0	0.0	19.2	20.5	20.4
Standard Deviation										8.6	0.0	0.0	0.0	13.4	14.4	14.2
CV										13.52	0.0	0.0	0.0	26.31	33.4	33.45
Replicate F										7.667	0.000	0.000	0.000	1.000	2.505	3.156
Replicate Prob(F)										0.0003	1.0000	1.0000	1.0000	0.4023	0.0721	0.0345
Treatment F										95.945	0.000	0.000	0.000	44.143	31.116	15.165
Treatment Prob(F)										0.0001	1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

Wilbur-Ellis No-Till Corn Burndown Programs.

Trial ID: 13-11A-E120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	PANDI 6-10-13 Control Percent 28 DA-A	PANDI 6-24-13 Control Percent 42 DA-A	CYPES 6-24-13 Control Percent 42 DA-A
1	LUMAX EZ	3.764	SE	1.41	lb ai/a	3	pt/a	14EPP	A	90 a	43 a-d	5 a
	WE1442-1	100	SL	40	fl oz/a	40	fl oz/a	14EPP	A			
2	LUMAX EZ	3.764	SE	1.41	lb ai/a	3	pt/a	14EPP	A	89 ab	45 a-d	8 a
	WE1258-1	100	SL	1	pt/a	1	pt/a	14EPP	A			
3	LUMAX EZ	3.764	SE	1.41	lb ai/a	3	pt/a	14EPP	A	88 ab	50 abc	5 a
	WE1177-1	100	SL	8	fl oz/a	8	fl oz/a	14EPP	A			
4	LUMAX EZ	3.764	SE	1.41	lb ai/a	3	pt/a	14EPP	A	90 a	60 a	13 a
	WE1095-1	100	SL	10	fl oz/a	10	fl oz/a	14EPP	A			
5	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	0 d	0 f	0 a
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A			
	WE1442-1	100	SL	40	fl oz/a	40	fl oz/a	14EPP	A			
6	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	85 ab	43 a-d	10 a
	AATREX NINE-O	90	WG	0.315	lb ai/a	0.35	lb/a	14EPP	A			
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A			
	WE1442-1	100	SL	40	fl oz/a	40	fl oz/a	14EPP	A			
7	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	0 d	13 ef	13 a
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A			
	WE1258-1	100	SL	1	pt/a	1	pt/a	14EPP	A			
8	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	58 c	35 cd	13 a
	AATREX NINE-O	90	WG	0.315	lb ai/a	0.35	lb/a	14EPP	A			
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A			
	WE1258-1	100	SL	1	pt/a	1	pt/a	14EPP	A			
9	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	0 d	0 f	0 a
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A			
	WE1177-1	100	SL	8	fl oz/a	8	fl oz/a	14EPP	A			
10	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	78 ab	55 ab	5 a
	AATREX NINE-O	90	WG	0.315	lb ai/a	0.35	lb/a	14EPP	A			
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A			
	WE1177-1	100	SL	8	fl oz/a	8	fl oz/a	14EPP	A			
11	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	0 d	8 f	0 a
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A			
	WE1095-1	100	SL	10	fl oz/a	10	fl oz/a	14EPP	A			
12	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	60 c	28 de	5 a
	AATREX NINE-O	90	WG	0.315	lb ai/a	0.35	lb/a	14EPP	A			
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A			
	WE1095-1	100	SL	10	fl oz/a	10	fl oz/a	14EPP	A			
13	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	0 d	0 f	0 a
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A			
	WE1279-2	100	SL	5	fl oz/a	5	fl oz/a	14EPP	A			

Wilbur-Ellis No-Till Corn Burndown Programs.

Trial ID: 13-11A-E120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	PANDI	PANDI	CYPES
	Pest Code									PANDI	PANDI	CYPES
	Crop Code											
	Rating Date									6-10-13	6-24-13	6-24-13
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing											
	Trt-Eval Interval									28 DA-A	42 DA-A	42 DA-A
14	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	14EPP	A	75 b	40 bcd	0 a
	AATREX NINE-O	90	WG	0.315	lb ai/a	0.35	lb/a	14EPP	A			
	BASE CAMP AMINE 4	3.8	EC	0.356	lb ae/a	0.75	pt/a	14EPP	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14EPP	A			
	WE1279-2	100	SL	5	fl oz/a	5	fl oz/a	14EPP	A			
15	NONTREATED									0 d	0 f	0 a
	LSD (P=.05)									13.9	18.7	13.8
	Standard Deviation									9.8	13.1	9.6
	CV									20.58	47.14	192.56
	Replicate F									0.331	1.636	4.339
	Replicate Prob(F)									0.8029	0.1954	0.0094
	Treatment F									71.325	11.512	1.079
	Treatment Prob(F)									0.0001	0.0001	0.4028

Southern Illinois University

Wilbur-Ellis No-Till Corn Burndown Programs.

Trial ID: 13-11A-E120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Wilbur-Ellis (1027-1302).
2. Ratings: WC 14, 28, and 42 DA-A.
3. Possible blanket application after the last evaluation, if desired.
4. Yield not requested.
5. On 6-10-13 at 28 DA-A SENGL and STEME were senescing naturally
   in the nontreated plots and could no longer be evaluated.
   On 6-24-13 at 42 DA-A HORPU was senescing naturally
   in the nontreated plots and could no longer be evaluated.
   Emergence of summer annual weeds was reduced by a dense mat of winter annual weeds in some plots.
6. Not harvested.

Fierce and Harrow in No-Till Corn.

Trial ID: 13-5C Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-1-13
Completion Date: 8-10-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the efficacy of Fierce and Harrow in No-Till Corn.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33 **BBCH Scale:** BCOR
Description: SS RIB
Planting Date: 6-15-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** HORPU Hordeum pusillum Nutt.
Common Name: barley, little

Pest 2 Type: W **Code:** RANAB Ranunculus abortivus L.
Common Name: buttercup, smallflower

Pest 3 Type: W **Code:** STEME Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 4 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 5 Type: W **Code:** XANST Xanthium strumarium L.
Common Name: cocklebur, common

Pest 6 Type: W **Code:** PANDI Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.6 **Texture:** SIL silt loam
pH: 7.2 **Soil Name:** Pierron
CEC: 7

Additional Measured Elements

Element	Quantity	Unit
P1	48	lb/A
K	247	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Fierce and Harrow in No-Till Corn.

Trial ID: 13-5C Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-7-13					7	DAY	34	82	F
2.	4-10-13	1.4	IN	RAIN	rain	2	DAY			
3.	4-14-13					7	DAY	31	82	F
4.	4-16-13	1.05	IN	RAIN	rain	2	DAY			
5.	4-18-13	5.2	IN	RAIN	rain	1	DAY			
6.	4-21-13					7	DAY	35	72	F
7.	4-23-13	1.35	IN	RAIN	rain	2	DAY			
8.	4-27-13	0.3	IN	RAIN	rain	2	DAY			
9.	4-28-13					7	DAY	41	83	F
10.	5-3-13	3.07	IN	RAIN	rain	4	DAY			
11.	5-5-13					7	DAY	46	80	F
12.	5-9-13	0.35	IN	RAIN	rain	2	DAY			
13.	5-12-13					7	DAY	39	92	F
14.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
15.	5-19-13					7	DAY	45	88	F
16.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
17.	5-26-13					7	DAY	56	86	F
18.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
19.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
20.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
21.	6-2-13					7	DAY	50	80	F
22.	6-9-13					7	DAY	59	94	F
23.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
24.	6-16-13					7	DAY	61	90	F
25.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
26.	6-23-13					7	DAY	64	92	F
27.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
28.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
29.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
30.	6-30-13					7	DAY	61	86	F
31.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
32.	7-7-13					7	DAY	62	94	F
33.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
34.	7-14-13					7	DAY	64	94	F
35.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
36.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
37.	7-21-13					7	DAY	56	91	F
38.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
39.	7-28-13					7	DAY	52	87	F
40.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
41.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
42.	8-4-13					7	DAY	62	87	F
43.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
44.	8-11-13					7	DAY	54	85	F
45.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
46.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
47.	8-18-13					7	DAY	61	91	F
48.	8-25-13					7	DAY	62	100	F
49.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
50.	9-1-13					7	DAY	57	92	F
51.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Fierce and Harrow in No-Till Corn.

Trial ID: 13-5C Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Description

	A
Application Date:	5-1-13
Appl. Start Time:	8:30
Appl. Stop Time:	9:00
Application Method:	Spray
Application Timing:	7DBP
Application Placement:	BROFOL
Applied By:	RFK
Air Temperature, Unit:	73 F
% Relative Humidity:	64
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	N
Soil Temperature, Unit:	60 F
Soil Moisture:	ABONOR
% Cloud Cover:	0
Next Moisture Occurred On:	5-2-13
Time to Next Moisture, Unit:	33 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	HORPU W
Stage Majority, Percent:	6
Stage Minimum, Percent:	5
Stage Maximum, Percent:	6
Height, Unit:	6 IN
Height Minimum, Maximum:	4 8
Density, Unit:	5 FT2
Pest 2 Code, Type, Scale:	RANAB W
Stage Majority, Percent:	10+
Stage Minimum, Percent:	10
Stage Maximum, Percent:	10+
Height, Unit:	12 IN
Height Minimum, Maximum:	12 14
Density, Unit:	0.1 FT2
Pest 3 Code, Type, Scale:	STEME W
Stage Majority, Percent:	10+
Stage Minimum, Percent:	10
Stage Maximum, Percent:	10+
Height, Unit:	4 IN
Height Minimum, Maximum:	4 5
Density, Unit:	0.1 FT2
Pest 4 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	NA
Pest 5 Code, Type, Scale:	XANST W
Stage Majority, Percent:	NA
Pest 6 Code, Type, Scale:	PANDI W
Stage Majority, Percent:	NA

Southern Illinois University

Fierce and Harrow in No-Till Corn.

Trial ID: 13-5C Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Fierce and Harrow in No-Till Corn.

Trial ID: 13-5C Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-29-13 Injury Percent 14 DAP 59 DA-A	ZEAMD 7-13-13 Injury Percent 28 DAP 73 DA-A	ZEAMD 7-27-13 Injury Percent 42 DAP 87 DA-A	HORPU 5-15-13 Control Percent 14 DA-A	HORPU 5-29-13 Control Percent 28 DA-A	RANAB 5-15-13 Control Percent 14 DA-A
1	NONTREATED									0 a	0 a	0 a	0 c	0 a	0 a
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	0 a	0 a	0 a	99 a	99 a	99 a
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	7DBP	A						
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	0 a	0 a	0 a	99 a	99 a	99 a
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	7DBP	A						
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
4	LEXAR EZ	3.7	SC	1.85	lb ai/a	2	qt/a	7DBP	A	0 a	0 a	0 a	94 b	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
5	HARROW	75	WG	0.0117	lb ai/a	0.25	oz/a	7DBP	A	0 a	0 a	0 a	99 a	99 a	99 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
6	HARROW	75	WG	0.0234	lb ai/a	0.50	oz/a	7DBP	A	0 a	0 a	0 a	99 a	99 a	99 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
7	HARROW	75	WG	0.047	lb ai/a	1	oz/a	7DBP	A	0 a	0 a	0 a	99 a	99 a	99 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
8	BASIS	75	WG	0.0234	lb ai/a	0.50	oz/a	7DBP	A	0 a	0 a	0 a	99 a	99 a	99 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
9	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A	0 a	0 a	0 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
LSD (P=.05)										0.0	0.0	0.0	1.2	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.8	0.0	0.0
CV										0.0	0.0	0.0	0.95	0.0	0.0
Replicate F										0.000	0.000	0.000	1.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	0.4098	1.0000	1.0000
Treatment F										0.000	0.000	0.000	6207.121	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Fierce and Harrow in No-Till Corn.

Trial ID: 13-5C Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	STEME	AMATA	AMATA	AMATA	AMATA	AMATA
	Pest Code									STEME	AMATA	AMATA	AMATA	AMATA	AMATA
	Crop Code														
	Rating Date									5-15-13	5-29-13	6-12-13	7-13-13	7-27-13	8-10-13
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing												28 DAP	42 DAP	56 DAP
	Trt-Eval Interval									14 DA-A	28 DA-A	42 DA-A	73 DA-A	87 DA-A	101 DA-A
1	NONTREATED									0 a	0 b	0 c	0 c	0 c	0 c
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	99 a	99 a	92 a	75 a	59 a	51 a
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	7DBP	A						
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	99 a	99 a	90 ab	53 ab	41 ab	41 ab
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	7DBP	A						
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A						
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
4	LEXAR EZ	3.7	SC	1.85	lb ai/a	2	qt/a	7DBP	A	99 a	74 a	64 ab	33 bc	18 bc	18 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
5	HARROW	75	WG	0.0117	lb ai/a	0.25	oz/a	7DBP	A	99 a	50 ab	40 bc	15 bc	5 c	5 c
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
6	HARROW	75	WG	0.0234	lb ai/a	0.50	oz/a	7DBP	A	99 a	72 a	66 ab	35 abc	23 bc	23 bc
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
7	HARROW	75	WG	0.047	lb ai/a	1	oz/a	7DBP	A	99 a	97 a	75 ab	30 bc	8 c	6 c
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
8	BASIS	75	WG	0.0234	lb ai/a	0.50	oz/a	7DBP	A	99 a	72 a	53 ab	20 bc	8 c	3 c
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
9	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A	99 a	68 a	61 ab	8 c	5 c	1 c
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
	LSD (P=.05)									0.0	56.6	49.7	41.1	29.7	28.6
	Standard Deviation									0.0	38.8	34.1	28.2	20.4	19.6
	CV									0.0	55.42	56.8	94.79	111.15	119.41
	Replicate F									0.000	0.243	0.258	1.123	0.459	0.486
	Replicate Prob(F)									1.0000	0.8653	0.8548	0.3593	0.7132	0.6952
	Treatment F									0.000	2.575	2.681	2.704	3.737	3.649
	Treatment Prob(F)									1.0000	0.0348	0.0293	0.0282	0.0057	0.0065

Fierce and Harrow in No-Till Corn.

Trial ID: 13-5C Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	XANST 5-29-13 Control Percent 28 DA-A	XANST 6-12-13 Control Percent 42 DA-A	XANST 7-13-13 Control Percent 28 DAP 73 DA-A	XANST 7-27-13 Control Percent 42 DAP 87 DA-A	XANST 8-10-13 Control Percent 56 DAP 101 DA-A
1	NONTREATED									0 c	0 b	0 d	0 d	0 d
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	90 ab	79 a	44 bc	20 cd	18 cd
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	7DBP	A					
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A					
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	90 ab	80 a	71 ab	41 c	34 c
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	7DBP	A					
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A					
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	7DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A					
4	LEXAR EZ	3.7	SC	1.85	lb ai/a	2	qt/a	7DBP	A	82 ab	66 a	70 ab	35 c	33 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A					
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	7DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A					
5	HARROW	75	WG	0.0117	lb ai/a	0.25	oz/a	7DBP	A	68 b	65 a	53 bc	25 cd	15 cd
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A					
6	HARROW	75	WG	0.0234	lb ai/a	0.50	oz/a	7DBP	A	94 ab	84 a	74 ab	45 bc	40 bc
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A					
7	HARROW	75	WG	0.047	lb ai/a	1	oz/a	7DBP	A	98 a	96 a	90 a	84 a	78 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A					
8	BASIS	75	WG	0.0234	lb ai/a	0.50	oz/a	7DBP	A	92 ab	92 a	88 a	79 ab	69 ab
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A					
9	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A	80 ab	65 a	38 c	20 cd	15 cd
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A					
LSD (P=.05)										27.1	40.4	32.5	33.9	31.7
Standard Deviation										18.6	27.7	22.2	23.2	21.7
CV										24.1	39.71	38.05	59.84	65.2
Replicate F										0.769	0.825	0.675	1.468	1.502
Replicate Prob(F)										0.5229	0.4931	0.5759	0.2483	0.2394
Treatment F										10.639	4.245	6.543	5.678	5.595
Treatment Prob(F)										0.0001	0.0027	0.0002	0.0004	0.0005

Fierce and Harrow in No-Till Corn.

Trial ID: 13-5C Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	PANDI 6-12-13 Control Percent 42 DA-A	PANDI 7-13-13 Control Percent 28 DAP 73 DA-A	PANDI 7-27-13 Control Percent 42 DAP 87 DA-A	PANDI 8-10-13 Control Percent 56 DAP 101 DA-A
1	NONTREATED									0 c	0 e	0 c	0 d
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	90 ab	45 bcd	25 bc	21 bcd
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	7DBP	A				
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A				
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A				
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	95 a	30 cde	18 bc	14 cd
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	7DBP	A				
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A				
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	7DBP	A				
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A				
4	LEXAR EZ	3.7	SC	1.85	lb ai/a	2	qt/a	7DBP	A	72 ab	45 bcd	20 bc	15 cd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A				
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	7DBP	A				
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A				
5	HARROW	75	WG	0.0117	lb ai/a	0.25	oz/a	7DBP	A	95 a	30 cde	18 bc	13 cd
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A				
6	HARROW	75	WG	0.0234	lb ai/a	0.50	oz/a	7DBP	A	97 a	60 abc	45 ab	43 ab
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A				
7	HARROW	75	WG	0.047	lb ai/a	1	oz/a	7DBP	A	99 a	88 a	71 a	68 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A				
8	BASIS	75	WG	0.0234	lb ai/a	0.50	oz/a	7DBP	A	99 a	75 ab	40 b	31 bc
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A				
9	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	7DBP	A	60 b	13 de	5 c	9 cd
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A				
LSD (P=.05)										31.7	38.0	28.9	26.9
Standard Deviation										21.7	26.0	19.8	18.4
CV										27.73	60.81	73.83	77.98
Replicate F										1.526	0.597	0.824	1.931
Replicate Prob(F)										0.2332	0.6234	0.4933	0.1515
Treatment F										8.857	4.743	4.975	5.044
Treatment Prob(F)										0.0001	0.0014	0.0010	0.0009

Southern Illinois University

Fierce and Harrow in No-Till Corn.

Trial ID: 13-5C Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Valent (Fierce 68.01), Cheminova (RIM2THI1301).
2. Ratings: CI 14, 28, and 42 DAP. WC 14, 28, and 42 DA-A, and 28, 42, and 56 DAP rate all plots each time.
3. Blanket POST application of Glyphosate (0.77 lbae/A) to be applied at 42 DAP, after the 42 DAP rating.
   The planned POST blanket application could not be made because corn was too tall by 42 DAP.
4. Yield.
5. On 5-29-13 at 28 DA-A RANAB and STEME were senescing naturally
   in the nontreated plots and could no longer be evaluated.
   On 6-12-13 at 42 DA-A HORPU was senescing naturally
   in the nontreated plots and could no longer be evaluated.
   Emergence of summer annual weeds was reduced by a dense mat of winter annual weeds in some plots.
6. Trial was not yielded due to extremely poor corn stand from early season flooding.

No-Till Soybean Weed Control Studies

Southern Illinois University

Wilbur-Ellis No-Till Soybean Burndown Programs.

Trial ID: 13-5A Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-13-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate and compare adjuvants with alternative herbicides for burndown applications in soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 5-27-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** HORPU Hordeum pusillum Nutt.
Common Name: barley, little

Pest 2 Type: W **Code:** STEME Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 3 Type: W **Code:** ERICA Conyza canadensis (L.) Crong.
Common Name: horseweed

Pest 4 Type: W **Code:** SETFA Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 5 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 26 FT **Total Plot Length:** 26 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	SORVU	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 2.4 **Texture:** SIL silt loam
pH: 6.9 **Soil Name:** Winfield
CEC: 7

Additional Measured Elements

Element	Quantity	Unit
P1	83	lb/A
K	352	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Wilbur-Ellis No-Till Soybean Burndown Programs.

Trial ID: 13-5A Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-7-13					7	DAY	34	82	F
2.	4-10-13	1.4	IN	RAIN	rain	2	DAY			
3.	4-14-13					7	DAY	31	82	F
4.	4-16-13	1.05	IN	RAIN	rain	2	DAY			
5.	4-18-13	5.2	IN	RAIN	rain	1	DAY			
6.	4-21-13					7	DAY	35	72	F
7.	4-23-13	1.35	IN	RAIN	rain	2	DAY			
8.	4-27-13	0.3	IN	RAIN	rain	2	DAY			
9.	4-28-13					7	DAY	41	83	F
10.	5-3-13	3.07	IN	RAIN	rain	4	DAY			
11.	5-5-13					7	DAY	46	80	F
12.	5-9-13	0.35	IN	RAIN	rain	2	DAY			
13.	5-12-13					7	DAY	39	92	F
14.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
15.	5-19-13					7	DAY	45	88	F
16.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
17.	5-26-13					7	DAY	56	86	F
18.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
19.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
20.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
21.	6-2-13					7	DAY	50	80	F
22.	6-9-13					7	DAY	59	94	F
23.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
24.	6-16-13					7	DAY	61	90	F
25.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
26.	6-23-13					7	DAY	64	92	F
27.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
28.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
29.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
30.	6-30-13					7	DAY	61	86	F

Application Description

	A
Application Date:	5-13-13
Appl. Start Time:	14:00
Appl. Stop Time:	14:30
Application Method:	Spray
Application Timing:	14DBP
Application Placement:	BROFOL
Applied By:	RFK
Air Temperature, Unit:	69 F
% Relative Humidity:	31
Wind Velocity, Unit:	1 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	60 F
Soil Moisture:	ABONOR
% Cloud Cover:	0
Next Moisture Occurred On:	5-16-13
Time to Next Moisture, Unit:	3 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Wilbur-Ellis No-Till Soybean Burndown Programs.

Trial ID: 13-5A Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	HORPU W
Stage Majority, Percent:	6
Stage Minimum, Percent:	5
Stage Maximum, Percent:	7
Height, Unit:	20 IN
Height Minimum, Maximum:	12 24
Density, Unit:	3 FT2
Pest 2 Code, Type, Scale:	STEME W
Stage Majority, Percent:	10+
Stage Minimum, Percent:	10
Stage Maximum, Percent:	10+
Height, Unit:	6 IN
Height Minimum, Maximum:	4 6
Density, Unit:	2 FT2
Pest 3 Code, Type, Scale:	ERICA W
Stage Majority, Percent:	10+
Stage Minimum, Percent:	10
Stage Maximum, Percent:	10+
Height, Unit:	6 IN
Height Minimum, Maximum:	4 10
Density, Unit:	0.01 FT2
Pest 4 Code, Type, Scale:	SETFA W
Stage Majority, Percent:	NA
Pest 5 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	17 GPA

Wilbur-Ellis No-Till Soybean Burndown Programs.

Trial ID: 13-5A Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	HORPU	STEME	ERICA	ERICA	ERICA	SETFA	SETFA
Pest Code										HORPU	STEME	ERICA	ERICA	ERICA	SETFA	SETFA
Crop Code																
Rating Date										5-27-13	5-27-13	5-27-13	6-10-13	6-24-13	6-10-13	6-24-13
Rating Type										Control	Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing																
Trt-Eval Interval										14 DA-A	14 DA-A	14 DA-A	28 DA-A	42 DA-A	28 DA-A	42 DA-A
1	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	14DBP	A	56 c	99 a	25 a	13 b	13 b	99 a	98 a
2	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	14DBP	A	75 b	99 a	25 a	0 b	0 b	99 a	96 a
	WE1442-1	100	SL	40	fl oz/a	40	fl oz/a	14DBP	A							
3	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	14DBP	A	69 b	99 a	25 a	0 b	0 b	99 a	97 a
	WE1258-1	100	SL	1	pt/a	1	pt/a	14DBP	A							
4	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.45	oz/a	14DBP	A	99 a	99 a	99 a	99 a	99 a	99 a	96 a
	GRAMOXONE 2 SL	2	SL	0.5	lb ai/a	1	qt/a	14DBP	A							
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14DBP	A							
	WE1279-2	100	SL	0.25	% v/v	1	qt/100 gal	14DBP	A							
5	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14DBP	A	0 d	99 a	99 a	97 a	97 a	0 a	0 b
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14DBP	A							
	WE1258-1	100	SL	1	pt/a	1	pt/a	14DBP	A							
6	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14DBP	A	0 d	99 a	99 a	94 a	92 a	0 a	0 b
	WE1442-1	100	SL	40	fl oz/a	40	fl oz/a	14DBP	A							
7	NONTREATED									0 d	0 a	0 a	0 b	0 b	0 a	0 b
LSD (P=.05)										10.7	0.0	0.0	14.0	14.4	0.0	2.8
Standard Deviation										7.2	0.0	0.0	9.4	9.7	0.0	1.9
CV										16.9	0.0	0.0	21.79	22.71	0.0	3.48
Replicate F										0.000	0.000	0.000	1.528	1.699	0.000	2.532
Replicate Prob(F)										1.0000	1.0000	1.0000	0.2415	0.2029	1.0000	0.0895
Treatment F										134.977	0.000	0.000	113.721	104.642	0.000	2894.825
Treatment Prob(F)										0.0001	1.0000	1.0000	0.0001	0.0001	1.0000	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Wilbur-Ellis No-Till Soybean Burndown Programs.

Trial ID: 13-5A Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 6-10-13 Control Percent 28 DA-A	AMATA 6-24-13 Control Percent 42 DA-A
1	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	14DBP	A	99 a	95 a
2	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	14DBP	A	99 a	94 a
	WE1442-1	100	SL	40	fl oz/a	40	fl oz/a	14DBP	A		
3	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	14DBP	A	99 a	92 a
	WE1258-1	100	SL	1	pt/a	1	pt/a	14DBP	A		
4	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.45	oz/a	14DBP	A	99 a	97 a
	GRAMOXONE 2 SL	2	SL	0.5	lb ai/a	1	qt/a	14DBP	A		
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14DBP	A		
	WE1279-2	100	SL	0.25	% v/v	1	qt/100 gal	14DBP	A		
5	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14DBP	A	72 a	63 b
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	14DBP	A		
	WE1258-1	100	SL	1	pt/a	1	pt/a	14DBP	A		
6	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14DBP	A	92 a	75 ab
	WE1442-1	100	SL	40	fl oz/a	40	fl oz/a	14DBP	A		
7	NONTREATED									0 b	0 c
LSD (P=.05)										27.0	24.7
Standard Deviation										18.2	16.6
CV										22.72	22.59
Replicate F										1.082	1.132
Replicate Prob(F)										0.3820	0.3625
Treatment F										16.242	17.596
Treatment Prob(F)										0.0001	0.0001

Southern Illinois University

Wilbur-Ellis No-Till Soybean Burndown Programs.

Trial ID: 13-5A Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Wilbur-Ellis (1027-1307).
2. Ratings: WC 14, 28, and 42 DA-A.
3. Possible blanket application after the last evaluation, if desired.
4. Yield not requested.
5. On 6-10-13 at 28 DA-A there was ERICA regrowth in the Sharpen plots.
   On 6-10-13 at 28 DA-A HORPU and STEME were senescing naturally
   in the nontreated plots and could no longer be evaluated.
   Emergence of summer annual weeds was reduced by a dense mat of winter annual weeds in some plots.
6. Not harveted.

DPX-R5W13 Burndown and Residual in No-Till Soybean.

Trial ID: 13-26C-S100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 4-17-13
Completion Date: 6-24-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate crop responce and weed control from DPX-R5W13 applied preplant in no-till soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 5-27-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** HORPU Hordeum pusillum Nutt.
Common Name: barley, little

Pest 2 Type: W **Code:** CAPBP Capsella bursa-pastoris(L.)M
Common Name: shepherdspurse

Pest 3 Type: W **Code:** STEME Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 4 Type: W **Code:** GERCA Geranium carolinianum L.
Common Name: geranium, Carolina

Pest 5 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 6 Type: W **Code:** PANDI Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Pest 7 Type: W **Code:** XANST Xanthium strumarium L.
Common Name: cocklebur, common

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 25 FT **Total Plot Length:** 25 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 100 LB/A

Soil Description

% OM: 2.6 **Texture:** SIL silt loam
pH: 6.4 **Soil Name:** Winfield
CEC: 7

Additional Measured Elements

Element	Quantity	Unit
P1	70	lb/A
K	346	lb/A

DPX-R5W13 Burndown and Residual in No-Till Soybean.

Trial ID: 13-26C-S100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	3-24-13					7	DAY	22	60	F
2.	3-24-13	0.41	IN	RAIN	rain	1	DAY			
3.	3-30-13	0.13	IN	RAIN	rain	1	DAY			
4.	3-31-13					7	DAY	27	71	F
5.	4-7-13					7	DAY	34	82	F
6.	4-10-13	1.4	IN	RAIN	rain	2	DAY			
7.	4-14-13					7	DAY	31	82	F
8.	4-16-13	1.05	IN	RAIN	rain	2	DAY			
9.	4-18-13	5.2	IN	RAIN	rain	1	DAY			
10.	4-21-13					7	DAY	35	72	F
11.	4-23-13	1.35	IN	RAIN	rain	2	DAY			
12.	4-27-13	0.3	IN	RAIN	rain	2	DAY			
13.	4-28-13					7	DAY	41	83	F
14.	5-3-13	3.07	IN	RAIN	rain	4	DAY			
15.	5-5-13					7	DAY	46	80	F
16.	5-9-13	0.35	IN	RAIN	rain	2	DAY			
17.	5-12-13					7	DAY	39	92	F
18.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
19.	5-19-13					7	DAY	45	88	F
20.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
21.	5-26-13					7	DAY	56	86	F
22.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
23.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
24.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
25.	6-2-13					7	DAY	50	80	F
26.	6-9-13					7	DAY	59	94	F
27.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
28.	6-16-13					7	DAY	61	90	F
29.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
30.	6-23-13					7	DAY	64	92	F
31.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
32.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
33.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
34.	6-30-13					7	DAY	61	86	F

Application Description

	A	B	C
Application Date:	4-17-13	5-30-13	
Appl. Start Time:	8:00	6:00	
Appl. Stop Time:	8:30	6:30	
Application Method:	Spray	Spray	Spray
Application Timing:	EPP28	PRE	POST
Application Placement:	BROFOL	BROFOL	Not
Applied By:	RFK	RFK	Applied
Air Temperature, Unit:	54 F	74 F	
% Relative Humidity:	100	84	
Wind Velocity, Unit:	3 MPH	4 MPH	
Wind Direction:	E	S	
Dew Presence (Y/N):	Y	Y	
Soil Temperature, Unit:	55 F	70 F	
Soil Moisture:	ABONOR	ABONOR	
% Cloud Cover:	100	100	
Next Moisture Occurred On:	4-18-13	5-30-13	
Time to Next Moisture, Unit:	23 HR	7 HR	

DPX-R5W13 Burndown and Residual in No-Till Soybean.

Trial ID: 13-26C-S100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	NA

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	HORPU W	HORPU W	HORPU W
Stage Majority, Percent:	6	NA	NA
Stage Minimum, Percent:	5		
Stage Maximum, Percent:	6		
Height, Unit:	5 IN		
Height Minimum, Maximum:	3 5		
Density, Unit:	0.1 FT2		
Pest 2 Code, Type, Scale:	CAPBP W	CAPBP W	CAPBP W
Stage Majority, Percent:	10+	NA	NA
Stage Minimum, Percent:	10		
Stage Maximum, Percent:	10+		
Height, Unit:	10 IN		
Height Minimum, Maximum:	6 12		
Density, Unit:	0.01 FT2		
Pest 3 Code, Type, Scale:	STEME W	STEME W	STEME W
Stage Majority, Percent:	10+	NA	NA
Stage Minimum, Percent:	10		
Stage Maximum, Percent:	10+		
Height, Unit:	4 IN		
Height Minimum, Maximum:	3 4		
Density, Unit:	1 FT2		
Pest 4 Code, Type, Scale:	GERCA W	GERCA W	GERCA W
Stage Majority, Percent:	10+	10+	NA
Stage Minimum, Percent:	10	10	
Stage Maximum, Percent:	10+	10+	
Height, Unit:	3 IN	3 IN	
Height Minimum, Maximum:	2 3	2 3	
Density, Unit:	2 FT2	0.01 FT2	
Pest 5 Code, Type, Scale:	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	NA	NA
Pest 6 Code, Type, Scale:	PANDI W	PANDI W	PANDI W
Stage Majority, Percent:	NA	NA	NA
Pest 7 Code, Type, Scale:	XANST W	XANST W	XANST W
Stage Majority, Percent:	NA	NA	NA

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

DPX-R5W13 Burndown and Residual in No-Till Soybean.

Trial ID: 13-26C-S100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		GLXMA 6-10-13 Injury Percent 14 DAP 11 DA-B	GLXMA 6-24-13 Injury Percent 28 DAP 25 DA-B	HORPU 5-15-13 Control Percent 0 DAPP 28 DA-A	CAPBP 5-15-13 Control Percent 0 DAPP 28 DA-A	STEME 5-15-13 Control Percent 0 DAPP 28 DA-A	GERCA 5-15-13 Control Percent 0 DAPP 28 DA-A	GERCA 5-27-13 Control Percent 0 DAP 40 DA-A
1	CANOPY EX	29.5	WG	0.0277	lb ai/a	1.5	oz/a	EPP28	A			0 b	99 a	99 a	99 a	97 a	97 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A								
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A								
	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	B								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C								
	AMS	100	SG	2	lb/a	2	lb/a	POST	C								
2	CANOPY EX	29.5	WG	0.0277	lb ai/a	1.5	oz/a	EPP28	A			0 b	99 a	99 a	99 a	99 a	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A								
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A								
	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B								
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	PRE	B								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C								
	AMS	100	SG	2	lb/a	2	lb/a	POST	C								
3	CANOPY EX	29.5	WG	0.0277	lb ai/a	1.5	oz/a	EPP28	A			15 a	99 a	99 a	99 a	91 ab	91 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A								
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A								
	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	B								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C								
	AMS	100	SG	2	lb/a	2	lb/a	POST	C								
4	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	EPP28	A			0 b	99 a	99 a	99 a	97 a	97 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A								
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C								
	AMS	100	SG	2	lb/a	2	lb/a	POST	C								
5	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	EPP28	A			0 b	99 a	99 a	99 a	94 ab	94 ab
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	EPP28	A								
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A								
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C								
	AMS	100	SG	2	lb/a	2	lb/a	POST	C								
6	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	EPP28	A			0 b	99 a	99 a	99 a	93 ab	93 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A								
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C								
	AMS	100	SG	2	lb/a	2	lb/a	POST	C								
7	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	EPP28	A			0 b	99 a	99 a	99 a	96 ab	96 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A								
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A								
8	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	EPP28	A			0 b	99 a	99 a	99 a	86 b	86 b
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A								
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A								
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C								
	AMS	100	SG	2	lb/a	2	lb/a	POST	C								

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=15

DPX-R5W13 Burndown and Residual in No-Till Soybean.

Trial ID: 13-26C-S100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
Pest Code												HORPU	CAPBP	STEME	GERCA	GERCA
Crop Code										GLXMA	GLXMA					
Rating Date										6-10-13	6-24-13	5-15-13	5-15-13	5-15-13	5-15-13	5-27-13
Rating Type										Injury	Injury	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing										14 DAP	28 DAP	0 DAPP	0 DAPP	0 DAPP	0 DAPP	0 DAP
Trt-Eval Interval										11 DA-B	25 DA-B	28 DA-A	28 DA-A	28 DA-A	28 DA-A	40 DA-A
9	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	EPP28	A		0 b	99 a	99 a	99 a	96 ab	96 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A							
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C							
	AMS	100	SG	2	lb/a	2	lb/a	POST	C							
10	NONTREATED										0 b	0 a	0 a	0 a	0 c	0 c
LSD (P=.05)										.	6.6	0.0	0.0	0.0	10.4	10.4
Standard Deviation										.	3.4	0.0	0.0	0.0	7.2	7.2
CV										.	223.61	0.0	0.0	0.0	8.47	8.47
Replicate F											0.148	0.000	0.000	0.000	7.247	7.247
Replicate Prob(F)											0.9257	1.0000	1.0000	1.0000	0.0010	0.0010
Treatment F											8.000	0.000	0.000	0.000	69.796	69.796
Treatment Prob(F)											0.0303	1.0000	1.0000	1.0000	0.0001	0.0001

DPX-R5W13 Burndown and Residual in No-Till Soybean.

Trial ID: 13-26C-S100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 5-27-13 Control Percent 0 DAP 40 DA-A	AMATA 6-10-13 Control Percent 14 DAP 11 DA-B	AMATA 6-24-13 Control Percent 28 DAP 25 DA-B	PANDI 6-10-13 Control Percent 14 DAP 11 DA-B	PANDI 6-24-13 Control Percent 28 DAP 25 DA-B	XANST 6-10-13 Control Percent 14 DAP 11 DA-B
1	CANOPY EX	29.5	WG	0.0277	lb ai/a	1.5	oz/a	EPP28	A	45 bc	70 ab	95 a	72 a	98 ab	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A						
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A						
	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C						
	AMS	100	SG	2	lb/a	2	lb/a	POST	C						
2	CANOPY EX	29.5	WG	0.0277	lb ai/a	1.5	oz/a	EPP28	A	23 cd	70 ab	80 ab	99 a	98 ab	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A						
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A						
	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C						
	AMS	100	SG	2	lb/a	2	lb/a	POST	C						
3	CANOPY EX	29.5	WG	0.0277	lb ai/a	1.5	oz/a	EPP28	A	60 abc	99 a	98 a	99 a	99 a	98 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A						
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A						
	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C						
	AMS	100	SG	2	lb/a	2	lb/a	POST	C						
4	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	EPP28	A	95 a	64 ab	53 bc	47 ab	68 ab	97 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A						
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C						
	AMS	100	SG	2	lb/a	2	lb/a	POST	C						
5	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	EPP28	A	68 ab	0 c	0 d	90 a	86 ab	99 a
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	EPP28	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A						
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C						
	AMS	100	SG	2	lb/a	2	lb/a	POST	C						
6	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	EPP28	A	92 a	45 bc	39 c	90 a	84 ab	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A						
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C						
	AMS	100	SG	2	lb/a	2	lb/a	POST	C						
7	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	EPP28	A	80 ab	0 c	0 d	68 a	67 ab	97 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A						
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A						
8	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	EPP28	A	0 d	0 c	0 d	47 ab	58 b	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A						
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C						
	AMS	100	SG	2	lb/a	2	lb/a	POST	C						

DPX-R5W13 Burndown and Residual in No-Till Soybean.

Trial ID: 13-26C-S100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA	AMATA	AMATA	PANDI	PANDI	XANST
	Pest Code									AMATA	AMATA	AMATA	PANDI	PANDI	XANST
	Crop Code														
	Rating Date									5-27-13	6-10-13	6-24-13	6-10-13	6-24-13	6-10-13
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing									0 DAP	14 DAP	28 DAP	14 DAP	28 DAP	14 DAP
	Trt-Eval Interval									40 DA-A	11 DA-B	25 DA-B	11 DA-B	25 DA-B	11 DA-B
9	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	EPP28	A	92 a	47 bc	48 bc	47 ab	68 ab	95 b
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP28	A						
	AMS	100	SG	2	lb/a	2	lb/a	EPP28	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C						
	AMS	100	SG	2	lb/a	2	lb/a	POST	C						
10	NONTREATED									0 d	0 c	0 d	0 b	0 c	0 c
	LSD (P=.05)									45.0	51.4	34.9	54.7	40.9	4.0
	Standard Deviation									31.0	35.5	24.0	37.7	28.2	2.8
	CV									55.93	89.88	58.44	57.15	38.95	3.12
	Replicate F									0.670	0.470	0.222	0.382	0.789	0.449
	Replicate Prob(F)									0.5778	0.7055	0.8801	0.7669	0.5106	0.7198
	Treatment F									5.715	4.344	11.174	2.749	4.392	507.740
	Treatment Prob(F)									0.0002	0.0014	0.0001	0.0202	0.0013	0.0001

Southern Illinois University

DPX-R5W13 Burndown and Residual in No-Till Soybean.

Trial ID: 13-26C-S100 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-13-117).
2. Ratings: CI 14 and 28 DAP (or prior to POST), 28 DA-C;
   WC at planting, 14 and 28 DAP (or prior to POST), 28 DA-C.
3. Application C (POST) should be timed for about 28 DAP,
   to get a 28 DAP rating as close to 28 DAP as possible.
4. Special instructions; Ratings prior to POST, give notice and confirm rating made.
5. Blanket application of Glyphosate at planting, after the at planting rating.
6. Yield not requested.
7. Following the EPP28 application the first rainfall event, beginning 23 hours later, was 5.2 inch over 1 day.
   Following the PRE application the first rainfall event, beginning 7 hours later, was 4.53 inch over 3 days.
8. The planned 5-15-13 planting date was delayed until 5-27-13 due to wet soil conditions.
   The planned crop injury evaluation at 14 DAP was not possible due to excessive rainfall after planting
   which flooded some plots and resulted in uneven emergence and stand at 14 DAP.
   Missing crop injury data in some plots at 28 DAP was due to water damage.
   The planned POST application was not applied due to poor crop stand.
9. Ratings on 5-15-13 are at the planned planting (0 DAPP).
   By 5-27-13, HORPU, CAPBP, and STEME in the nontreated plots were senescing naturally
   and could no longer be evaluated.
10. Not harvested.

Southern Illinois University

Evaluation of Crusher Applied Preplant in No-Till Soybean.

Trial ID: 13-26C-N70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 4-15-13
Completion Date: 6-24-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the efficacy of Crusher for burndown weed control when applied 30 days prior to planting soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 5-27-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** HORPU Hordeum pusillum Nutt.
Common Name: barley, little

Pest 2 Type: W **Code:** GERCA Geranium carolinianum L.
Common Name: geranium, Carolina

Pest 3 Type: W **Code:** STEME Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 4 Type: W **Code:** CAPBP Capsella bursa-pastoris(L.)M
Common Name: shepherdspurse

Pest 5 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 25 FT **Total Plot Length:** 25 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 100 LB/A

Soil Description

% OM: 2.6 **Texture:** SIL silt loam
pH: 6.4 **Soil Name:** Winfield
CEC: 7

Additional Measured Elements

Element	Quantity	Unit
P1	70	lb/A
K	346	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Evaluation of Crusher Applied Preplant in No-Till Soybean.

Trial ID: 13-26C-N70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	3-31-13					7	DAY	27	71	F
2.	4-7-13					7	DAY	34	82	F
3.	4-10-13	1.4	IN	RAIN	rain	2	DAY			
4.	4-14-13					7	DAY	31	82	F
5.	4-16-13	1.05	IN	RAIN	rain	2	DAY			
6.	4-18-13	5.2	IN	RAIN	rain	1	DAY			
7.	4-21-13					7	DAY	35	72	F
8.	4-23-13	1.35	IN	RAIN	rain	2	DAY			
9.	4-27-13	0.3	IN	RAIN	rain	2	DAY			
10.	4-28-13					7	DAY	41	83	F
11.	5-3-13	3.07	IN	RAIN	rain	4	DAY			
12.	5-5-13					7	DAY	46	80	F
13.	5-9-13	0.35	IN	RAIN	rain	2	DAY			
14.	5-12-13					7	DAY	39	92	F
15.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
16.	5-19-13					7	DAY	45	88	F
17.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
18.	5-26-13					7	DAY	56	86	F
19.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
20.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
21.	5-31-13	3.46	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	4-15-13
Appl. Start Time:	11:00
Appl. Stop Time:	11:15
Application Method:	Spray
Application Timing:	EPP30
Application Placement:	BROFOL
Applied By:	RFK
Air Temperature, Unit:	69 F
% Relative Humidity:	73
Wind Velocity, Unit:	5 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	60 F
Soil Moisture:	ABONOR
% Cloud Cover:	0
Next Moisture Occurred On:	4-16-13
Time to Next Moisture, Unit:	16 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Southern Illinois University

Evaluation of Crusher Applied Preplant in No-Till Soybean.

Trial ID: 13-26C-N70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	HORPU W
Stage Majority, Percent:	6
Stage Minimum, Percent:	5
Stage Maximum, Percent:	6
Height, Unit:	5 IN
Height Minimum, Maximum:	3 5
Density, Unit:	0.1 FT2
Pest 2 Code, Type, Scale:	GERCA W
Stage Majority, Percent:	10+
Stage Minimum, Percent:	10
Stage Maximum, Percent:	10+
Height, Unit:	3 IN
Height Minimum, Maximum:	2 3
Density, Unit:	2 FT2
Pest 3 Code, Type, Scale:	STEME W
Stage Majority, Percent:	10+
Stage Minimum, Percent:	10
Stage Maximum, Percent:	10+
Height, Unit:	4 IN
Height Minimum, Maximum:	3 4
Density, Unit:	1 FT2
Pest 4 Code, Type, Scale:	CAPBP W
Stage Majority, Percent:	10+
Stage Minimum, Percent:	10
Stage Maximum, Percent:	10+
Height, Unit:	10 IN
Height Minimum, Maximum:	6 12
Density, Unit:	0.01 FT2
Pest 5 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Evaluation of Crusher Applied Preplant in No-Till Soybean.

Trial ID: 13-26C-N70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		GLXMA 6-10-13 Injury Percent 14 DAP 56 DA-A	GLXMA 6-24-13 Injury Percent 28 DAP 70 DA-A	HORPU 4-29-13 Control Percent 14 DA-A	HORPU 5-13-13 Control Percent 28 DA-A	GERCA 4-29-13 Control Percent 14 DA-A	GERCA 5-13-13 Control Percent 28 DA-A	GERCA 5-27-13 Control Percent 42 DA-A
1	CRUSHER	50	WG	0.0234	lb ai/a	0.75	oz/a	EPP30	A			0 b	99 a	99 a	50 b	98 a	85 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP30	A								
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPP30	A								
2	CRUSHER	50	WG	0.0313	lb ai/a	1	oz/a	EPP30	A			0 b	99 a	99 a	58 b	97 a	91 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP30	A								
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPP30	A								
3	CRUSHER	50	WG	0.0625	lb ai/a	2	oz/a	EPP30	A			5 a	99 a	99 a	73 a	98 a	90 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP30	A								
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPP30	A								
4	LEADOFF	33.4	WG	0.0313	lb ai/a	1.5	oz/a	EPP30	A			8 a	99 a	99 a	50 b	98 a	90 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP30	A								
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPP30	A								
5	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP30	A			0 b	99 a	99 a	50 b	97 a	90 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPP30	A								
6	NONTREATED											0 b	0 a	0 a	0 c	0 b	0 b
LSD (P=.05)											.	3.5	0.0	0.0	12.6	2.1	11.1
Standard Deviation											.	2.2	0.0	0.0	8.4	1.4	7.4
CV											.	106.52	0.0	0.0	17.93	1.73	9.94
Replicate F												1.410	0.000	0.000	1.429	6.266	1.351
Replicate Prob(F)												0.2919	1.0000	1.0000	0.2737	0.0057	0.2955
Treatment F												8.969	0.000	0.000	34.238	3212.578	97.553
Treatment Prob(F)												0.0013	1.0000	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=16

Southern Illinois University

Evaluation of Crusher Applied Preplant in No-Till Soybean.

Trial ID: 13-26C-N70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	STEME	STEME	CAPBP	CAPBP	AMATA
	Pest Code									STEME	STEME	CAPBP	CAPBP	AMATA
	Crop Code													
	Rating Date									4-29-13	5-13-13	4-29-13	5-13-13	5-27-13
	Rating Type									Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent
	Rating Timing													
	Trt-Eval Interval									14 DA-A	28 DA-A	14 DA-A	28 DA-A	42 DA-A
1	CRUSHER	50	WG	0.0234	lb ai/a	0.75	oz/a	EPP30	A	99 a	99 a	99 a	99 a	97 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP30	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPP30	A					
2	CRUSHER	50	WG	0.0313	lb ai/a	1	oz/a	EPP30	A	99 a	99 a	99 a	99 a	97 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP30	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPP30	A					
3	CRUSHER	50	WG	0.0625	lb ai/a	2	oz/a	EPP30	A	99 a	99 a	99 a	99 a	70 ab
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP30	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPP30	A					
4	LEADOFF	33.4	WG	0.0313	lb ai/a	1.5	oz/a	EPP30	A	99 a	99 a	99 a	99 a	72 ab
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP30	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPP30	A					
5	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	EPP30	A	99 a	99 a	99 a	99 a	23 bc
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPP30	A					
6	NONTREATED									0 a	0 a	0 a	0 a	0 c
	LSD (P=.05)									0.0	0.0	0.0	0.0	52.6
	Standard Deviation									0.0	0.0	0.0	0.0	34.9
	CV									0.0	0.0	0.0	0.0	58.52
	Replicate F									0.000	0.000	0.000	0.000	0.395
	Replicate Prob(F)									1.0000	1.0000	1.0000	1.0000	0.7588
	Treatment F									0.000	0.000	0.000	0.000	5.221
	Treatment Prob(F)									1.0000	1.0000	1.0000	1.0000	0.0057

Southern Illinois University

Evaluation of Crusher Applied Preplant in No-Till Soybean.

Trial ID: 13-26C-N70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Cheminova (HGLXMARIMTHI1301).
2. Ratings: CI 14 and 28 DAP; WC 14, 28, and 42 DAT.
3. Blanket applications of Glyfos X-tra (32 floz/A) to be applied at planting after 28 DAT rating and again as needed anytime after the final WC evaluation (42 DAT).
4. On 5-27-13 at planting HORPU, STEME, and CAPBP were senescing naturally in the nontreated plots and could no longer be evaluated.
   On 5-27-13 at 42 DA-A GERCA in some plots had begun to regrow after the 28 DA-A rating.
   On 6-10-13 at 14 DAP it was not possible to rate crop injury due to excessive rainfall after planting which resulted in poor stand in the nontreated and some plots were flooded.
5. Yield not required.
6. Not harvested.

Corn, Tilled Weed Control Studies

Southern Illinois University

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-15-13
Completion Date: 11-8-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate herbicide programs for weed control in reduced-till corn.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33
Description: SS RIB
Planting Date: 6-15-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** XANST Xanthium strumarium L.
Common Name: cocklebur, common

Pest 2 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 3 Type: W **Code:** AMBEL Ambrosia artemisiifolia L.
Common Name: ragweed, common

Pest 4 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 5 Type: W **Code:** PANDI Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 28 FT **Total Plot Length:** 28 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	NON-CROP	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

% OM: 2.7 **Texture:** SIL silt loam
pH: 6.1 **Soil Name:** Pierron
CEC: 7

Additional Measured Elements

Element	Quantity	Unit
P1	68	lb/A
K	322	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-9-13					7	DAY	59	94	F
3.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
4.	6-16-13					7	DAY	61	90	F
5.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
6.	6-23-13					7	DAY	64	92	F
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
9.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
10.	6-30-13					7	DAY	61	86	F
11.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
12.	7-7-13					7	DAY	62	94	F
13.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
14.	7-14-13					7	DAY	64	94	F
15.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
16.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
17.	7-21-13					7	DAY	56	91	F
18.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
19.	7-28-13					7	DAY	52	87	F
20.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
21.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
22.	8-4-13					7	DAY	62	87	F
23.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
24.	8-11-13					7	DAY	54	85	F
25.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
26.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
27.	8-18-13					7	DAY	61	91	F
28.	8-25-13					7	DAY	62	100	F
29.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
30.	9-1-13					7	DAY	57	92	F
31.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A	B	C
Application Date:	6-15-13	7-1-13	7-9-13
Appl. Start Time:	20:00	17:00	6:00
Appl. Stop Time:	21:00	17:15	6:30
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	2-4"W-1	2-4"W-2
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	LXF	RFK	RJW
Air Temperature, Unit:	79 F	73 F	77 F
% Relative Humidity:	69	66	88
Wind Velocity, Unit:	3 MPH	4 MPH	1 MPH
Wind Direction:	S	N	E
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	73 F	73 F	79 F
Soil Moisture:	NORMAL	ABONOR	ABONOR
% Cloud Cover:	80	100	80
Next Moisture Occurred On:	6-15-13	7-1-13	7-10-13
Time to Next Moisture, Unit:	1 HR	5 HR	24 HR

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMD	ZEAMD	ZEAMD
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V4	V6
Stage Minimum, Percent:		V4	V5
Stage Maximum, Percent:		V4	V6
Height, Unit:		8 IN	15 IN
Height Minimum, Maximum:		6 8	14 15

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	XANST W	XANST W	XANST W
Stage Majority, Percent:	NA	5	5
Stage Minimum, Percent:		5	2
Stage Maximum, Percent:		6	6
Height, Unit:		3 IN	4 IN
Height Minimum, Maximum:		1 4	2 6
Density, Unit:		0.01 FT2	0.01 FT2
Pest 2 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	6	2
Stage Minimum, Percent:		5	COTY
Stage Maximum, Percent:		6	4
Height, Unit:		2 IN	2 IN
Height Minimum, Maximum:		1 3	1 3
Density, Unit:		0.01 FT2	0.001 FT2
Pest 3 Code, Type, Scale:	AMBEL W	AMBEL W	AMBEL W
Stage Majority, Percent:	NA	4	NA
Stage Minimum, Percent:		2	
Stage Maximum, Percent:		4	
Height, Unit:		2 IN	
Height Minimum, Maximum:		1 3	
Density, Unit:		0.01 FT2	
Pest 4 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W
Stage Majority, Percent:	NA	8	2
Stage Minimum, Percent:		6	COTY
Stage Maximum, Percent:		8	4
Height, Unit:		3 IN	2 IN
Height Minimum, Maximum:		1 3	1 3
Density, Unit:		0.1 FT2	0.03 FT2
Pest 5 Code, Type, Scale:	PANDI W	PANDI W	PANDI W
Stage Majority, Percent:	NA	4	4
Stage Minimum, Percent:		2	2
Stage Maximum, Percent:		5	6
Height, Unit:		3 IN	6 IN
Height Minimum, Maximum:		1 4	1 10
Density, Unit:		1 FT2	1 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 11-8-13 Moisture Percent	ZEAMD 11-8-13 Test wt. lb/bu	ZEAMD 11-8-13 Yield bu/A	ZEAMD 7-5-13 Injury Percent	ZEAMD 7-5-13 Necrosis Percent	ZEAMD 7-5-13 Chlorosis Percent	ZEAMD 7-5-13 Stunt Percent
	Pest Code															
	Crop Code															
	Rating Date															
	Rating Type															
	Rating Unit															
	Rating Timing															
	Trt-Eval Interval												4 DA-B	4 DA-B	4 DA-B	4 DA-B
1	NONTREATED									23.4 a	55.1 a	173 a	0 a	0 a	0 a	0 a
2	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	25.3 a	54.4 a	180 a	0 a	0 a	0 a	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
3	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	24.6 a	54.6 a	178 a	0 a	0 a	0 a	0 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A							
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
4	KEYSTONE NXT	5.6	SE	3.36	lb ai/a	2.4	qt/a	PRE	A	25.7 a	54.2 a	180 a	0 a	0 a	0 a	0 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	PRE	A							
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	A	23.0 a	55.2 a	202 a	0 a	0 a	0 a	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
6	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	24.1 a	54.8 a	190 a	0 a	0 a	0 a	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
7	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	24.8 a	54.7 a	196 a	0 a	0 a	0 a	0 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A							
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
8	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W-1	B	23.6 a	55.0 a	192 a	0 a	0 a	0 a	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							
9	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	24.3 a	54.8 a	206 a	0 a	0 a	0 a	0 a
10	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	24.6 a	54.7 a	193 a	0 a	0 a	0 a	0 a
	PRINCEP 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A							
11	CORVUS	2.63	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	24.1 a	54.8 a	188 a	0 a	0 a	0 a	0 a
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A							
12	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	PRE	A	24.8 a	54.6 a	185 a	0 a	0 a	0 a	0 a
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A							
13	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	24.4 a	54.7 a	197 a	0 a	0 a	0 a	0 a
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A							
14	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	25.3 a	54.4 a	180 a	0 a	0 a	0 a	0 a
15	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	23.6 a	55.0 a	210 a	0 a	0 a	0 a	0 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W-2	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
16	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-1	B	24.2 a	54.8 a	205 a	1 a	0 a	1 a	0 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in
columns:Average=2,3,5,10,11,12,13,14,15,16,17,28,34,40,19,23,29,35,41,20,24,30,36,42,21,25,31,37,43,22,26,32,38,44,27,33,39,45

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 11-8-13 Moisture Percent	ZEAMD 11-8-13 Test wt. lb/bu	ZEAMD 11-8-13 Yield bu/A	ZEAMD 7-5-13 Injury Percent	ZEAMD 7-5-13 Necrosis Percent	ZEAMD 7-5-13 Chlorosis Percent	ZEAMD 7-5-13 Stunt Percent
	Pest Code															
	Crop Code															
	Rating Date															
	Rating Type															
	Rating Unit															
	Rating Timing															
	Trt-Eval Interval												4 DA-B	4 DA-B	4 DA-B	4 DA-B
17	HARROW	75	WG	0.0155	lb ai/a	0.33	oz/a	2-4"W-1	B	24.3 a	54.8 a	202 a	0 a	0 a	0 a	0 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							
	LSD (P=.05)									2.11	0.69	26.2	0.8	0.0	0.8	0.0
	Standard Deviation									1.24	0.40	15.4	0.5	0.0	0.5	0.0
	CV									5.11	0.74	8.05	807.96	0.0	807.96	0.0
	Replicate F									0.168	0.056	0.662	0.781	0.000	0.781	0.000
	Replicate Prob(F)									0.8469	0.9454	0.5261	0.4687	1.0000	0.4687	1.0000
	Treatment F									0.954	1.117	1.558	0.781	0.000	0.781	0.000
	Treatment Prob(F)									0.5312	0.3997	0.1690	0.6914	1.0000	0.6914	1.0000

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 7-8-13 Injury Percent -1 DA-C 7 DA-B	ZEAMD 7-8-13 Necrosis Percent -1 DA-C 7 DA-B	ZEAMD 7-8-13 Chlorosis Percent -1 DA-C 7 DA-B	ZEAMD 7-8-13 Stunt Percent -1 DA-C 7 DA-B	ZEAMD 7-23-13 Injury Percent 14 DA-C 22 DA-B	ZEAMD 7-29-13 Injury Percent 20 DA-C 28 DA-B	ZEAMD 8-6-13 Injury Percent 28 DA-C
1	NONTREATED									0 a	0 a	0 a	0 a	0 a	0 a	0 a
2	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	0 a	0 a	0 a	0 a	2 a	0 a	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
3	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	0 a	0 a	0 a	0 a	3 a	0 a	0 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A							
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
4	KEYSTONE NXT	5.6	SE	3.36	lb ai/a	2.4	qt/a	PRE	A	0 a	0 a	0 a	0 a	1 a	0 a	0 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	PRE	A							
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
6	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	0 a	0 a	0 a	0 a	2 a	0 a	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
7	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	0 a	0 a	0 a	0 a	2 a	0 a	0 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A							
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
8	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W-1	B	0 a	0 a	0 a	0 a	0 a	0 a	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							
9	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a	0 a
10	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a	0 a
	PRINCEP 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A							
11	CORVUS	2.63	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a	0 a
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A							
12	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a	0 a
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A							
13	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a	0 a
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A							
14	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a	0 a
15	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	0 a	0 a	0 a	0 a	1 a	0 a	0 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W-2	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
16	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-1	B	0 a	0 a	0 a	0 a	0 a	0 a	0 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 7-8-13 Injury Percent -1 DA-C 7 DA-B	ZEAMD 7-8-13 Necrosis Percent -1 DA-C 7 DA-B	ZEAMD 7-8-13 Chlorosis Percent -1 DA-C 7 DA-B	ZEAMD 7-8-13 Stunt Percent -1 DA-C 7 DA-B	ZEAMD 7-23-13 Injury Percent 14 DA-C 22 DA-B	ZEAMD 7-29-13 Injury Percent 20 DA-C 28 DA-B	ZEAMD 8-6-13 Injury Percent 28 DA-C
17	HARROW	75	WG	0.0155	lb ai/a	0.33	oz/a	2-4"W-1	B	0 a	0 a	0 a	0 a	0 a	0 a	0 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							
LSD (P=.05)										0.0	0.0	0.0	0.0	2.2	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0	1.3	0.0	0.0
CV										0.0	0.0	0.0	0.0	199.15	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000	2.787	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	0.0781	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000	1.865	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	0.0702	1.0000	1.0000

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
Pest Code										XANST	XANST	XANST	XANST	XANST
Crop Code														
Rating Date										7-9-13	7-14-13	7-23-13	7-29-13	8-6-13
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing										0 DA-C		14 DA-C	20 DA-C	
Trt-Eval Interval										8 DA-B	13 DA-B	22 DA-B	28 DA-B	28 DA-C
1	NONTREATED									0 d	0 c	0 c	0 c	0 c
2	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	97 ab	98 a	98 a	98 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
3	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	98 ab	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
4	KEYSTONE NXT	5.6	SE	3.36	lb ai/a	2.4	qt/a	PRE	A	97 ab	96 ab	95 a	94 a	95 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	PRE	A					
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	A	99 a	99 a	99 a	98 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
6	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	99 a	99 a	99 a	98 a	98 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
7	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	98 ab	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
8	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W-1	B	99 a	99 a	99 a	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
9	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	99 a	98 a	98 a	97 a	97 a
10	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	PRINCEP 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A					
11	CORVUS	2.63	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A					
12	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	PRE	A	94 c	94 b	90 b	76 b	76 b
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A					
13	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	97 b	97 ab	98 a	95 a	95 a
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A					
14	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	97 ab	97 ab	97 a	96 a	97 a
15	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	98 ab	99 a	99 a	99 a	99 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
16	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-1	B	99 a	99 a	99 a	99 a	99 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
Pest Code										XANST	XANST	XANST	XANST	XANST
Crop Code														
Rating Date										7-9-13	7-14-13	7-23-13	7-29-13	8-6-13
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing										0 DA-C		14 DA-C	20 DA-C	
Trt-Eval Interval										8 DA-B	13 DA-B	22 DA-B	28 DA-B	28 DA-C
17	HARROW	75	WG	0.0155	lb ai/a	0.33	oz/a	2-4"W-1	B	99 a	97 ab	99 a	99 a	99 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
LSD (P=.05)										2.2	3.4	4.5	10.5	10.3
Standard Deviation										1.3	2.0	2.7	6.3	6.2
CV										1.43	2.22	2.94	6.91	6.77
Replicate F										2.822	1.737	0.854	0.827	0.834
Replicate Prob(F)										0.0759	0.1958	0.4363	0.4475	0.4446
Treatment F										971.147	407.178	232.548	44.106	45.817
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
Pest Code										ABUTH	ABUTH	ABUTH	ABUTH	ABUTH
Crop Code														
Rating Date										7-9-13	7-14-13	7-23-13	7-29-13	8-6-13
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing										0 DA-C		14 DA-C	20 DA-C	
Trt-Eval Interval										8 DA-B	13 DA-B	22 DA-B	28 DA-B	28 DA-C
1	NONTREATED									0 c	0 e	0 f	0 c	0 d
2	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	99 a	97 abc	98 abc	98 a	96 ab
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
3	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	99 a	97 ab	99 ab	99 a	99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
4	KEYSTONE NXT	5.6	SE	3.36	lb ai/a	2.4	qt/a	PRE	A	98 ab	97 ab	98 a-d	98 a	97 ab
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	PRE	A					
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	A	98 ab	96 abc	98 a-d	98 a	97 ab
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
6	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	98 ab	96 abc	98 a-d	97 a	97 ab
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
7	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	99 a	98 ab	99 ab	98 a	98 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
8	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W-1	B	97 b	96 abc	99 a	97 a	97 ab
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
9	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
10	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	99 a	99 a	99 ab	98 a	98 ab
	PRINCEP 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A					
11	CORVUS	2.63	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	99 a	97 abc	99 ab	98 a	97 ab
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A					
12	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	PRE	A	99 a	94 bcd	96 de	91 b	90 c
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A					
13	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	99 a	96 abc	98 a-d	96 a	95 ab
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A					
14	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	99 a	95 bcd	97 cde	95 ab	93 bc
15	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
16	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-1	B	98 ab	93 cd	97 b-e	95 ab	94 abc
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
Pest Code										ABUTH	ABUTH	ABUTH	ABUTH	ABUTH
Crop Code														
Rating Date										7-9-13	7-14-13	7-23-13	7-29-13	8-6-13
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing										0 DA-C		14 DA-C	20 DA-C	
Trt-Eval Interval										8 DA-B	13 DA-B	22 DA-B	28 DA-B	28 DA-C
17	HARROW	75	WG	0.0155	lb ai/a	0.33	oz/a	2-4"W-1	B	98 ab	91 d	96 e	94 ab	93 bc
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
LSD (P=.05)										1.6	3.6	1.7	4.9	4.9
Standard Deviation										0.9	2.1	1.0	3.0	3.0
CV										1.01	2.37	1.12	3.24	3.26
Replicate F										1.428	0.738	1.446	1.797	1.944
Replicate Prob(F)										0.2562	0.4880	0.2519	0.1837	0.1613
Treatment F										1952.467	358.229	1598.694	191.229	188.950
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBEL	AMBEL	AMBEL	AMBEL	AMBEL
	Pest Code									AMBEL	AMBEL	AMBEL	AMBEL	AMBEL
	Crop Code													
	Rating Date									7-9-13	7-14-13	7-23-13	7-29-13	8-6-13
	Rating Type									Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent
	Rating Timing									0 DA-C		14 DA-C	20 DA-C	
	Trt-Eval Interval									8 DA-B	13 DA-B	22 DA-B	28 DA-B	28 DA-C
1	NONTREATED									0 b	0 d	0 c	0 c	0 c
2	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	99 a	99 a	99 a	99 a	98 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
3	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
4	KEYSTONE NXT	5.6	SE	3.36	lb ai/a	2.4	qt/a	PRE	A	98 a	99 a	99 a	98 a	98 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	PRE	A					
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	A	98 a	99 a	99 a	99 a	98 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
6	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
7	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
8	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W-1	B	99 a	99 a	99 a	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
9	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
10	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	99 a	99 ab	99 a	98 a	97 a
	PRINCEP 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A					
11	CORVUS	2.63	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	98 a	98 ab	99 a	99 a	98 a
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A					
12	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	PRE	A	98 a	98 abc	96 b	92 b	91 b
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A					
13	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	97 a	96 c	98 ab	96 ab	95 ab
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A					
14	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	98 a	97 bc	96 b	92 b	92 b
15	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
16	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-1	B	98 a	98 ab	98 a	99 a	99 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBEL	AMBEL	AMBEL	AMBEL	AMBEL
	Pest Code									AMBEL	AMBEL	AMBEL	AMBEL	AMBEL
	Crop Code													
	Rating Date									7-9-13	7-14-13	7-23-13	7-29-13	8-6-13
	Rating Type									Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent
	Rating Timing									0 DA-C		14 DA-C	20 DA-C	
	Trt-Eval Interval									8 DA-B	13 DA-B	22 DA-B	28 DA-B	28 DA-C
17	HARROW	75	WG	0.0155	lb ai/a	0.33	oz/a	2-4"W-1	B	98 a	97 abc	98 ab	98 a	97 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
	LSD (P=.05)									2.2	2.0	1.9	4.1	4.3
	Standard Deviation									1.3	1.2	1.2	2.5	2.6
	CV									1.39	1.27	1.25	2.68	2.82
	Replicate F									2.307	1.244	1.325	3.439	4.585
	Replicate Prob(F)									0.1176	0.3047	0.2814	0.0457	0.0186
	Treatment F									1026.714	1243.581	1274.264	278.966	252.930
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
Pest Code										IPOHE	IPOHE	IPOHE	IPOHE	IPOHE
Crop Code														
Rating Date										7-9-13	7-14-13	7-23-13	7-29-13	8-6-13
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing										0 DA-C		14 DA-C	20 DA-C	
Trt-Eval Interval										8 DA-B	13 DA-B	22 DA-B	28 DA-B	28 DA-C
1	NONTREATED									0 d	0 e	0 d	0 f	0 f
2	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	97 abc	96 abc	98 ab	95 a-d	95 a-d
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
3	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	98 abc	97 ab	98 ab	96 a-d	96 a-d
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
4	KEYSTONE NXT	5.6	SE	3.36	lb ai/a	2.4	qt/a	PRE	A	97 abc	95 a-d	97 abc	94 bcd	93 cd
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	PRE	A					
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	A	96 abc	97 ab	98 ab	98 ab	98 ab
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
6	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	94 c	95 a-d	98 ab	97 ab	97 abc
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
7	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	99 ab	98 a	98 ab	97 abc	97 abc
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
8	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W-1	B	96 abc	92 d	98 ab	96 a-d	95 a-d
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
9	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	95 bc	93 cd	97 abc	92 de	92 de
10	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	98 abc	97 ab	98 ab	97 abc	96 a-d
	PRINCEP 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A					
11	CORVUS	2.63	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	95 bc	96 a-d	96 bc	95 a-d	94 a-d
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A					
12	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	PRE	A	96 abc	93 bcd	95 c	88 e	88 e
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A					
13	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	99 a	98 a	98 a	97 abc	96 a-d
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A					
14	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	97 abc	96 abc	96 abc	93 cd	93 bcd
15	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	98 abc	97 ab	98 a	98 a	99 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
16	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-1	B	97 abc	95 a-d	97 ab	94 a-d	94 bcd
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
Pest Code										IPOHE	IPOHE	IPOHE	IPOHE	IPOHE
Crop Code														
Rating Date										7-9-13	7-14-13	7-23-13	7-29-13	8-6-13
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing										0 DA-C		14 DA-C	20 DA-C	
Trt-Eval Interval										8 DA-B	13 DA-B	22 DA-B	28 DA-B	28 DA-C
17	HARROW	75	WG	0.0155	lb ai/a	0.33	oz/a	2-4"W-1	B	97 abc	95 a-d	98 ab	97 abc	96 a-d
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
LSD (P=.05)										3.7	3.7	2.5	4.3	4.9
Standard Deviation										2.2	2.2	1.5	2.6	2.9
CV										2.41	2.44	1.65	2.89	3.3
Replicate F										3.719	2.931	2.720	4.733	2.620
Replicate Prob(F)										0.0365	0.0711	0.0826	0.0166	0.0899
Treatment F										343.267	335.672	729.500	240.635	185.363
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
Pest Code										PANDI	PANDI	PANDI	PANDI
Crop Code													
Rating Date										7-14-13	7-23-13	7-29-13	8-6-13
Rating Type										Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent
Rating Timing											14 DA-C	20 DA-C	
Trt-Eval Interval										13 DA-B	22 DA-B	28 DA-B	28 DA-C
1	NONTREATED									0 e	0 g	0 e	0 e
2	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	97 abc	97 bcd	89 bcd	88 bcd
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
3	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	PRE	A	96 abc	97 a-d	94 abc	94 abc
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
4	KEYSTONE NXT	5.6	SE	3.36	lb ai/a	2.4	qt/a	PRE	A	94 bcd	96 cd	85 d	84 d
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	PRE	A				
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	A	96 abc	98 ab	92 a-d	91 a-d
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
6	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	98 ab	98 ab	93 a-d	94 abc
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
7	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	A	99 a	98 ab	93 a-d	90 a-d
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
8	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W-1	B	98 ab	99 ab	97 ab	96 ab
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B				
9	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	93 cd	96 d	90 a-d	88 bcd
10	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	93 cd	97 bcd	89 bcd	86 bcd
	PRINCEP 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A				
11	CORVUS	2.63	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	96 a-d	98 abc	92 a-d	90 a-d
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
12	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	PRE	A	94 a-d	93 e	87 cd	85 cd
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
13	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	93 bcd	92 ef	88 bcd	87 bcd
	AATREX 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
14	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	91 d	91 f	85 d	83 d
15	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	96 a-d	99 a	98 a	98 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W-2	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
16	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-1	B	96 a-d	97 a-d	93 a-d	93 abc
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B				

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
	Pest Code									PANDI	PANDI	PANDI	PANDI
	Crop Code												
	Rating Date									7-14-13	7-23-13	7-29-13	8-6-13
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing										14 DA-C	20 DA-C	
	Trt-Eval Interval									13 DA-B	22 DA-B	28 DA-B	28 DA-C
17	HARROW	75	WG	0.0155	lb ai/a	0.33	oz/a	2-4"W-1	B	96 a-d	98 ab	92 a-d	91 a-d
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B				
	LSD (P=.05)									4.7	2.1	8.5	9.6
	Standard Deviation									2.8	1.3	5.1	5.8
	CV									3.13	1.39	5.92	6.84
	Replicate F									0.098	0.455	2.858	3.396
	Replicate Prob(F)									0.9073	0.6388	0.0736	0.0473
	Treatment F									204.655	1039.383	58.441	44.244
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Southern Illinois University

General Corn Herbicide Comparison.

Trial ID: 13-2C-ME90 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Dow, Syngenta, Cheminova (RIM 1302).
2. Ratings: CI / necrosis / chlorosis / stunt at 3-5, 7-10, and 15-21 DA-B, CI at 0 and 14 DA-C.
   WC at 7, 14, 21, and 28 DA-B, and 0, 14, and 28 DA-C.
3. Photos.
4. Yield.
5. Following the PRE application the first rainfall event, beginning 1 hour later, was 2.16 inch over 3 days.
   Following the 2-4"W-1 application the first rainfall event, beginning 5 hours later, was 2.0 inch over 2 days.
6. Missing data in some plots was due to early season standing water.
7. Harvested 11-8-13, (2) 30 inch rows by 25 ft.

DuPont Corn Programs.

Trial ID: 13-5B-N60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-12-13
Completion Date: 9-24-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the effect of fungicide/insecticide applications at tassel on corn yield.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33
Description: SS RIB
Planting Date: 7-12-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Site and Design

Treated Plot Width: 5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 40 FT **Total Plot Length:** 40 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 2 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 2.4 **Texture:** SIL silt loam
pH: 6.6 **Soil Name:** Winfield
CEC: 7

Additional Measured Elements

Element	Quantity	Unit
P1	75	lb/A
K	347	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

DuPont Corn Programs.

Trial ID: 13-5B-N60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-30-13					7	DAY	61	86	F
2.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
3.	7-7-13					7	DAY	62	94	F
4.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
5.	7-14-13					7	DAY	64	94	F
6.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
7.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
8.	7-21-13					7	DAY	56	91	F
9.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
10.	7-28-13					7	DAY	52	87	F
11.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
12.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
13.	8-4-13					7	DAY	62	87	F
14.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
15.	8-11-13					7	DAY	54	85	F
16.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
17.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
18.	8-18-13					7	DAY	61	91	F
19.	8-25-13					7	DAY	62	100	F
20.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
21.	9-1-13					7	DAY	57	92	F
22.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A
Application Date:	9-3-13
Appl. Start Time:	10:30
Appl. Stop Time:	11:00
Application Method:	Spray
Application Timing:	VT
Application Placement:	BROFOL
Applied By:	RFK
Air Temperature, Unit:	77 F
% Relative Humidity:	64
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	N
Soil Temperature, Unit:	72 F
Soil Moisture:	NORMAL
% Cloud Cover:	0
Next Moisture Occurred On:	9-8-13
Time to Next Moisture, Unit:	5 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD
Stage Scale Used:	DESC
Stage Majority, Percent:	VT
Stage Minimum, Percent:	VT
Stage Maximum, Percent:	VT
Height, Unit:	96 IN
Height Minimum, Maximum:	94 96

Pest Stage At Each Application

Pest 1 Code, Type, Scale:	

DuPont Corn Programs.

Trial ID: 13-5B-N60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	40 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	5 FT
Spray Volume, Unit:	20 GPA

DuPont Corn Programs.

Trial ID: 13-5B-N60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 9-24-13 Injury Percent 21 DA-A	CERCZM ZEAMD 9-24-13 Incidence Percent 21 DA-A	CERCZM ZEAMD 9-24-13 Severity Percent 21 DA-A
1	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	VT	A	0 a	0.0 a	0.0 a
2	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	VT	A	0 a	0.0 a	0.0 a
	PREVATHON	0.43	SC	0.047	lb ai/a	14	fl oz/a	VT	A			
3	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	VT	A	0 a	0.0 a	0.0 a
	ASANA XL	0.66	EC	0.0495	lb ai/a	9.6	fl oz/a	VT	A			
4	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	VT	A	0 a	0.0 a	0.0 a
	ASANA XL	0.66	EC	0.031	lb ai/a	6	fl oz/a	VT	A			
	PREVATHON	0.43	SC	0.047	lb ai/a	14	fl oz/a	VT	A			
5	NO INSECTICIDES NO FUNGICIDES									0 a	1.0 a	1.0 a
LSD (P=.05)										0.0	0.00	0.00
Standard Deviation										0.0	0.00	0.00
CV										0.0	0.0	0.0
Replicate F										0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

DuPont Corn Programs.

Trial ID: 13-5B-N60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont.
2. DI/DS at 21 DA-A.
3. Blanket PRE application of Instigate (6 oz/A) plus Bicep II Magnum (2 qt/A)
   was applied to entire area on 7-13-13.
   Blanket POST application of Abundit (1 qt/A) plus Aatrex 4L (1 qt/A)
   was applied to entire area on 7-26-13.
4. Yield.
5. On 8-31-13 there was severe green snap due to wind storm.
6. CERCZM = Gray leaf spot (Cercospora zeae-maydis).
7. Trial was not yielded due to late planting (7-12-13), green snap (8-31-13), and early frost (10-25-13).

Loveland Herbicide Evaluation in Corn.

Trial ID: 13-2C-MMW70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-15-13
Completion Date: 11-8-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the performance of experimental Loveland corn herbicides compared with competitive standards.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33 **BBCH Scale:** BCOR
Description: SS RIB
Planting Date: 6-15-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** PANDI Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 3 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 4 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 28 FT **Total Plot Length:** 28 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: NONE control is other than an untreated

No.	Previous Crop	Year
1.	NON-CROP	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

% OM: 2.7 **Texture:** SIL silt loam
pH: 6.1 **Soil Name:** Pierron
CEC: 7

Additional Measured Elements

Element	Quantity	Unit
P1	68	lb/A
K	322	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Loveland Herbicide Evaluation in Corn.

Trial ID: 13-2C-MMW70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-9-13					7	DAY	59	94	F
3.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
4.	6-16-13					7	DAY	61	90	F
5.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
6.	6-23-13					7	DAY	64	92	F
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
9.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
10.	6-30-13					7	DAY	61	86	F
11.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
12.	7-7-13					7	DAY	62	94	F
13.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
14.	7-14-13					7	DAY	64	94	F
15.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
16.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
17.	7-21-13					7	DAY	56	91	F
18.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
19.	7-28-13					7	DAY	52	87	F
20.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
21.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
22.	8-4-13					7	DAY	62	87	F
23.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
24.	8-11-13					7	DAY	54	85	F
25.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
26.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
27.	8-18-13					7	DAY	61	91	F
28.	8-25-13					7	DAY	62	100	F
29.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
30.	9-1-13					7	DAY	57	92	F
31.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A	B	C
Application Date:	6-15-13	6-27-13	7-15-13
Appl. Start Time:	17:30	19:00	7:00
Appl. Stop Time:	18:15	19:30	7:30
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	V3	30DAP
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	LXF	LXF	RJW
Air Temperature, Unit:	82 F	85 F	68 F
% Relative Humidity:	67	79	100
Wind Velocity, Unit:	5 MPH	2 MPH	2 MPH
Wind Direction:	S	W	E
Dew Presence (Y/N):	N	N	Y
Soil Temperature, Unit:	73 F	74 F	79 F
Soil Moisture:	NORMAL	ABONOR	NORMAL
% Cloud Cover:	75	30	30
Next Moisture Occurred On:	6-15-13	6-29-13	7-20-13
Time to Next Moisture, Unit:	3 HR	2 DAY	5 DAY

Loveland Herbicide Evaluation in Corn.

Trial ID: 13-2C-MMW70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMD	ZEAMD	ZEAMD
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V3	V7
Stage Minimum, Percent:		V2	V6
Stage Maximum, Percent:		V3	V7
Height, Unit:		8 IN	22 IN
Height Minimum, Maximum:		6 8	18 22

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	PANDI W	PANDI W	PANDI W
Stage Majority, Percent:	NA	2	4
Stage Minimum, Percent:		1	3
Stage Maximum, Percent:		3	6
Height, Unit:		0.5 IN	6 IN
Height Minimum, Maximum:		0.5 1	3 8
Density, Unit:		0.1 FT2	0.05 FT2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	2	4
Stage Minimum, Percent:		2	4
Stage Maximum, Percent:		4	6
Height, Unit:		2 IN	3 IN
Height Minimum, Maximum:		1 2	2 3
Density, Unit:		0.001 FT2	0.001 FT2
Pest 3 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	2	4
Stage Minimum, Percent:		2	2
Stage Maximum, Percent:		4	6
Height, Unit:		1 IN	1 IN
Height Minimum, Maximum:		0.5 1	0.5 3
Density, Unit:		0.3 FT2	0.01 FT2
Pest 4 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W
Stage Majority, Percent:	NA	1	4
Stage Minimum, Percent:		COTY	2
Stage Maximum, Percent:		2	8
Height, Unit:		1 IN	2 IN
Height Minimum, Maximum:		1 2	1 4
Density, Unit:		0.01 FT2	0.01 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Loveland Herbicide Evaluation in Corn.

Trial ID: 13-2C-MMW70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 11-8-13 Moisture Percent	ZEAMD 11-8-13 Test wt. lb/bu	ZEAMD 11-8-13 Yield bu/A
	Pest Code											
	Crop Code											
	Rating Date											
	Rating Type											
	Rating Unit											
	Rating Timing											
	Trt-Eval Interval											
1	NO PRE HERBICIDE									23.4 a	55.0 a	222 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C			
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C			
2	LI-6464	100	SL	2	pt/a	2	pt/a	PRE	A	24.4 a	54.7 a	210 a
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	PRE	A			
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C			
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C			
3	LI-6464	100	SL	2	pt/a	2	pt/a	PRE	A	23.3 a	55.0 a	215 a
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	PRE	A			
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C			
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C			
4	HARNESS XTRA 5.6L	5.6	EC	3.36	lb ai/a	2.4	qt/a	PRE	A	23.5 a	55.0 a	219 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C			
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C			
5	LEXAR EZ	3.7	SC	2.08	lb ai/a	2.25	qt/a	PRE	A	23.9 a	54.8 a	209 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C			
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C			
6	LI-6464	100	SL	2	pt/a	2	pt/a	V3	B	24.6 a	54.6 a	196 a
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	V3	B			
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B			
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B			
7	LI-6464	100	SL	2	pt/a	2	pt/a	V3	B	23.2 a	55.1 a	211 a
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	V3	B			
	AATREX 4L	4	SC	0.5	lb ai/a	0.5	qt/a	V3	B			
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B			
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B			
8	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3	B	24.9 a	54.5 a	197 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B			
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B			
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3	B	23.8 a	54.9 a	210 a
	AATREX 4L	4	SC	0.5	lb ai/a	0.5	qt/a	V3	B			
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B			
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B			
10	HALEX GT	4.389	CS	1.97	lb ai/a	3.6	pt/a	V3	B	24.1 a	54.8 a	211 a
	AATREX 4L	4	SC	0.5	lb ai/a	0.5	qt/a	V3	B			
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B			
	LSD (P=.05)									2.31	0.77	29.3
	Standard Deviation									1.57	0.52	19.9
	CV									6.57	0.95	9.49
	Replicate F									0.672	0.836	0.350
	Replicate Prob(F)									0.5789	0.4891	0.7895
	Treatment F									0.541	0.479	0.696
	Treatment Prob(F)									0.8284	0.8722	0.7051

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=2,3,5,10,15,16,21,11,17,22,12,18,23,13,19,24,14,20,25

Loveland Herbicide Evaluation in Corn.

Trial ID: 13-2C-MMW70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-30-13 Injury Percent 15 DA-A	ZEAMD 7-7-13 Injury Percent 10 DA-B 22 DA-A	ZEAMD 7-14-13 Injury Percent 17 DA-B 29 DA-A	ZEAMD 7-30-13 Injury Percent 45 DAP 15 DA-C
1	NO PRE HERBICIDE												0 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C				
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C				
2	LI-6464	100	SL	2	pt/a	2	pt/a	PRE	A	0 a	0 c	0 a	0 a
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	PRE	A				
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C				
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C				
3	LI-6464	100	SL	2	pt/a	2	pt/a	PRE	A	1 a	0 c	0 a	0 a
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	PRE	A				
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C				
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C				
4	HARNESS XTRA 5.6L	5.6	EC	3.36	lb ai/a	2.4	qt/a	PRE	A	0 a	0 c	0 a	0 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C				
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C				
5	LEXAR EZ	3.7	SC	2.08	lb ai/a	2.25	qt/a	PRE	A	0 a	0 c	0 a	0 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C				
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C				
6	LI-6464	100	SL	2	pt/a	2	pt/a	V3	B		5 a	0 a	0 a
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	V3	B				
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B				
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B				
7	LI-6464	100	SL	2	pt/a	2	pt/a	V3	B		3 b	0 a	0 a
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	V3	B				
	AATREX 4L	4	SC	0.5	lb ai/a	0.5	qt/a	V3	B				
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B				
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B				
8	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3	B		3 b	0 a	0 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B				
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B				
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3	B		5 a	0 a	0 a
	AATREX 4L	4	SC	0.5	lb ai/a	0.5	qt/a	V3	B				
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B				
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B				
10	HALEX GT	4.389	CS	1.97	lb ai/a	3.6	pt/a	V3	B		6 a	0	0 a
	AATREX 4L	4	SC	0.5	lb ai/a	0.5	qt/a	V3	B				
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B				
LSD (P=.05)										1.3	1.1	0.0	0.0
Standard Deviation										0.8	0.8	0.0	0.0
CV										320.71	31.1	0.0	0.0
Replicate F										0.778	0.256	0.000	0.000
Replicate Prob(F)										0.5426	0.8559	1.0000	1.0000
Treatment F										1.556	43.462	0.000	0.000
Treatment Prob(F)										0.2832	0.0001	1.0000	1.0000

Loveland Herbicide Evaluation in Corn.

Trial ID: 13-2C-MMW70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	PANDI 6-30-13 Control Percent 15 DAP 15 DA-A	PANDI 7-14-13 Control Percent 29 DAP 17 DA-B	PANDI 7-30-13 Control Percent 45 DAP 15 DA-C	AMBTR 6-30-13 Control Percent 15 DAP 15 DA-A	AMBTR 7-14-13 Control Percent 29 DAP 17 DA-B	AMBTR 7-30-13 Control Percent 45 DAP 15 DA-C
1	NO PRE HERBICIDE											98 a			99 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C						
2	LI-6464	100	SL	2	pt/a	2	pt/a	PRE	A	99 a	96 b	95 bc	99 a	99 a	99 a
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	PRE	A						
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C						
3	LI-6464	100	SL	2	pt/a	2	pt/a	PRE	A	99 a	95 b	94 c	99 a	99 a	99 a
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	PRE	A						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C						
4	HARNESS XTRA 5.6L	5.6	EC	3.36	lb ai/a	2.4	qt/a	PRE	A	99 a	95 b	97 ab	99 a	96 a	99 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C						
5	LEXAR EZ	3.7	SC	2.08	lb ai/a	2.25	qt/a	PRE	A	99	98 a	97 ab	99	99 a	99 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C						
6	LI-6464	100	SL	2	pt/a	2	pt/a	V3	B		99 a	97 ab		99 a	98 a
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	V3	B						
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B						
7	LI-6464	100	SL	2	pt/a	2	pt/a	V3	B		99 a	98 a		99 a	99 a
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	V3	B						
	AATREX 4L	4	SC	0.5	lb ai/a	0.5	qt/a	V3	B						
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B						
8	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3	B		99 a	98 a		99 a	99 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B						
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3	B		99 a	98 a		99 a	99 a
	AATREX 4L	4	SC	0.5	lb ai/a	0.5	qt/a	V3	B						
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B						
10	HALEX GT	4.389	CS	1.97	lb ai/a	3.6	pt/a	V3	B		99 a	99 a		99 a	99 a
	AATREX 4L	4	SC	0.5	lb ai/a	0.5	qt/a	V3	B						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B						
LSD (P=.05)										0.0	2.0	2.1	0.0	2.3	0.8
Standard Deviation										0.0	1.3	1.4	0.0	1.5	0.6
CV										0.0	1.37	1.45	0.0	1.56	0.56
Replicate F										0.000	1.340	2.133	0.000	0.924	2.635
Replicate Prob(F)										1.0000	0.2897	0.1237	1.0000	0.4473	0.0740
Treatment F										0.000	7.703	4.653	0.000	1.367	0.933
Treatment Prob(F)										1.0000	0.0001	0.0014	1.0000	0.2696	0.5161

Loveland Herbicide Evaluation in Corn.

Trial ID: 13-2C-MMW70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 6-30-13 Control Percent 15 DAP 15 DA-A	ABUTH 7-14-13 Control Percent 29 DAP 17 DA-B	ABUTH 7-30-13 Control Percent 45 DAP 15 DA-C	IPOHE 6-30-13 Control Percent 15 DAP 15 DA-A	IPOHE 7-14-13 Control Percent 29 DAP 17 DA-B	IPOHE 7-30-13 Control Percent 45 DAP 15 DA-C
1	NO PRE HERBICIDE											93 b			83 d
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C						
2	LI-6464	100	SL	2	pt/a	2	pt/a	PRE	A	99 a	95 b	97 a	99 a	92 bc	95 ab
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	PRE	A						
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C						
3	LI-6464	100	SL	2	pt/a	2	pt/a	PRE	A	99 a	98 ab	97 a	99 a	92 b	93 bc
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	PRE	A						
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C						
4	HARNESS XTRA 5.6L	5.6	EC	3.36	lb ai/a	2.4	qt/a	PRE	A	98 a	88 c	93 b	96 a	89 c	92 c
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C						
5	LEXAR EZ	3.7	SC	2.08	lb ai/a	2.25	qt/a	PRE	A	99 a	99 ab	98 a	99 a	97 a	97 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	30DAP	C						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	30DAP	C						
6	LI-6464	100	SL	2	pt/a	2	pt/a	V3	B		99 ab	98 a		97 a	93 bc
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	V3	B						
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B						
7	LI-6464	100	SL	2	pt/a	2	pt/a	V3	B		99 ab	98 a		98 a	97 a
	LI-6465	100	SL	4	fl oz/a	4	fl oz/a	V3	B						
	AATREX 4L	4	SC	0.5	lb ai/a	0.5	qt/a	V3	B						
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B						
8	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3	B		99 a	98 a		98 a	96 a
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B						
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3	B		99 ab	98 a		98 a	96 ab
	AATREX 4L	4	SC	0.5	lb ai/a	0.5	qt/a	V3	B						
	MAKAZE	3	SL	32	fl oz/a	32	fl oz/a	V3	B						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B						
10	HALEX GT	4.389	CS	1.97	lb ai/a	3.6	pt/a	V3	B		99 ab	98 a		98 a	96 a
	AATREX 4L	4	SC	0.5	lb ai/a	0.5	qt/a	V3	B						
	WEATHER GARD COMPLETE	100	SL	0.5	% v/v	0.5	% v/v	V3	B						
LSD (P=.05)										1.9	3.6	3.2	4.0	3.1	3.2
Standard Deviation										1.1	2.5	2.2	2.4	2.1	2.2
CV										1.15	2.55	2.26	2.47	2.22	2.32
Replicate F										0.778	1.816	1.366	0.543	0.782	0.776
Replicate Prob(F)										0.5426	0.1768	0.2779	0.6680	0.5178	0.5192
Treatment F										0.778	8.296	3.707	1.542	10.970	15.747
Treatment Prob(F)										0.5426	0.0001	0.0053	0.2862	0.0001	0.0001

Southern Illinois University

Loveland Herbicide Evaluation in Corn.

Trial ID: 13-2C-MMW70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Loveland (29.0).
2. Ratings: CI 15 DA-A, continue rating every 7 days until injury is gone; WC 15, 30, and 45 DAP.
3. Photos.
4. Yield.
5. Following the PRE application the first rainfall event, beginning 3 hours later, was 2.16 inch over 3 days.
   Following the V3 application the first rainfall event, beginning 2 days later, was 2.27 inch over 4 days.
   Following the 30DAP application the first rainfall event, beginning 5 days later, was 0.59 inch over 1 day.
6. Missing data in plots 405-410 was due to early season standing water.
7. Harvested 11-8-13, (2) 30 inch rows by 25 ft.

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-15-13
Completion Date: 11-8-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate Impact in sequential or total postemergence weed control programs in corn.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33
Description: SS RIB
Planting Date: 6-15-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** GGGAN
Common Name: grasses, annual
Description: Mixture of SETFA 10% and PANDI 90%

Pest 2 Type: W **Code:** AMBEL Ambrosia artemisiifolia L.
Common Name: ragweed, common

Pest 3 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 4 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 28 FT **Total Plot Length:** 28 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	NONE	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

% OM: 2.7 **Texture:** SIL silt loam
pH: 6.1 **Soil Name:** Pierron
CEC: 7

Additional Measured Elements

Element	Quantity	Unit
P1	68	lb/A
K	322	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-9-13					7	DAY	59	94	F
3.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
4.	6-16-13					7	DAY	61	90	F
5.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
6.	6-23-13					7	DAY	64	92	F
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
9.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
10.	6-30-13					7	DAY	61	86	F
11.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
12.	7-7-13					7	DAY	62	94	F
13.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
14.	7-14-13					7	DAY	64	94	F
15.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
16.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
17.	7-21-13					7	DAY	56	91	F
18.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
19.	7-28-13					7	DAY	52	87	F
20.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
21.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
22.	8-4-13					7	DAY	62	87	F
23.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
24.	8-11-13					7	DAY	54	85	F
25.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
26.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
27.	8-18-13					7	DAY	61	91	F
28.	8-25-13					7	DAY	62	100	F
29.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
30.	9-1-13					7	DAY	57	92	F
31.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A	B	C
Application Date:	6-15-13	6-27-13	7-5-13
Appl. Start Time:	19:30	19:30	12:30
Appl. Stop Time:	20:00	20:00	13:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	2-4"W-1	2-4"W-2
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	LXF	LXF	NTH
Air Temperature, Unit:	79 F	85 F	78 F
% Relative Humidity:	70	80	74
Wind Velocity, Unit:	3 MPH	2 MPH	4 MPH
Wind Direction:	S	W	E
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	73 F	74 F	74 F
Soil Moisture:	NORMAL	ABONOR	ABONOR
% Cloud Cover:	80	30	50
Next Moisture Occurred On:	6-15-13	6-29-13	7-10-13
Time to Next Moisture, Unit:	1 HR	2 DAY	5 DAY

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMD	ZEAMD	ZEAMD
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V3	V5
Stage Minimum, Percent:		V2	V4
Stage Maximum, Percent:		V3	V5
Height, Unit:		8 IN	12 IN
Height Minimum, Maximum:		6 8	8 12

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	GGGAN W	GGGAN W	GGGAN W
Stage Majority, Percent:	NA	2	3
Stage Minimum, Percent:		1	1
Stage Maximum, Percent:		3	4
Height, Unit:		0.5 IN	3 IN
Height Minimum, Maximum:		0.125 1	0.5 4
Density, Unit:		3 FT2	0.25 FT2
Pest 2 Code, Type, Scale:	AMBEL W	AMBEL W	AMBEL W
Stage Majority, Percent:	NA	2	6
Stage Minimum, Percent:		2	COTY
Stage Maximum, Percent:		4	8
Height, Unit:		0.75 IN	3 IN
Height Minimum, Maximum:		0.5 1	0.5 6
Density, Unit:		0.3 FT2	0.25 FT2
Pest 3 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	2	NA
Stage Minimum, Percent:		COTY	
Stage Maximum, Percent:		2	
Height, Unit:		1 IN	
Height Minimum, Maximum:		0.5 1.5	
Density, Unit:		0.1 FT2	
Pest 4 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W
Stage Majority, Percent:	NA	NA	2
Stage Minimum, Percent:			COTY
Stage Maximum, Percent:			4
Height, Unit:			2 IN
Height Minimum, Maximum:			0.5 3
Density, Unit:			0.5 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 11-8-13 Moisture Percent	ZEAMD 11-8-13 Test wt. lb/bu	ZEAMD 11-8-13 Yield bu/A
	Pest Code											
	Crop Code											
	Rating Date											
	Rating Type											
	Rating Unit											
	Rating Timing											
	Trt-Eval Interval											
1	NONTREATED									23.2 a	55.1 a	175 b
2	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	25.5 a	54.4 a	196 ab
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W-2	C			
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C			
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
3	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	22.9 a	55.2 a	201 a
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C			
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	2-4"W-2	C			
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C			
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
4	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	24.5 a	54.6 a	216 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
5	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	23.4 a	55.0 a	216 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C			
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C			
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
6	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	24.1 a	54.8 a	211 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C			
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	2-4"W-2	C			
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
7	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"W-1	B	24.2 a	54.8 a	209 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-1	B			
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-1	B			
	AATREX 4L	4	SC	1	lb ai/a	2	pt/a	2-4"W-1	B			
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B			
8	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W-1	B	24.2 a	54.8 a	202 a
	AATREX 4L	4	SC	1	lb ai/a	2	pt/a	2-4"W-1	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B			
	LSD (P=.05)									2.13	0.68	23.0
	Standard Deviation									1.42	0.46	15.4
	CV									5.91	0.83	7.56
	Replicate F									0.434	0.420	0.868
	Replicate Prob(F)									0.7315	0.7414	0.4780
	Treatment F									1.369	1.498	3.131
	Treatment Prob(F)									0.2836	0.2373	0.0278

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=2,3,6,11,16,21,26,35,12,17,22,27,31,36,40,13,18,23,28,32,37,41,14,19,24,29,33,38,42,15,20,25,30,34,39,43

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 7-4-13 Injury Percent -1 DA-C	ZEAMD 7-12-13 Injury Percent 7 DA-B	ZEAMD 7-20-13 Injury Percent 7 DA-C	ZEAMD 7-27-13 Injury Percent 15 DA-C	ZEAMD 8-4-13 Injury Percent 30 DA-B	ZEAMD 8-4-13 Injury Percent 30 DA-C
1	NONTREATED									0 c	0 b	0 a	0 a	0 a	
2	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	0 c	1 b	1 a	0 a	0 a	
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W-2	C						
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C						
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C						
3	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	0 c	0 b	0 a	0 a	0 a	
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C						
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	2-4"W-2	C						
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C						
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C						
4	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	0 c	1 b	0 a	0 a	0 a	
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C						
5	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	0 c	3 a	0 a	0 a	0 a	
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C						
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C						
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C						
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C						
6	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	0 c	0 b	0 a	0 a	0 a	
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	2-4"W-2	C						
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C						
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C						
7	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"W-1	B	4 b	0 b	0 a	0 a	0 a	
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-1	B						
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-1	B						
	AATREX 4L	4	SC	1	lb ai/a	2	pt/a	2-4"W-1	B						
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-1	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B						
8	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W-1	B	7 a	1 b	0 a	0 a	0 a	
	AATREX 4L	4	SC	1	lb ai/a	2	pt/a	2-4"W-1	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B						
LSD (P=.05)										0.6	1.4	0.8	0.0	0.0	
Standard Deviation										0.4	0.9	0.5	0.0	0.0	
CV										29.1	130.79	432.05	0.0	0.0	
Replicate F										0.857	1.073	0.857	0.000	0.000	
Replicate Prob(F)										0.4811	0.3855	0.4811	1.0000	1.0000	
Treatment F										186.000	4.804	1.714	0.000	0.000	
Treatment Prob(F)										0.0001	0.0034	0.1685	1.0000	1.0000	

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GGGAN 7-4-13 Control Percent -1 DA-C	GGGAN 7-12-13 Control Percent 7 DA-C	GGGAN 7-20-13 Control Percent 15 DA-C	GGGAN 7-27-13 Control Percent 30 DA-B	GGGAN 8-4-13 Control Percent 30 DA-C	GGGAN 8-26-13 Control Percent 60 DA-B	GGGAN 9-3-13 Control Percent 60 DA-C
1	NONTREATED									0 c	0 c	0 c	0 c	0 d	0 b	0 b
2	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	93 b	98 ab	97 ab	96 b	94 c	92 a	92 a
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C							
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
3	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	94 b	98 b	97 ab	97 ab	95 bc	94 a	94 a
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C							
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C							
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
4	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	95 b	98 ab	97 b	96 b	93 c	94 a	94 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
5	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	96 ab	99 ab	97 ab	96 b	94 c	96 a	97 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C							
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
6	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	95 b	99 ab	98 a	98 a	97 ab	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C							
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
7	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"W-1	B	99 a	99 ab	98 ab	97 ab	97 ab	97 a	97 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-1	B							
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-1	B							
	AATREX 4L	4	SC	1	lb ai/a	2	pt/a	2-4"W-1	B							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							
8	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W-1	B	99 a	99 a	98 a	97 ab	98 a	93 a	93 a
	AATREX 4L	4	SC	1	lb ai/a	2	pt/a	2-4"W-1	B							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							
LSD (P=.05)										3.6	0.8	1.2	1.5	2.5	6.1	6.0
Standard Deviation										2.4	0.5	0.8	1.0	1.7	4.1	4.0
CV										2.88	0.62	0.95	1.16	2.05	4.96	4.84
Replicate F										0.385	2.640	0.346	0.925	1.227	2.354	2.459
Replicate Prob(F)										0.7651	0.0808	0.7924	0.4501	0.3289	0.1062	0.0960
Treatment F										791.560	16783.071	7266.119	4827.718	1558.069	266.657	279.544
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
Pest Code										AMBEL	AMBEL	AMBEL	AMBEL	AMBEL	AMBEL	AMBEL
Crop Code																
Rating Date										7-4-13	7-12-13	7-20-13	7-27-13	8-4-13	8-26-13	9-3-13
Rating Type										Control	Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing										-1 DA-C						
Trt-Eval Interval										7 DA-B	7 DA-C	15 DA-C	30 DA-B	30 DA-C	60 DA-B	60 DA-C
1	NONTREATED									0 d	0 a	0 b	0 c	0 c	0 b	0 b
2	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	92 bc	99 a	99 a	98 b	97 b	98 a	98 a
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C							
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
3	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	94 b	99 a	97 a	99 a	99 a	99 a	99 a
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C							
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C							
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
4	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	90 c	99 a	98 a	98 b	98 ab	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
5	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	93 b	99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C							
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
6	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	93 bc	99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C							
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
7	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"W-1	B	99 a	99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-1	B							
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-1	B							
	AATREX 4L	4	SC	1	lb ai/a	2	pt/a	2-4"W-1	B							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							
8	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W-1	B	99 a	99 a	99 a	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	1	lb ai/a	2	pt/a	2-4"W-1	B							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							
LSD (P=.05)										3.3	0.0	2.6	0.8	1.7	0.8	0.8
Standard Deviation										2.2	0.0	1.8	0.5	1.1	0.5	0.5
CV										2.7	0.0	2.04	0.6	1.33	0.6	0.6
Replicate F										0.584	0.000	0.857	0.103	0.761	0.698	0.698
Replicate Prob(F)										0.6330	1.0000	0.4811	0.9572	0.5308	0.5655	0.5655
Treatment F										904.152	0.000	1577.093	18058.447	3700.002	18392.743	18392.743
Treatment Prob(F)										0.0001	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
Pest Code										ABUTH	ABUTH	ABUTH	ABUTH	ABUTH	ABUTH	ABUTH
Crop Code																
Rating Date										7-4-13	7-12-13	7-20-13	7-27-13	8-4-13	8-26-13	9-3-13
Rating Type										Control	Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing										-1 DA-C						
Trt-Eval Interval										7 DA-B	7 DA-C	15 DA-C	30 DA-B	30 DA-C	60 DA-B	60 DA-C
1	NONTREATED									0 c	0 b	0 d	0 c	0 c	0 c	0 b
2	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	67 b	99 a	98 ab	96 a	96 a	96 ab	96 a
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C							
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
3	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	65 b	99 a	95 bc	94 ab	92 ab	93 ab	93 a
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C							
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C							
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
4	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	75 b	98 a	93 c	90 b	83 b	89 b	91 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
5	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	80 b	98 a	98 ab	96 a	94 ab	95 ab	96 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C							
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
6	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	74 b	99 a	99 a	99 a	99 a	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C							
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
7	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"W-1	B	99 a	98 a	95 bc	94 ab	88 ab	92 ab	93 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-1	B							
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-1	B							
	AATREX 4L	4	SC	1	lb ai/a	2	pt/a	2-4"W-1	B							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							
8	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W-1	B	99 a	99 a	98 ab	96 a	98 a	98 ab	98 a
	AATREX 4L	4	SC	1	lb ai/a	2	pt/a	2-4"W-1	B							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							
LSD (P=.05)										18.5	1.2	3.7	5.3	11.4	8.7	8.3
Standard Deviation										12.3	0.8	2.5	3.6	7.7	5.9	5.6
CV										17.66	0.91	2.95	4.27	9.44	7.11	6.76
Replicate F										3.191	0.779	0.568	0.307	0.933	0.718	0.804
Replicate Prob(F)										0.0521	0.5209	0.6434	0.8199	0.4451	0.5541	0.5079
Treatment F										25.412	7948.670	755.458	360.581	75.021	130.379	143.668
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
Pest Code										IPOHE	IPOHE	IPOHE	IPOHE	IPOHE	IPOHE	IPOHE
Crop Code																
Rating Date										7-4-13	7-12-13	7-20-13	7-27-13	8-4-13	8-26-13	9-3-13
Rating Type										Control	Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing										-1 DA-C						
Trt-Eval Interval										7 DA-B	7 DA-C	15 DA-C	30 DA-B	30 DA-C	60 DA-B	60 DA-C
1	NONTREATED									0 d	0 c	0 c	0 c	0 c	0 d	0 d
2	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	70 bc	98 a	97 a	96 a	94 a	92 abc	90 bc
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C							
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
3	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	77 b	99 a	97 a	95 a	93 a	94 ab	95 abc
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C							
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C							
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
4	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	68 bc	90 b	92 b	88 ab	87 ab	88 bc	93 abc
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
5	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	68 bc	98 a	97 a	93 a	91 ab	92 abc	96 ab
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C							
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
6	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	65 c	98 a	97 a	95 a	97 a	97 a	97 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-2	C							
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	2-4"W-2	C							
	AATREX 4L	4	SC	0.75	lb ai/a	1.5	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
7	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"W-1	B	99 a	97 a	96 ab	84 b	82 b	87 c	89 c
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W-1	B							
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-1	B							
	AATREX 4L	4	SC	1	lb ai/a	2	pt/a	2-4"W-1	B							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							
8	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W-1	B	99 a	99 a	97 a	94 a	92 ab	94 abc	94 abc
	AATREX 4L	4	SC	1	lb ai/a	2	pt/a	2-4"W-1	B							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B							
LSD (P=.05)										10.6	6.1	3.5	9.1	10.7	7.4	5.7
Standard Deviation										7.1	4.1	2.4	6.1	7.2	5.0	3.8
CV										10.45	4.87	2.82	7.61	9.07	6.18	4.72
Replicate F										1.063	0.740	0.490	0.818	0.489	1.618	3.037
Replicate Prob(F)										0.3895	0.5419	0.6936	0.5015	0.6943	0.2202	0.0559
Treatment F										74.377	276.991	823.260	114.503	81.071	172.532	295.306
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Amvac (13C04H059).
2. Ratings: CI 7, 15, and 30 DA-B and DA-C. WC 7, 15, 30, and 60 DA-B and DA-C.
3. Application B targeting V2-V3 corn, application C targeting V3-V4 corn.
4. Yield.
5. Missing data in some plots was due to early season standing water in some plots.
6. Following the PRE application the first rainfall event, beginning 1 hour later, was 2.16 inch over 3 days.
   Following the 2-4"W-1 application the first rainfall event, beginning 2 days later, was 2.27 inch over 4 days.
   Following the 2-4"W-2 application the first rainfall event, beginning 5 days later, was 0.20 inch over 1 day.
7. GGGAN = Annual grasses including 10% SETFA (giant foxtail) and 90% PANDI (fall panicum).
8. Harvested 11-8-13, (2) 30 inch rows by 25 ft.

Instigate Programs in Corn.

Trial ID: 13-2C-MW60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-15-13
Completion Date: 8-13-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate weed control and crop response with Instigate programs.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
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Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33
Description: SS RIB
Planting Date: 6-15-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** PANDI Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Pest 2 Type: W **Code:** XANST Xanthium strumarium L.
Common Name: cocklebur, common

Pest 3 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 4 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 28 FT **Total Plot Length:** 28 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	NON-CROP	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

% OM: 2.7 **Texture:** SIL silt loam
pH: 6.1 **Soil Name:** Pierron
CEC: 7

Additional Measured Elements

Element	Quantity	Unit
P1	68	lb/A
K	322	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Instigate Programs in Corn.

Trial ID: 13-2C-MW60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-9-13					7	DAY	59	94	F
3.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
4.	6-16-13					7	DAY	61	90	F
5.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
6.	6-23-13					7	DAY	64	92	F
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
9.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
10.	6-30-13					7	DAY	61	86	F
11.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
12.	7-7-13					7	DAY	62	94	F
13.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
14.	7-14-13					7	DAY	64	94	F
15.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
16.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
17.	7-21-13					7	DAY	56	91	F
18.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
19.	7-28-13					7	DAY	52	87	F
20.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
21.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
22.	8-4-13					7	DAY	62	87	F
23.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
24.	8-11-13					7	DAY	54	85	F
25.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
26.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
27.	8-18-13					7	DAY	61	91	F

Application Description

	A	B
Application Date:	6-15-13	7-15-13
Appl. Start Time:	16:50	7:30
Appl. Stop Time:	17:30	8:00
Application Method:	Spray	Spray
Application Timing:	PRE	POST
Application Placement:	BROSOI	BROFOL
Applied By:	LXF	RJW
Air Temperature, Unit:	84 F	80 F
% Relative Humidity:	61	85
Wind Velocity, Unit:	5 MPH	4 MPH
Wind Direction:	S	E
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	73 F	79 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	70	20
Next Moisture Occurred On:	6-15-13	7-15-13
Time to Next Moisture, Unit:	4 HR	9 HR

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMD	ZEAMD
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V7
Stage Minimum, Percent:		V6
Stage Maximum, Percent:		V7
Height, Unit:		22 IN
Height Minimum, Maximum:		18 22

Instigate Programs in Corn.

Trial ID: 13-2C-MW60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	PANDI W	PANDI W
Stage Majority, Percent:	NA	6
Stage Minimum, Percent:		3
Stage Maximum, Percent:		8
Height, Unit:		5 IN
Height Minimum, Maximum:		3 12
Density, Unit:		0.01 FT2
Pest 2 Code, Type, Scale:	XANST W	XANST W
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		4
Stage Maximum, Percent:		6
Height, Unit:		1 IN
Height Minimum, Maximum:		1 2
Density, Unit:		0.001 FT2
Pest 3 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		4
Stage Maximum, Percent:		6
Height, Unit:		2 IN
Height Minimum, Maximum:		2 4
Density, Unit:		0.001 FT2
Pest 4 Code, Type, Scale:	IPOHE W	IPOHE W
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		2
Stage Maximum, Percent:		6
Height, Unit:		2.5 IN
Height Minimum, Maximum:		1 3
Density, Unit:		0.01 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

Instigate Programs in Corn.

Trial ID: 13-2C-MW60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-29-13 Injury Percent 14 DAP 14 DA-A	ZEAMD 7-13-13 Injury Percent 28 DAP -2 DA-B	ZEAMD 8-13-13 Injury Percent 29 DA-B	PANDI 6-29-13 Control Percent 14 DAP 14 DA-A	PANDI 7-13-13 Control Percent 28 DAP -2 DA-B	PANDI 8-13-13 Control Percent 29 DA-B
1	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 a	99 a	99 a	98 abc
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
2	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 a	99 a	98 a	99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
3	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 a	99 a	99 a	99 ab
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
4	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 a	99 a	99 a	99 a
	CINCH ATZ	5.5	SC	2.75	lb ai/a	4	pt/a	PRE	A						
5	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 a	99 a	99 a	99 a
	BREAKFREE ATZ	5.25	SC	1.97	lb ai/a	3	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
6	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 a	99 a	99 a	97 bc
	BREAKFREE ATZ	5.25	SC	2.63	lb ai/a	4	pt/a	PRE	A						
7	INSTIGATE	45.84	WG	0.15	lb ai/a	5.25	oz/a	PRE	A	0 a	0 a	0 a	99 a	99 a	99 ab
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
8	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 a	99 a	98 a	99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	SIMAZINE 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
9	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	0 a	0 a	0 a	99 a	98 a	98 ab
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
10	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	B			0 a			96 c
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
11	LUMAX	3.948	SE	2.96	lb ai/a	3	qt/a	PRE	A	0 a	0 a	0 a	99 a	98 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
12	NONTREATED									0	0	0 a	0	0 b	0 d
LSD (P=.05)										0.0	0.0	0.0	0.0	1.2	2.0
Standard Deviation										0.0	0.0	0.0	0.0	0.7	1.2
CV										0.0	0.0	0.0	0.0	0.78	1.29
Replicate F										0.000	0.000	0.000	0.000	3.016	1.079
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	0.0757	0.3600
Treatment F										0.000	0.000	0.000	0.000	5471.210	1803.480
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=5,10,15,6,11,16,7,12,17,8,13,18,9,14,19

Instigate Programs in Corn.

Trial ID: 13-2C-MW60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	XANST 6-29-13 Control Percent 14 DAP 14 DA-A	XANST 7-13-13 Control Percent 28 DAP -2 DA-B	XANST 8-13-13 Control Percent 29 DA-B	AMBTR 6-29-13 Control Percent 14 DAP 14 DA-A	AMBTR 7-13-13 Control Percent 28 DAP -2 DA-B	AMBTR 8-13-13 Control Percent 29 DA-B
1	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
2	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
3	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	98 b	99 a	99 a	99 a	99 a	99 a
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
4	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 ab	99 a
	CINCH ATZ	5.5	SC	2.75	lb ai/a	4	pt/a	PRE	A						
5	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	99 a	99 a	99 a	98 ab	99 a
	BREAKFREE ATZ	5.25	SC	1.97	lb ai/a	3	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
6	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	99 a	99 a	99 b	99 a	99 a
	BREAKFREE ATZ	5.25	SC	2.63	lb ai/a	4	pt/a	PRE	A						
7	INSTIGATE	45.84	WG	0.15	lb ai/a	5.25	oz/a	PRE	A	99 a	99 a	99 a	99 a	98 b	99 a
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
8	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	SIMAZINE 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
9	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	98 ab	99 a	99 a	99 a	99 a	98 a
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
10	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	B			99 a			99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
11	LUMAX	3.948	SE	2.96	lb ai/a	3	qt/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B						
12	NONTREATED									0 c	0	0 a	0 c	0 c	0 b
LSD (P=.05)										0.8	0.0	0.0	0.3	0.9	0.7
Standard Deviation										0.5	0.0	0.0	0.2	0.5	0.4
CV										0.53	0.0	0.0	0.21	0.59	0.44
Replicate F										1.727	0.000	0.000	0.850	0.968	2.473
Replicate Prob(F)										0.2077	1.0000	1.0000	0.4448	0.3997	0.1111
Treatment F										11677.381	0.000	0.000	74928.017	9453.766	15264.561
Treatment Prob(F)										0.0001	1.0000	1.0000	0.0001	0.0001	0.0001

Instigate Programs in Corn.

Trial ID: 13-2C-MW60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOHE 6-29-13 Control Percent 14 DAP 14 DA-A	IPOHE 7-13-13 Control Percent 28 DAP -2 DA-B	IPOHE 8-13-13 Control Percent 29 DA-B
1	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	97 ab	95 c
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B			
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B			
2	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	98 b	98 ab	99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B			
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B			
3	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	99 a	98 ab
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B			
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B			
4	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	98 ab	97 abc
	CINCH ATZ	5.5	SC	2.75	lb ai/a	4	pt/a	PRE	A			
5	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	97 ab	97 abc
	BREAKFREE ATZ	5.25	SC	1.97	lb ai/a	3	pt/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B			
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B			
6	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	98 ab	97 abc
	BREAKFREE ATZ	5.25	SC	2.63	lb ai/a	4	pt/a	PRE	A			
7	INSTIGATE	45.84	WG	0.15	lb ai/a	5.25	oz/a	PRE	A	99 a	97 b	96 bc
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B			
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B			
8	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	98 ab	97 abc
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	SIMAZINE 4L	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B			
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B			
9	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	97 c	94 c	96 bc
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B			
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B			
10	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	POST	B			99 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	POST	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B			
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B			
11	LUMAX	3.948	SE	2.96	lb ai/a	3	qt/a	PRE	A	98 ab	98 ab	98 ab
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B			
	N-PAK AMS	3.4	SL	2.04	lb ai/a	4	% v/v	POST	B			
12	NONTREATED									0 d	0 d	0 d
LSD (P=.05)										0.8	2.5	2.4
Standard Deviation										0.5	1.4	1.4
CV										0.53	1.63	1.55
Replicate F										1.727	0.409	0.729
Replicate Prob(F)										0.2077	0.6709	0.4954
Treatment F										11634.031	1244.966	1233.998
Treatment Prob(F)										0.0001	0.0001	0.0001

Southern Illinois University

Instigate Programs in Corn.

Trial ID: 13-2C-MW60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (13-004).
2. Ratings: CI at 14 and 28 DAP; WC at 14 and 28 DAP (or prior to POST); 28 DA-B.
3. Target POST for 28-35 DAP.
4. Yield not requested.
5. Missing data in plots 310, 311, and 312 was due to standing water.
6. DAP = Days after planting.
7. Not harvested.

Broadleaf Weed Control with F9387 in Corn.

Trial ID: 13-21M-EE50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-14-13
Completion Date: 11-7-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate broadleaf weed control with F9387 in corn.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33 **BBCH Scale:** BCOR
Description: SS RIB
Planting Date: 6-14-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 2 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 3 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 4 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 0 LB/A, K2O 150 LB/A

Soil Description

% OM: 3.4 **Texture:** SIL silt loam
pH: 6.5 **Soil Name:** Bethalto
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	71	lb/A
K	297	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Broadleaf Weed Control with F9387 in Corn.

Trial ID: 13-21M-EE50 Location: Belleville Res. Center Trial Year: 2013
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No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-9-13					7	DAY	59	94	F
3.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
4.	6-16-13					7	DAY	61	90	F
5.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
6.	6-23-13					7	DAY	64	92	F
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
9.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
10.	6-30-13					7	DAY	61	86	F
11.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
12.	7-7-13					7	DAY	62	94	F
13.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
14.	7-14-13					7	DAY	64	94	F
15.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
16.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
17.	7-21-13					7	DAY	56	91	F
18.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
19.	7-28-13					7	DAY	52	87	F
20.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
21.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
22.	8-4-13					7	DAY	62	87	F
23.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
24.	8-11-13					7	DAY	54	85	F
25.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
26.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
27.	8-18-13					7	DAY	61	91	F

Application Description

	A
Application Date:	7-4-13
Appl. Start Time:	13:00
Appl. Stop Time:	13:30
Application Method:	Spray
Application Timing:	4"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	82 F
% Relative Humidity:	55
Wind Velocity, Unit:	2 MPH
Wind Direction:	E
Dew Presence (Y/N):	N
Soil Temperature, Unit:	74 F
Soil Moisture:	ABONOR
% Cloud Cover:	25
Next Moisture Occurred On:	7-10-13
Time to Next Moisture, Unit:	6 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD
Stage Scale Used:	DESC
Stage Majority, Percent:	V5
Stage Minimum, Percent:	V4
Stage Maximum, Percent:	V5
Height, Unit:	12 IN
Height Minimum, Maximum:	10 12

Broadleaf Weed Control with F9387 in Corn.

Trial ID: 13-21M-EE50 Location: Belleville Res. Center Trial Year: 2013
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Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBTR W
Stage Majority, Percent:	6
Stage Minimum, Percent:	4
Stage Maximum, Percent:	8
Height, Unit:	5 IN
Height Minimum, Maximum:	4 8
Density, Unit:	0.1 FT2
Pest 2 Code, Type, Scale:	ABUTH W
Stage Majority, Percent:	4
Stage Minimum, Percent:	3
Stage Maximum, Percent:	6
Height, Unit:	4 IN
Height Minimum, Maximum:	2 5
Density, Unit:	0.5 FT2
Pest 3 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	8
Stage Minimum, Percent:	4
Stage Maximum, Percent:	10
Height, Unit:	3 IN
Height Minimum, Maximum:	1 5
Density, Unit:	1 FT2
Pest 4 Code, Type, Scale:	IPOHE W
Stage Majority, Percent:	4
Stage Minimum, Percent:	4
Stage Maximum, Percent:	6
Height, Unit:	3.5 IN
Height Minimum, Maximum:	2 4
Density, Unit:	0.1 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Broadleaf Weed Control with F9387 in Corn.

Trial ID: 13-21M-EE50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 11-7-13 Moisture Percent	ZEAMD 11-7-13 Test wt. lb/bu	ZEAMD 11-7-13 Yield bu/A	ZEAMD 7-9-13 Necrosis Percent 5 DA-A	ZEAMD 7-9-13 Injury Percent 5 DA-A	ZEAMD 7-18-13 Necrosis Percent 14 DA-A	ZEAMD 7-18-13 Injury Percent 14 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	A	21.5 a	55.6 a	210 a	0 c	0 d	0 e	0 d
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A							
2	F9387-1	4	SC	0.0625	lb ai/a	2.0	fl oz/a	4"W	A	21.7 a	55.6 a	213 a	4 b	4 bc	5 b	5 ab
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A							
3	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	20.7 a	55.9 a	218 a	8 a	8 a	6 a	6 a
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A							
4	F9387-1	4	SC	0.098	lb ai/a	3.15	fl oz/a	4"W	A	21.4 a	55.7 a	226 a	9 a	9 a	5 b	5 ab
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A							
5	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	4"W	A	22.0 a	55.5 a	212 a	0 c	1 d	0 e	1 cd
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A							
6	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	21.3 a	55.7 a	219 a	3 b	3 c	3 c	3 bc
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	A							
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A							
7	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	21.5 a	55.6 a	234 a	4 b	5 b	3 c	3 bc
	AATREX 4L	4	SC	1.5	lb ai/a	48	fl oz/a	4"W	A							
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A							
8	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	21.8 a	55.6 a	220 a	3 b	3 c	1 d	1 cd
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	4"W	A							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"W	A							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A							
9	STATUS	56	WG	0.175	lb ae/a	5	oz/a	4"W	A	21.3 a	55.7 a	214 a	0 c	0 d	0 e	3 bc
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"W	A							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A							
10	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	4"W	A	21.7 a	55.6 a	234 a	0 c	0 d	0 e	1 cd
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	A							
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4"W	A							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A							
11	NONTREATED									22.0 a	55.5 a	144 b	0 c	0 d	0 e	0 d
LSD (P=.05)										1.70	0.67	30.5	1.6	1.7	1.0	1.9
Standard Deviation										1.18	0.46	21.1	1.1	1.2	0.7	1.3
CV										5.47	0.83	9.92	43.54	43.7	33.7	54.38
Replicate F										3.296	2.736	5.336	2.310	1.946	1.826	2.347
Replicate Prob(F)										0.0338	0.0609	0.0046	0.0964	0.1434	0.1637	0.0926
Treatment F										0.380	0.278	5.358	31.243	27.875	42.625	7.796
Treatment Prob(F)										0.9456	0.9815	0.0002	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=19

Broadleaf Weed Control with F9387 in Corn.

Trial ID: 13-21M-EE50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 8-3-13 Stunt Percent 30 DA-A	ZEAMD 8-3-13 Injury Percent 30 DA-A	AMBTR 7-9-13 Control Percent 5 DA-A	AMBTR 7-18-13 Control Percent 14 DA-A	AMBTR 8-3-13 Control Percent 30 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	A	0 a	0 a	93 bc	99 a	99 ab
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A					
2	F9387-1	4	SC	0.0625	lb ai/a	2.0	fl oz/a	4"W	A	0 a	1 a	84 d	99 a	99 ab
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A					
3	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	1 a	2 a	91 c	99 a	99 ab
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A					
4	F9387-1	4	SC	0.098	lb ai/a	3.15	fl oz/a	4"W	A	0 a	2 a	90 c	99 a	99 ab
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A					
5	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	4"W	A	0 a	0 a	50 f	99 a	99 ab
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A					
6	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	0 a	0 a	98 ab	99 a	99 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A					
7	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	0 a	0 a	98 a	99 a	99 a
	AATREX 4L	4	SC	1.5	lb ai/a	48	fl oz/a	4"W	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A					
8	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	0 a	0 a	80 d	99 a	99 ab
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	4"W	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"W	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A					
9	STATUS	56	WG	0.175	lb ae/a	5	oz/a	4"W	A	0 a	1 a	69 e	98 b	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"W	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A					
10	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	4"W	A	0 a	0 a	92 c	99 a	98 b
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4"W	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A					
11	NONTREATED									0 a	0 a	0 g	0 c	0 c
LSD (P=.05)										1.1	2.0	4.6	0.7	0.7
Standard Deviation										0.8	1.4	3.2	0.5	0.5
CV										663.33	258.38	4.19	0.52	0.57
Replicate F										1.000	3.933	1.169	0.925	0.233
Replicate Prob(F)										0.4064	0.0177	0.3378	0.4408	0.8730
Treatment F										1.000	1.246	328.383	16040.673	13593.978
Treatment Prob(F)										0.4654	0.3037	0.0001	0.0001	0.0001

Broadleaf Weed Control with F9387 in Corn.

Trial ID: 13-21M-EE50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 7-9-13 Control Percent 5 DA-A	ABUTH 7-18-13 Control Percent 14 DA-A	ABUTH 8-3-13 Control Percent 30 DA-A	AMATA 7-9-13 Control Percent 5 DA-A	AMATA 7-18-13 Control Percent 14 DA-A	AMATA 8-3-13 Control Percent 30 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	A	97 a	98 b	98 bc	99 a	99 a	99 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A						
2	F9387-1	4	SC	0.0625	lb ai/a	2.0	fl oz/a	4"W	A	99 a	99 a	99 a	97 a	99 ab	99 a
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A						
3	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	99 a	99 a	99 ab	98 a	99 a	99 a
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A						
4	F9387-1	4	SC	0.098	lb ai/a	3.15	fl oz/a	4"W	A	99 a	99 a	99 a	99 a	99 a	99 a
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A						
5	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	4"W	A	72 b	99 a	99 a	87 b	99 b	98 a
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A						
6	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	99 a	99 a	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A						
7	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	99 a	99 a	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	1.5	lb ai/a	48	fl oz/a	4"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A						
8	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	99 a	99 a	99 a	97 a	99 a	99 a
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	4"W	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A						
9	STATUS	56	WG	0.175	lb ae/a	5	oz/a	4"W	A	73 b	80 c	98 c	70 c	80 c	98 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A						
10	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	4"W	A	97 a	99 a	99 a	98 a	99 a	99 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A						
11	NONTREATED									0 c	0 d	0 d	0 d	0 d	0 b
LSD (P=.05)										3.8	0.5	0.7	2.6	0.5	1.0
Standard Deviation										2.7	0.3	0.5	1.8	0.3	0.7
CV										3.13	0.39	0.54	2.07	0.39	0.78
Replicate F										0.668	1.000	0.784	0.192	0.714	0.492
Replicate Prob(F)										0.5783	0.4064	0.5121	0.9010	0.5512	0.6903
Treatment F										511.479	29289.603	15314.178	1119.614	30446.925	7209.444
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Broadleaf Weed Control with F9387 in Corn.

Trial ID: 13-21M-EE50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOHE 7-9-13 Control Percent 5 DA-A	IPOHE 7-18-13 Control Percent 14 DA-A	IPOHE 8-3-13 Control Percent 30 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	A	68 d	95 d	96 bcd
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A			
2	F9387-1	4	SC	0.0625	lb ai/a	2.0	fl oz/a	4"W	A	89 c	96 cd	96 d
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A			
3	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	94 abc	96 bcd	97 bcd
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A			
4	F9387-1	4	SC	0.098	lb ai/a	3.15	fl oz/a	4"W	A	94 abc	97 a-d	98 abc
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A			
5	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	4"W	A	54 e	96 cd	96 cd
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A			
6	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	98 a	98 abc	97 abc
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A			
7	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	98 a	99 a	99 a
	AATREX 4L	4	SC	1.5	lb ai/a	48	fl oz/a	4"W	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1.0	% v/v	4"W	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A			
8	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	A	96 ab	96 cd	97 abc
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	4"W	A			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"W	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A			
9	STATUS	56	WG	0.175	lb ae/a	5	oz/a	4"W	A	70 d	75 e	98 abc
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"W	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A			
10	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	4"W	A	91 bc	99 ab	98 ab
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4"W	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4"W	A			
11	NONTREATED									0 f	0 f	0 e
LSD (P=.05)										5.6	2.2	1.5
Standard Deviation										3.9	1.5	1.1
CV										4.99	1.79	1.22
Replicate F										1.209	1.472	0.072
Replicate Prob(F)										0.3233	0.2428	0.9743
Treatment F										235.442	1441.887	2982.566
Treatment Prob(F)										0.0001	0.0001	0.0001

Southern Illinois University

Broadleaf Weed Control with F9387 in Corn.

Trial ID: 13-21M-EE50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: FMC (NA13-1115A).
2. Ratings: CI / Necrosis 5 and 14 DA-A; CI / Stunt 30 DA-A. WC 5, 14, and 30 DA-A.
3. Photos to show weed size/height at application.
4. Photos at each evaluation.
5. Evaluations at 30 DA-A should include new emergence.
6. Apply treatments when 75% of weeds are 4 inch in height.
7. The planned blanket PRE application of Dual II Magnum (0.5 pt/A) for grass suppression, was applied to the entire area 10 ft wide on 6-15-13, however due to heavy rain right after planting and the reduced corn emergence a few days later, the trial was relocated. The PRE application was not made at the relocated area, but grass pressure was low.
8. Yield.
9. Following the 4"W application the first rainfall event, beginning 6 days later, was 0.20 inch over 1 day.
10 Harvested 11-7-13, (2) 30 inch rows by 27 ft.

Soybean, Tilled Weed Control Studies

Southern Illinois University

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-12-13
Completion Date: 9-12-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the influence of residual herbicides on weed control in Liberty Link soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: HS 42L02 **BBCH Scale:** BSOY
Description: LL
Planting Date: 7-12-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** PANDI Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Pest 2 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 3 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 4 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 31 FT **Total Plot Length:** 31 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.5 **Texture:** SIL silt loam
pH: 6 **Soil Name:** Winfield
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	58	lb/A
K	286	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
2.	7-7-13					7	DAY	62	94	F
3.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
4.	7-14-13					7	DAY	64	94	F
5.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
6.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
7.	7-21-13					7	DAY	56	91	F
8.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
9.	7-28-13					7	DAY	52	87	F
10.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
11.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
12.	8-4-13					7	DAY	62	87	F
13.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
14.	8-11-13					7	DAY	54	85	F
15.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
16.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
17.	8-18-13					7	DAY	61	91	F
18.	8-25-13					7	DAY	62	100	F
19.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
20.	9-1-13					7	DAY	57	92	F
21.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A	B	C	D	E
Application Date:	7-13-13	7-29-13	8-1-13	8-16-13	
Appl. Start Time:	16:30	9:00	15:00	11:00	
Appl. Stop Time:	17:00	9:15	15:20	11:15	
Application Method:	Spray	Spray	Spray	Spray	Spray
Application Timing:	PRE	V2	2-4"W-1	2-4"W-2	LPOST-IN
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL	Not
Applied By:	RJW	RJW	LXF	RFK	Applied
Air Temperature, Unit:	83 F	73 F	87 F	75 F	
% Relative Humidity:	53	71	39	50	
Wind Velocity, Unit:	6 MPH	3 MPH	4 MPH	4 MPH	
Wind Direction:	S	S	N	NE	
Dew Presence (Y/N):	N	N	N	N	
Soil Temperature, Unit:	76 F	73 F	74 F	70 F	
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL	
% Cloud Cover:	20	100	10	50	
Next Moisture Occurred On:	7-20-13	7-30-13	8-2-13	8-18-13	
Time to Next Moisture, Unit:	7 DAY	1 DAY	1 DAY	2 DAY	

Crop Stage At Each Application

	A	B	C	D	E
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	V2	V3	V5	NA
Stage Minimum, Percent:		V2	V2	V5	
Stage Maximum, Percent:		V2	V3	V5	
Height, Unit:		6 IN	6 IN	12 IN	
Height Minimum, Maximum:		4 6	5 6	10 12	

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B	C	D	E
Pest 1 Code, Type, Scale:	PANDI W	PANDI W	PANDI W	PANDI W	PANDI W
Stage Majority, Percent:	NA	3	2	NA	NA
Stage Minimum, Percent:		2	1		
Stage Maximum, Percent:		5	2		
Height, Unit:		4 IN	1 IN		
Height Minimum, Maximum:		0.5 6	0.5 1		
Density, Unit:		5 FT2	0.01 FT2		
Pest 2 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	4	NA	6	NA
Stage Minimum, Percent:		2		2	
Stage Maximum, Percent:		6		6	
Height, Unit:		3 IN		3 IN	
Height Minimum, Maximum:		0.5 4		2 4	
Density, Unit:		0.01 FT2		0.001 FT2	
Pest 3 Code, Type, Scale:	AMATA W	AMATA W	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	6	NA	NA	NA
Stage Minimum, Percent:		COTY			
Stage Maximum, Percent:		10			
Height, Unit:		3 IN			
Height Minimum, Maximum:		0.5 4			
Density, Unit:		5 FT2			
Pest 4 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	6	4	6	NA
Stage Minimum, Percent:		4	COTY	2	
Stage Maximum, Percent:		10	8	6	
Height, Unit:		4 IN	4 IN	3 IN	
Height Minimum, Maximum:		2 5	0.5 6	2 4	
Density, Unit:		0.05 FT2	1 FT2	0.001 FT2	

Application Equipment

	A	B	C	D	E
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA	15 GPA

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-29-13 Injury Percent 16 DA-A 0 DA-B	GLXMA 8-1-13 Injury Percent 3 DA-B 0 DA-C	GLXMA 8-15-13 Injury Percent 14 DA-C	GLXMA 8-29-13 Injury Percent 28 DA-C	GLXMA 9-12-13 Injury Percent 42 DA-C
1	NONTREATED									0 d	0 e	0 d	0 c	0 a
2	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	7 a	7 c	1 cd	3 abc	2 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
3	VALOR XLT	40.3	WG	0.088	lb ai/a	3.5	oz/a	PRE	A	6 ab	6 cd	1 d	2 bc	1 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
4	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	4 ab	15 a	3 bcd	3 abc	1 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B					
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
5	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B		13 a	6 b	3 abc	2 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-2	D					
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	2-4"W-2	D					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-2	D					
6	OPTILL PRO (CO-PACK)							PRE	A	4 bc	4 d	2 cd	0 c	0 a
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A					
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
7	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	7 a	15 a	4 bc	6 a	3 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B					
	OUTLOOK	6	EC	0.656	lb ai/a	14	fl oz/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
8	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B		10 b	1 cd	2 bc	2 a
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-2	D					
	OUTLOOK	6	EC	0.656	lb ai/a	14	fl oz/a	2-4"W-2	D					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-2	D					
9	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	4 bc	4 d	2 cd	0 c	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=16

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-29-13 Injury Percent 16 DA-A 0 DA-B	GLXMA 8-1-13 Injury Percent 3 DA-B 0 DA-C	GLXMA 8-15-13 Injury Percent 14 DA-C	GLXMA 8-29-13 Injury Percent 28 DA-C	GLXMA 9-12-13 Injury Percent 42 DA-C
10	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	1 cd	1 e	11 a	4 ab	2 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
LSD (P=.05)										2.7	2.4	3.6	3.4	2.8
Standard Deviation										1.6	1.4	2.1	2.0	1.6
CV										39.15	19.09	67.06	83.99	123.41
Replicate F										1.427	2.855	2.105	0.113	0.973
Replicate Prob(F)										0.2728	0.0837	0.1508	0.8939	0.3971
Treatment F										7.728	47.525	7.216	3.086	1.259
Treatment Prob(F)										0.0006	0.0001	0.0002	0.0200	0.3227

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	PANDI 7-29-13 Control Percent 16 DA-A 0 DA-B	PANDI 8-1-13 Control Percent 3 DA-B 0 DA-C	PANDI 8-15-13 Control Percent 14 DA-C	PANDI 8-29-13 Control Percent 28 DA-C	PANDI 9-12-13 Control Percent 42 DA-C
1	NONTREATED									0 d	0 e	0 d	0 b	0 b
2	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	97 b	96 bc	99 a	99 a	98 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
3	VALOR XLT	40.3	WG	0.088	lb ai/a	3.5	oz/a	PRE	A	97 ab	96 abc	98 bc	98 a	98 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
4	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	95 c	98 ab	98 abc	98 a	98 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B					
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
5	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B		94 c	98 c	99 a	99 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-2	D					
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	2-4"W-2	D					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-2	D					
6	OPTILL PRO (CO-PACK)							PRE	A	99 a	99 a	99 ab	99 a	99 a
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A					
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
7	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	97 b	98 ab	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B					
	OUTLOOK	6	EC	0.656	lb ai/a	14	fl oz/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
8	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B		73 d	98 c	99 a	99 a
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-2	D					
	OUTLOOK	6	EC	0.656	lb ai/a	14	fl oz/a	2-4"W-2	D					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-2	D					
9	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	99 a	99 a	99 ab	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
Pest Code										PANDI	PANDI	PANDI	PANDI	PANDI
Crop Code														
Rating Date										7-29-13	8-1-13	8-15-13	8-29-13	9-12-13
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing										16 DA-A	3 DA-B			
Trt-Eval Interval										0 DA-B	0 DA-C	14 DA-C	28 DA-C	42 DA-C
10	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
LSD (P=.05)										1.8	2.9	0.9	0.9	1.5
Standard Deviation										1.0	1.7	0.5	0.5	0.9
CV										1.17	1.96	0.57	0.6	0.97
Replicate F										0.290	0.228	1.588	0.474	0.851
Replicate Prob(F)										0.7527	0.7986	0.2316	0.6302	0.4436
Treatment F										3558.131	1032.645	11547.295	10415.383	3926.791
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 7-29-13 Control Percent 16 DA-A 0 DA-B	ABUTH 8-1-13 Control Percent 3 DA-B 0 DA-C	ABUTH 8-15-13 Control Percent 14 DA-C	ABUTH 8-29-13 Control Percent 28 DA-C	ABUTH 9-12-13 Control Percent 42 DA-C
1	NONTREATED									0 c	0 d	0 c	0 a	0 b
2	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	97 a	97 a	98 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
3	VALOR XLT	40.3	WG	0.088	lb ai/a	3.5	oz/a	PRE	A	98 a	98 a	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
4	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	98 a	98 a	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B					
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
5	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B		98 a	99 a	99 a	99 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-2	D					
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	2-4"W-2	D					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-2	D					
6	OPTILL PRO (CO-PACK)							PRE	A	91 a	91 ab	99 a	99 a	99 a
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A					
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
7	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	98 a	99 a	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B					
	OUTLOOK	6	EC	0.656	lb ai/a	14	fl oz/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
8	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B		77 c	96 b	99 a	99 a
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-2	D					
	OUTLOOK	6	EC	0.656	lb ai/a	14	fl oz/a	2-4"W-2	D					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-2	D					
9	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	82 b	82 bc	98 ab	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
	Pest Code									ABUTH	ABUTH	ABUTH	ABUTH	ABUTH
	Crop Code													
	Rating Date									7-29-13	8-1-13	8-15-13	8-29-13	9-12-13
	Rating Type									Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent
	Rating Timing									16 DA-A	3 DA-B			
	Trt-Eval Interval									0 DA-B	0 DA-C	14 DA-C	28 DA-C	42 DA-C
10	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	78 b	82 bc	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
	LSD (P=.05)									9.2	10.0	2.2	0.0	0.6
	Standard Deviation									5.3	5.8	1.3	0.0	0.3
	CV									6.55	7.1	1.48	0.0	0.39
	Replicate F									0.302	0.592	0.310	0.000	1.909
	Replicate Prob(F)									0.7442	0.5644	0.7370	1.0000	0.1770
	Treatment F									120.779	79.708	1692.114	0.000	23985.730
	Treatment Prob(F)									0.0001	0.0001	0.0001	1.0000	0.0001

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 7-29-13 Control Percent 16 DA-A 0 DA-B	AMATA 8-1-13 Control Percent 3 DA-B 0 DA-C	AMATA 8-15-13 Control Percent 14 DA-C	AMATA 8-29-13 Control Percent 28 DA-C	AMATA 9-12-13 Control Percent 42 DA-C
1	NONTREATED									0 b	0 c	0 b	0 c	0 c
2	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	98 a	98 a	99 a	99 a	98 b
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
3	VALOR XLT	40.3	WG	0.088	lb ai/a	3.5	oz/a	PRE	A	99 a	99 a	99 a	99 b	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
4	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B					
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
5	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B		98 a	99 a	99 a	99 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-2	D					
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	2-4"W-2	D					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-2	D					
6	OPTILL PRO (CO-PACK)							PRE	A	98 a	98 a	99 a	99 a	99 a
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A					
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
7	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B					
	OUTLOOK	6	EC	0.656	lb ai/a	14	fl oz/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
8	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B		90 b	99 a	99 a	99 a
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-2	D					
	OUTLOOK	6	EC	0.656	lb ai/a	14	fl oz/a	2-4"W-2	D					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-2	D					
9	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
Pest Code										AMATA	AMATA	AMATA	AMATA	AMATA
Crop Code														
Rating Date										7-29-13	8-1-13	8-15-13	8-29-13	9-12-13
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing										16 DA-A	3 DA-B			
Trt-Eval Interval										0 DA-B	0 DA-C	14 DA-C	28 DA-C	42 DA-C
10	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
LSD (P=.05)										1.3	1.2	0.5	0.3	0.6
Standard Deviation										0.8	0.7	0.3	0.2	0.4
CV										0.88	0.77	0.3	0.2	0.41
Replicate F										0.505	0.512	0.474	1.000	1.000
Replicate Prob(F)										0.6140	0.6077	0.6302	0.3874	0.3874
Treatment F										6335.794	6336.391	41721.530	88144.009	22020.252
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 7-29-13 Control Percent 16 DA-A 0 DA-B	AMBTR 8-1-13 Control Percent 3 DA-B 0 DA-C	AMBTR 8-15-13 Control Percent 14 DA-C	AMBTR 8-29-13 Control Percent 28 DA-C	AMBTR 9-12-13 Control Percent 42 DA-C
1	NONTREATED									0 c	0 d	0 d	0 d	0 d
2	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	84 a	77 b	98 ab	98 abc	97 abc
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
3	VALOR XLT	40.3	WG	0.088	lb ai/a	3.5	oz/a	PRE	A	96 a	93 a	99 a	99 a	97 abc
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
4	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	91 a	96 a	98 ab	98 bc	95 c
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B					
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
5	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B		98 a	99 a	99 a	99 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-2	D					
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	2-4"W-2	D					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-2	D					
6	OPTILL PRO (CO-PACK)							PRE	A	83 a	78 b	99 a	99 ab	98 ab
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A					
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
7	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	93 a	97 a	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B					
	OUTLOOK	6	EC	0.656	lb ai/a	14	fl oz/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
8	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V2	B		77 b	93 c	99 a	99 a
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	V2	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	V2	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-2	D					
	OUTLOOK	6	EC	0.656	lb ai/a	14	fl oz/a	2-4"W-2	D					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-2	D					
9	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	42 b	33 c	96 b	97 c	96 bc
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
Pest Code										AMBTR	AMBTR	AMBTR	AMBTR	AMBTR
Crop Code														
Rating Date										7-29-13	8-1-13	8-15-13	8-29-13	9-12-13
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing										16 DA-A	3 DA-B			
Trt-Eval Interval										0 DA-B	0 DA-C	14 DA-C	28 DA-C	42 DA-C
10	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	33 b	30 c	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C					
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	2-4"W-1	C					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN						
LSD (P=.05)										17.1	15.7	2.0	1.1	2.8
Standard Deviation										9.7	9.1	1.2	0.6	1.6
CV										14.98	13.45	1.34	0.73	1.85
Replicate F										0.200	1.056	0.385	3.857	3.660
Replicate Prob(F)										0.8207	0.3684	0.6859	0.0404	0.0464
Treatment F										39.747	42.701	2071.562	7027.402	1079.985
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Bayer (NH2).
2. CI/WC at 0 DA-B, 0 DA-C and 14, 28, and 42 DA-C.
3. Applications D (2-4"W-2) and E (LPOST-IN) are "if needed".
4. No yield.
5. Following the PRE application the first rainfall event, beginning 7 days later, was 0.59 inch over 1 day.
   Following the V2 application the first rainfall event, beginning 1 day later, was 0.46 inch over 1 day.
   Following the 2-4"W-1 application the first rainfall event, beginning 1 day later, was 0.24 inch over 1 day.
   Following the 2-4"W-2 application the first rainfall event, beginning 2 days later, was 0.1 inch over 1 day.
   The E (LPOST-IN) application was not applied, not needed.
6. At application "B", in treatments 4 and 7, AMBTR was the only weed in the plots and it was smaller than in the other treatments.
7. Not harvested.

Southern Illinois University

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-12-13
Completion Date: 11-10-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate postemergence weed control with Marvel compared with competitive standards.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832
Description: RR2Y
Planting Date: 7-12-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 3 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 4 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 31 FT **Total Plot Length:** 31 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.5 **Texture:** SIL silt loam
pH: 6 **Soil Name:** Winfield
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	58	lb/A
K	286	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-9-13					7	DAY	59	94	F
3.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
4.	6-16-13					7	DAY	61	90	F
5.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
6.	6-23-13					7	DAY	64	92	F
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
9.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
10.	6-30-13					7	DAY	61	86	F
11.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
12.	7-7-13					7	DAY	62	94	F
13.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
14.	7-14-13					7	DAY	64	94	F
15.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
16.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
17.	7-21-13					7	DAY	56	91	F
18.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
19.	7-28-13					7	DAY	52	87	F
20.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
21.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
22.	8-4-13					7	DAY	62	87	F
23.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
24.	8-11-13					7	DAY	54	85	F
25.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
26.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
27.	8-18-13					7	DAY	61	91	F
28.	8-25-13					7	DAY	62	100	F
29.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
30.	9-1-13					7	DAY	57	92	F
31.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A	B	C
Application Date:	7-13-13	7-29-13	8-2-13
Appl. Start Time:	18:00	9:30	9:00
Appl. Stop Time:	18:30	10:00	9:30
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	2-4"W	4-6"W
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	RJW	RJW	RJW
Air Temperature, Unit:	82 F	74 F	77 F
% Relative Humidity:	55	66	79
Wind Velocity, Unit:	6 MPH	3 MPH	4 MPH
Wind Direction:	S	S	S
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	76 F	73 F	74 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	20	100	100
Next Moisture Occurred On:	7-20-13	7-30-13	8-2-13
Time to Next Moisture, Unit:	7 DAY	21 HR	11 HR

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V2	V3
Stage Minimum, Percent:		V2	V3
Stage Maximum, Percent:		V2	V3
Height, Unit:		6 IN	7 IN
Height Minimum, Maximum:		4 6	6 7

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SETFA W	SETFA W	SETFA W
Stage Majority, Percent:	NA	3	NA
Stage Minimum, Percent:		2	
Stage Maximum, Percent:		4	
Height, Unit:		3 IN	
Height Minimum, Maximum:		0.5 5	
Density, Unit:		1 FT2	
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	6	6
Stage Minimum, Percent:		2	COTY
Stage Maximum, Percent:		8	10
Height, Unit:		4 IN	5 IN
Height Minimum, Maximum:		1 5	1 8
Density, Unit:		0.01 FT2	0.1 FT2
Pest 3 Code, Type, Scale:	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	6	NA
Stage Minimum, Percent:		COTY	
Stage Maximum, Percent:		10	
Height, Unit:		3 IN	
Height Minimum, Maximum:		0.5 5	
Density, Unit:		10 FT2	
Pest 4 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	NA	NA

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	TTI	XR	XR
Nozzle Size:	11002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 11-10-13 Moisture Percent	GLXMA 11-10-13 Test wt. lb/bu	GLXMA 11-10-13 Yield bu/A
1	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	14.8 a	56.5 a	34 ab
	MARVEL	3	SL	0.14	lb ai/a	6	fl oz/a	4-6"W	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C			
2	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	14.9 a	56.3 a	35 ab
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C			
3	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	14.8 a	56.4 a	33 b
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C			
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	14.8 a	56.4 a	42 a
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C			
5	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	2-4"W	B	14.9 a	56.4 a	40 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B			
6	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	2-4"W	B	15.0 a	56.3 a	37 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B			
7	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	2-4"W	B	14.9 a	56.4 a	35 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B			
8	NONTREATED									14.2 b	56.5 a	6 c
LSD (P=.05)										0.37	0.14	7.8
Standard Deviation										0.25	0.09	5.3
CV										1.69	0.16	16.16
Replicate F										0.300	0.557	3.248
Replicate Prob(F)										0.8250	0.6500	0.0423
Treatment F										4.102	2.098	18.127
Treatment Prob(F)										0.0055	0.0944	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=3

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-28-13 Injury Percent -1 DA-B 15 DA-A	GLXMA 8-2-13 Injury Percent 0 DA-C 4 DA-B	GLXMA 8-8-13 Injury Percent 6 DA-C	GLXMA 8-13-13 Injury Percent 31 DA-A 15 DA-B	GLXMA 8-17-13 Injury Percent 15 DA-C	GLXMA 8-28-13 Injury Percent 30 DA-B	GLXMA 9-1-13 Injury Percent 30 DA-C	GLXMA 9-11-13 Injury Percent 60 DA-A
1	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	18 a	18 b	21 b	21 cd	16 bc	10 bc	7 b	0 a
	MARVEL	3	SL	0.14	lb ai/a	6	fl oz/a	4-6"W	C								
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C								
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C								
2	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	18 a	18 b	22 b	28 ab	21 a	14 a	11 a	0 a
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	C								
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C								
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C								
3	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	19 a	20 b	22 b	26 abc	19 ab	13 ab	10 a	0 a
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	C								
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C								
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C								
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	7 b	7 c	26 a	30 a	23 a	15 a	11 a	0 a
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W	C								
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C								
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C								
5	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	2-4"W	B		24 a	12 c	18 de	9 de	8 cd	7 b	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B								
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B								
6	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	2-4"W	B		18 b	9 d	14 e	8 e	6 d	5 b	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B								
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B								
7	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	2-4"W	B		19 b	12 c	23 bcd	13 cd	9 c	6 b	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B								
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B								
8	NONTREATED									0 c	0 d	0 e	0 f	0 f	0 e	0 c	0 a
LSD (P=.05)										3.4	3.7	2.7	5.1	4.6	3.3	2.0	0.0
Standard Deviation										2.2	2.5	1.9	3.4	3.1	2.2	1.4	0.0
CV										17.92	16.34	12.18	17.31	22.93	23.95	19.83	0.0
Replicate F										0.288	0.631	2.968	2.363	7.137	11.522	6.900	0.000
Replicate Prob(F)										0.8331	0.6031	0.0553	0.1002	0.0017	0.0001	0.0021	1.0000
Treatment F										57.206	39.172	89.253	31.410	25.222	19.085	26.377	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	1.0000

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 7-28-13 Control Percent -1 DA-B 15 DA-A	SETFA 8-2-13 Control Percent 0 DA-C 4 DA-B	SETFA 8-8-13 Control Percent 6 DA-C	SETFA 8-13-13 Control Percent 31 DA-A 15 DA-B	SETFA 8-17-13 Control Percent 15 DA-C	SETFA 8-28-13 Control Percent 30 DA-B
1	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	96 a	94 b	99 a	99 a	99 a	99 a
	MARVEL	3	SL	0.14	lb ai/a	6	fl oz/a	4-6"W	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C						
2	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	96 a	93 b	99 a	99 a	99 a	99 a
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C						
3	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	95 a	95 b	99 a	99 a	99 a	99 a
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C						
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	96 a	94 b	99 a	99 a	99 a	98 b
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C						
5	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	2-4"W	B		98 a	99 a	99 a	99 a	98 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B						
6	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	2-4"W	B		98 a	99 a	99 a	99 a	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B						
7	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	2-4"W	B		97 a	99 a	98 b	98 b	97 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B						
8	NONTREATED									0 b	0 c	0 a	0 c	0 c	0 d
LSD (P=.05)										2.7	2.2	0.0	0.6	0.5	0.9
Standard Deviation										1.7	1.5	0.0	0.4	0.3	0.6
CV										2.25	1.75	0.0	0.47	0.37	0.71
Replicate F										2.106	0.622	0.000	1.734	1.928	0.304
Replicate Prob(F)										0.1528	0.6085	1.0000	0.1907	0.1561	0.8219
Treatment F										2465.572	2131.400	0.000	30064.269	47559.266	12826.329
Treatment Prob(F)										0.0001	0.0001	1.0000	0.0001	0.0001	0.0001

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 9-1-13 Control Percent 30 DA-C	SETFA 9-11-13 Control Percent 60 DA-A
1	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 ab	96 ab
	MARVEL	3	SL	0.14	lb ai/a	6	fl oz/a	4-6"W	C		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C		
2	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 ab	98 ab
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	C		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C		
3	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 a	99 a
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	C		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C		
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	97 cd	95 bc
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W	C		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C		
5	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	2-4"W	B	97 cd	95 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B		
6	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	2-4"W	B	98 bc	96 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B		
7	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	2-4"W	B	97 d	93 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B		
8	NONTREATED									0 e	0 d
LSD (P=.05)										0.9	2.7
Standard Deviation										0.6	1.8
CV										0.71	2.2
Replicate F										0.543	1.713
Replicate Prob(F)										0.6583	0.1949
Treatment F										13130.242	1356.378
Treatment Prob(F)										0.0001	0.0001

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 7-28-13 Control Percent -1 DA-B 15 DA-A	AMBTR 8-2-13 Control Percent 0 DA-C 4 DA-B	AMBTR 8-8-13 Control Percent 6 DA-C	AMBTR 8-13-13 Control Percent 31 DA-A 15 DA-B	AMBTR 8-17-13 Control Percent 15 DA-C	AMBTR 8-28-13 Control Percent 30 DA-B	AMBTR 9-1-13 Control Percent 30 DA-C
1	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	40 b	30 c	94 c	96 b	96 b	98 a	98 a
	MARVEL	3	SL	0.14	lb ai/a	6	fl oz/a	4-6"W	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C							
2	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	40 b	30 c	94 c	96 b	96 b	98 a	98 a
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C							
3	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	45 ab	30 c	96 b	98 ab	98 ab	99 a	99 a
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C							
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	56 a	49 b	99 a	99 a	98 a	99 a	98 a
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C							
5	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	2-4"W	B		96 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B							
6	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	2-4"W	B		97 a	99 a	98 ab	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B							
7	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	2-4"W	B		97 a	98 ab	96 b	97 b	96 b	96 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B							
8	NONTREATED									0 c	0 d	0 d	0 c	0 c	0 c	0 c
LSD (P=.05)										11.5	11.1	2.0	2.6	1.6	1.7	2.0
Standard Deviation										7.4	7.6	1.4	1.8	1.1	1.1	1.4
CV										20.54	14.1	1.63	2.11	1.31	1.31	1.58
Replicate F										0.624	0.727	4.789	0.129	1.533	0.720	0.430
Replicate Prob(F)										0.6130	0.5470	0.0107	0.9417	0.2352	0.5514	0.7334
Treatment F										32.820	101.638	2452.523	1464.753	3800.229	3783.028	2608.457
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
	Pest Code									AMBTR
	Crop Code									
	Rating Date									9-11-13
	Rating Type									Control
	Rating Unit									Percent
	Rating Timing									
	Trt-Eval Interval									60 DA-A
1	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	97 ab
	MARVEL	3	SL	0.14	lb ai/a	6	fl oz/a	4-6"W	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C	
2	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 a
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C	
3	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 a
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C	
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	98 a
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C	
5	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	2-4"W	B	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B	
6	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	2-4"W	B	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B	
7	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	2-4"W	B	94 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B	
8	NONTREATED									0 c
	LSD (P=.05)									3.2
	Standard Deviation									2.1
	CV									2.51
	Replicate F									0.606
	Replicate Prob(F)									0.6185
	Treatment F									1037.289
	Treatment Prob(F)									0.0001

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	7-28-13 Control Percent -1 DA-B 15 DA-A	8-2-13 Control Percent 0 DA-C 4 DA-B	8-8-13 Control Percent 6 DA-C	8-13-13 Control Percent 31 DA-A 15 DA-B	8-17-13 Control Percent 15 DA-C	8-28-13 Control Percent 30 DA-B	9-1-13 Control Percent 30 DA-C
	Pest Code									AMATA	AMATA	AMATA	AMATA	AMATA	AMATA	AMATA
	Crop Code															
	Rating Date									7-28-13	8-2-13	8-8-13	8-13-13	8-17-13	8-28-13	9-1-13
	Rating Type									Control	Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing									-1 DA-B	0 DA-C		31 DA-A			
	Trt-Eval Interval									15 DA-A	4 DA-B	6 DA-C	15 DA-B	15 DA-C	30 DA-B	30 DA-C
1	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 a	98 ab	99 a	99 a	99 a	99 ab	99 a
	MARVEL	3	SL	0.14	lb ai/a	6	fl oz/a	4-6"W	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C							
2	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 a	98 ab	99 a	99 a	99 a	99 ab	99 a
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C							
3	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 ab	99 a
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C							
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	99 a	98 ab	99 a	99 a	99 a	99 a	99 a
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C							
5	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	2-4"W	B		97 b	99 a	98 a	98 a	98 b	97 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B							
6	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	2-4"W	B		99 ab	99 a	96 b	99 a	98 ab	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B							
7	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	2-4"W	B		99 ab	99 a	97 ab	99 a	98 ab	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B							
8	NONTREATED									0	0 c	0 b	0 c	0 b	0 c	0 c
	LSD (P=.05)									0.0	1.8	0.3	1.9	1.4	1.5	1.2
	Standard Deviation									0.0	1.2	0.2	1.3	1.0	1.0	0.8
	CV									0.0	1.39	0.2	1.53	1.12	1.15	0.98
	Replicate F									0.000	0.933	1.000	0.338	0.746	1.096	1.101
	Replicate Prob(F)									1.0000	0.4421	0.4123	0.7981	0.5369	0.3726	0.3709
	Treatment F									0.000	3372.550	156703.873	2784.497	5209.942	4903.446	6821.730
	Treatment Prob(F)									1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
	Pest Code									AMATA
	Crop Code									
	Rating Date									9-11-13
	Rating Type									Control
	Rating Unit									Percent
	Rating Timing									
	Trt-Eval Interval									60 DA-A
1	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 a
	MARVEL	3	SL	0.14	lb ai/a	6	fl oz/a	4-6"W	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C	
2	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 a
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C	
3	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 a
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C	
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	99 a
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C	
5	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	2-4"W	B	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B	
6	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	2-4"W	B	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B	
7	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	2-4"W	B	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B	
8	NONTREATED									0 b
	LSD (P=.05)									1.9
	Standard Deviation									1.3
	CV									1.53
	Replicate F									1.055
	Replicate Prob(F)									0.3892
	Treatment F									2795.836
	Treatment Prob(F)									0.0001

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 7-28-13 Control Percent -1 DA-B 15 DA-A	ABUTH 8-2-13 Control Percent 0 DA-C 4 DA-B	ABUTH 8-8-13 Control Percent 6 DA-C	ABUTH 8-13-13 Control Percent 31 DA-A 15 DA-B	ABUTH 8-17-13 Control Percent 15 DA-C	ABUTH 8-28-13 Control Percent 30 DA-B	ABUTH 9-1-13 Control Percent 30 DA-C
1	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	71 b	71 cd	98 a	99 a	99 a	99 a	99 a
	MARVEL	3	SL	0.14	lb ai/a	6	fl oz/a	4-6"W	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C							
2	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	68 b	65 d	99 a	99 a	99 a	99 a	99 a
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C							
3	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	73 b	73 c	99 a	99 a	99 a	99 a	98 a
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C							
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	92 a	90 b	99 a	99 a	99 a	99 a	99 a
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C							
5	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	2-4"W	B		98 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B							
6	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	2-4"W	B		99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B							
7	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	2-4"W	B		98 a	99 a	99 a	99 a	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B							
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B							
8	NONTREATED									0 c	0 e	0 b	0 b	0 b	0 b	0 b
LSD (P=.05)										9.0	6.7	1.1	0.4	0.3	1.1	1.4
Standard Deviation										5.9	4.6	0.7	0.3	0.2	0.7	0.9
CV										9.66	6.17	0.84	0.3	0.2	0.85	1.07
Replicate F										1.971	2.204	4.765	0.636	1.000	0.825	0.721
Replicate Prob(F)										0.1722	0.1177	0.0110	0.5999	0.4123	0.4950	0.5508
Treatment F										144.564	206.850	9165.572	74736.826	156703.873	8990.656	5702.487
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
	Pest Code									ABUTH
	Crop Code									
	Rating Date									9-11-13
	Rating Type									Control
	Rating Unit									Percent
	Rating Timing									
	Trt-Eval Interval									60 DA-A
1	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	98 a
	MARVEL	3	SL	0.14	lb ai/a	6	fl oz/a	4-6"W	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C	
2	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	98 a
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C	
3	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 a
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C	
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	99 a
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	C	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	4-6"W	C	
5	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	2-4"W	B	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B	
6	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	2-4"W	B	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B	
7	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	2-4"W	B	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	B	
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	2-4"W	B	
8	NONTREATED									0 b
	LSD (P=.05)									3.0
	Standard Deviation									2.1
	CV									2.39
	Replicate F									0.955
	Replicate Prob(F)									0.4322
	Treatment F									1140.342
	Treatment Prob(F)									0.0001

Southern Illinois University

Marvel Evaluation in Soybean.

Trial ID: 13-1-MMW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: FMC (Marvel_Compare).
2. Ratings CI 15 and 30 DA-A; 5, 15, and 30 DA-B and DA-C.
   WC 15, 30, and 60 DA-A; 5, 15, and 30 DA-B and DA-C.
3. Photos to show crop injury and recovery.
4. Yield.
5. Following the PRE application the first rainfall event, beginning 7 days later, was 0.59 inch over 1 day.
   Following the 2-4"W application the first rainfall event, beginning 1 day later, was 0.46 inch over 1 day.
   Following the 4-6"W application the first rainfall event, beginning 11 hours later, was 0.13 inch over 1 day.
6. Harvested 11-10-13, (2) 30 inch rows by 28 ft.

Duration of Weed Control from Residual Herbicides.

Trial ID: 13-1-ME50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-13-13
Completion Date: 9-11-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Demonstrate and measure residual control from preemergence herbicides.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: NONE - Non-crop
Variety: NON-CROP
Planting Method: NA

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 2 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 3 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 4 Type: W **Code:** GGGAN
Common Name: grasses, annual
Description: Mixture of SETFA and PANDI

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 31 FT **Total Plot Length:** 31 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.5 **Texture:** SIL silt loam
pH: 6 **Soil Name:** Winfield
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	58	lb/A
K	286	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Duration of Weed Control from Residual Herbicides.

Trial ID: 13-1-ME50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-30-13					7	DAY	61	86	F
2.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
3.	7-7-13					7	DAY	62	94	F
4.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
5.	7-14-13					7	DAY	64	94	F
6.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
7.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
8.	7-21-13					7	DAY	56	91	F
9.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
10.	7-28-13					7	DAY	52	87	F
11.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
12.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
13.	8-4-13					7	DAY	62	87	F
14.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
15.	8-11-13					7	DAY	54	85	F
16.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
17.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
18.	8-18-13					7	DAY	61	91	F
19.	8-25-13					7	DAY	62	100	F
20.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
21.	9-1-13					7	DAY	57	92	F
22.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A
Application Date:	7-13-13
Appl. Start Time:	17:30
Appl. Stop Time:	18:00
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	RJW
Air Temperature, Unit:	83 F
% Relative Humidity:	51
Wind Velocity, Unit:	6 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	76 F
Soil Moisture:	NORMAL
% Cloud Cover:	20
Next Moisture Occurred On:	7-20-13
Time to Next Moisture, Unit:	7 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Duration of Weed Control from Residual Herbicides.

Trial ID: 13-1-ME50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBTR W
Stage Majority, Percent:	NA
Pest 2 Code, Type, Scale:	ABUTH W
Stage Majority, Percent:	NA
Pest 3 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	NA
Pest 4 Code, Type, Scale:	GGGAN W
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TTI
Nozzle Size:	11002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Duration of Weed Control from Residual Herbicides.

Trial ID: 13-1-ME50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 7-23-13 Control Percent 10 DA-A	AMBTR 8-2-13 Control Percent 20 DA-A	AMBTR 8-12-13 Control Percent 30 DA-A	AMBTR 8-22-13 Control Percent 40 DA-A	AMBTR 9-1-13 Control Percent 50 DA-A	AMBTR 9-11-13 Control Percent 60 DA-A
1	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	63 c	40 c	50 fg	32 d	17 fg	13 ef
2	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	86 ab	75 ab	76 bcd	70 b	60 bc	53 bc
3	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	PRE	A	80 ab	77 ab	93 a	85 ab	72 ab	63 ab
4	DUAL MAGNUM	7.62	EC	1.27	lb ai/a	1.33	pt/a	PRE	A	83 ab	72 ab	67 cde	50 c	37 de	30 de
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	86 ab	62 b	65 c-f	48 cd	33 def	32 de
6	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	73 bc	62 b	53 efg	52 c	43 cde	37 cd
7	VALOR SX	51	WG	0.096	lb ai/a	3	oz/a	PRE	A	82 ab	78 ab	77 bcd	76 ab	70 ab	63 ab
8	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	78 abc	77 ab	80 abc	82 ab	78 ab	75 a
9	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	88 ab	78 ab	83 ab	77 ab	72 ab	72 ab
10	SENCOR	75	WG	0.375	lb ai/a	8	oz/a	PRE	A	30 d	37 c	43 g	47 cd	25 ef	20 def
11	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	PRE	A	92 a	90 a	95 a	89 a	82 a	78 a
12	WEEDAR 64	3.8	SL	0.95	lb ae/a	32	fl oz/a	PRE	A	73 bc	60 b	62 def	43 cd	50 cd	40 cd
13	NONTREATED									0 e	0 d	0 h	0 e	0 g	0 f
LSD (P=.05)										15.9	18.5	15.1	17.0	19.3	20.9
Standard Deviation										9.4	11.0	8.9	10.1	11.4	12.4
CV										13.37	17.73	13.8	17.46	23.26	28.0
Replicate F										1.095	0.906	2.674	1.019	2.570	4.805
Replicate Prob(F)										0.3507	0.4176	0.0895	0.3761	0.0974	0.0176
Treatment F										23.564	14.404	23.470	18.904	15.301	12.334
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=8,12

Duration of Weed Control from Residual Herbicides.

Trial ID: 13-1-ME50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 7-23-13 Control Percent 10 DA-A	ABUTH 8-2-13 Control Percent 20 DA-A	ABUTH 8-12-13 Control Percent 30 DA-A	ABUTH 8-22-13 Control Percent 40 DA-A	ABUTH 9-1-13 Control Percent 50 DA-A	ABUTH 9-11-13 Control Percent 60 DA-A
1	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	70 ab	65 abc	67 b	52 cd	40 cd	33 cd
2	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	20 cd	30 def	10 cd	7 ef	0 e	0 e
3	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	PRE	A	7 d	13 ef	10 cd	3 ef	0 e	0 e
4	DUAL MAGNUM	7.62	EC	1.27	lb ai/a	1.33	pt/a	PRE	A	10 d	13 ef	10 cd	3 ef	0 e	0 e
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	50 bc	37 cde	33 c	37 cd	27 de	22 de
6	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	77 ab	75 ab	82 ab	81 ab	71 ab	70 ab
7	VALOR SX	51	WG	0.096	lb ai/a	3	oz/a	PRE	A	89 a	94 a	92 ab	91 a	86 ab	85 ab
8	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	82 ab	88 a	87 ab	88 ab	87 ab	83 ab
9	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	96 a	95 a	96 a	96 a	93 a	91 a
10	SENCOR	75	WG	0.375	lb ai/a	8	oz/a	PRE	A	63 ab	80 ab	77 ab	62 bc	60 bc	60 bc
11	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	PRE	A	17 d	53 bcd	32 c	25 def	20 de	17 de
12	WEEDAR 64	3.8	SL	0.95	lb ae/a	32	fl oz/a	PRE	A	27 cd	30 def	32 c	30 de	27 de	27 de
13	NONTREATED									0 d	0 f	0 d	0 f	0 e	0 e
LSD (P=.05)										33.3	31.0	28.4	28.6	27.5	27.3
Standard Deviation										19.7	18.4	16.9	17.0	16.3	16.2
CV										42.32	35.53	35.02	38.42	41.73	43.15
Replicate F										0.317	1.939	2.097	3.332	1.870	1.724
Replicate Prob(F)										0.7314	0.1657	0.1448	0.0528	0.1759	0.1997
Treatment F										9.165	9.809	13.539	13.747	14.541	14.514
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Duration of Weed Control from Residual Herbicides.

Trial ID: 13-1-ME50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code								AMATA	AMATA	AMATA	AMATA	AMATA	AMATA
Crop Code													
Rating Date								7-23-13	8-2-13	8-12-13	8-22-13	9-1-13	9-11-13
Rating Type								Control	Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing													
Trt-Eval Interval								10 DA-A	20 DA-A	30 DA-A	40 DA-A	50 DA-A	60 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	99 a	99 a	99 a	98 a	93 a	93 a
2	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	99 a	99 a	99 a	98 a	98 a	97 a
3	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	PRE	A	99 a	99 a	97 a	96 a	98 a	98 a
4	DUAL MAGNUM	7.62	EC	1.27	lb ai/a	1.33	pt/a	PRE	A	99 a	99 a	97 a	96 a	96 a	96 a
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	98 b	98 a	96 a	96 a	95 a	94 a
6	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	99 a	98 a	98 a	96 a	96 a	96 a
7	VALOR SX	51	WG	0.096	lb ai/a	3	oz/a	PRE	A	99 a	99 a	96 a	95 a	92 a	91 a
8	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	99 a	99 a	96 a	93 a	92 a	90 a
9	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a
10	SENCOR	75	WG	0.375	lb ai/a	8	oz/a	PRE	A	99 a	99 a	98 a	98 a	98 a	98 a
11	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	PRE	A	99 a	99 a	84 b	70 b	73 b	71 b
12	WEEDAR 64	3.8	SL	0.95	lb ae/a	32	fl oz/a	PRE	A	90 c	85 b	65 c	47 c	47 c	38 c
13	NONTREATED									0 d	0 c	0 d	0 d	0 d	0 d
LSD (P=.05)										1.1	4.3	5.9	9.0	15.7	15.8
Standard Deviation										0.6	2.5	3.5	5.3	9.3	9.3
CV										0.71	2.83	4.03	6.39	11.23	11.45
Replicate F										1.000	0.581	3.264	1.241	0.118	0.249
Replicate Prob(F)										0.3827	0.5672	0.0557	0.3070	0.8888	0.7814
Treatment F										5462.594	345.913	188.973	90.583	28.825	30.246
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Duration of Weed Control from Residual Herbicides.

Trial ID: 13-1-ME50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GGGAN 7-23-13 Control Percent 10 DA-A	GGGAN 8-2-13 Control Percent 20 DA-A	GGGAN 8-12-13 Control Percent 30 DA-A	GGGAN 8-22-13 Control Percent 40 DA-A	GGGAN 9-1-13 Control Percent 50 DA-A	GGGAN 9-11-13 Control Percent 60 DA-A
1	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	99 a	99 a	98 a	97 a	96 a	96 a
2	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	98 a	98 a	96 a	93 a	92 ab	91 ab
3	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	PRE	A	83 b	82 b	78 bc	73 cd	67 d	67 d
4	DUAL MAGNUM	7.62	EC	1.27	lb ai/a	1.33	pt/a	PRE	A	99 a	99 a	98 a	97 a	96 a	94 ab
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	99 a	99 a	92 ab	89 ab	83 bc	83 abc
6	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	98 a	95 ab	92 ab	89 ab	85 ab	81 bc
7	VALOR SX	51	WG	0.096	lb ai/a	3	oz/a	PRE	A	99 a	99 a	82 bc	80 bc	72 cd	70 cd
8	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	92 ab	92 ab	82 bc	77 c	72 cd	70 cd
9	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	99 a	99 a	98 a	97 a	96 a	95 a
10	SENCOR	75	WG	0.375	lb ai/a	8	oz/a	PRE	A	93 ab	83 b	70 c	65 d	63 d	63 d
11	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	PRE	A	10 c	10 c	17 d	15 e	7 e	7 e
12	WEEDAR 64	3.8	SL	0.95	lb ae/a	32	fl oz/a	PRE	A	0 c	0 c	0 e	0 f	0 e	0 e
13	NONTREATED									0 c	0 c	0 e	0 f	0 e	0 e
	LSD (P=.05)									11.8	13.4	14.6	11.6	11.9	13.8
	Standard Deviation									7.0	8.0	8.6	6.9	7.1	8.2
	CV									9.36	10.83	12.45	10.25	11.11	13.06
	Replicate F									0.004	0.166	0.910	0.625	1.293	0.917
	Replicate Prob(F)									0.9963	0.8481	0.4161	0.5438	0.2930	0.4133
	Treatment F									103.286	77.599	56.749	86.468	81.177	58.810
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Duration of Weed Control from Residual Herbicides.

Trial ID: 13-1-ME50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Syngenta.
2. Ratings: WC every 7-10 DA-A.
3. Photos.
4. No yield (non-crop).
5. Following the PRE application the first rainfall event, beginning 7 days later, was 0.59 inch over 1 day.
6. GGGAN = Annual grasses including 50% SETFA (giant foxtail) and 50% PANDI (fall panicum).
7. Not harvested (non-crop).

Statement Preemergence in Soybean.

Trial ID: 13-1-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-12-13
Completion Date: 11-10-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate crop tolerance and efficacy with Statement applied preemergence in soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 7-12-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 2 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 3 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 4 Type: W **Code:** GGGAN
Common Name: grasses, annual
Description: Mixture of SETFA and PANDI

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 31 FT **Total Plot Length:** 31 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.5 **Texture:** SIL silt loam
pH: 6 **Soil Name:** Winfield
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	58	lb/A
K	286	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Statement Preemergence in Soybean.

Trial ID: 13-1-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-30-13					7	DAY	61	86	F
2.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
3.	7-7-13					7	DAY	62	94	F
4.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
5.	7-14-13					7	DAY	64	94	F
6.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
7.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
8.	7-21-13					7	DAY	56	91	F
9.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
10.	7-28-13					7	DAY	52	87	F
11.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
12.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
13.	8-4-13					7	DAY	62	87	F
14.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
15.	8-11-13					7	DAY	54	85	F
16.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
17.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
18.	8-18-13					7	DAY	61	91	F
19.	8-25-13					7	DAY	62	100	F
20.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
21.	9-1-13					7	DAY	57	92	F
22.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A
Application Date:	7-13-13
Appl. Start Time:	19:45
Appl. Stop Time:	20:00
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	RJW
Air Temperature, Unit:	72 F
% Relative Humidity:	79
Wind Velocity, Unit:	4 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	76 F
Soil Moisture:	NORMAL
% Cloud Cover:	20
Next Moisture Occurred On:	7-20-13
Time to Next Moisture, Unit:	7 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Statement Preemergence in Soybean.

Trial ID: 13-1-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBTR W
Stage Majority, Percent:	NA
Pest 2 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	NA
Pest 3 Code, Type, Scale:	ABUTH W
Stage Majority, Percent:	NA
Pest 4 Code, Type, Scale:	GGGAN W
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TTI
Nozzle Size:	11002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Statement Preemergence in Soybean.

Trial ID: 13-1-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 11-10-13 Moisture Percent	GLXMA 11-10-13 Test wt. lb/bu	GLXMA 11-10-13 Yield bu/A	GLXMA 7-27-13 Injury Percent 14 DA-A	GLXMA 7-27-13 Chlorosis Percent 14 DA-A	GLXMA 7-27-13 Necrosis Percent 14 DA-A	GLXMA 7-27-13 Stunt Percent 14 DA-A
1	STATEMENT	5.25	EC	1.31	lb ai/a	32	fl oz/a	PRE	A	14.4 a	56.4 b	16 a	4 c	0 a	0 a	0 a
2	STATEMENT	5.25	EC	1.64	lb ai/a	40	fl oz/a	PRE	A	14.5 a	56.4 b	23 a	5 bc	0 a	0 a	0 a
3	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	A	14.6 a	56.4 b	18 a	6 b	0 a	0 a	0 a
4	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	PRE	A	14.6 a	56.4 b	22 a	9 a	0 a	0 a	2 a
5	NONTREATED									11.7 b	57.6 a	3 b	0 d	0 a	0 a	0 a
LSD (P=.05)										0.36	0.20	7.4	2.3	0.0	0.0	1.2
Standard Deviation										0.23	0.12	4.8	1.5	0.0	0.0	0.8
CV										1.67	0.22	28.85	32.67	0.0	0.0	258.2
Replicate F										0.312	0.499	1.551	3.601	0.000	0.000	1.000
Replicate Prob(F)										0.8167	0.6910	0.2523	0.0461	1.0000	1.0000	0.4262
Treatment F										117.469	72.937	11.058	18.742	0.000	0.000	3.000
Treatment Prob(F)										0.0001	0.0001	0.0005	0.0001	1.0000	1.0000	0.0625

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=3

Statement Preemergence in Soybean.

Trial ID: 13-1-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								GLXMA 8-10-13 Injury Percent 28 DA-A	GLXMA 8-10-13 Chlorosis Percent 28 DA-A	GLXMA 8-10-13 Necrosis Percent 28 DA-A	GLXMA 8-10-13 Stunt Percent 28 DA-A	GLXMA 8-24-13 Injury Percent 42 DA-A	GLXMA 8-24-13 Chlorosis Percent 42 DA-A	GLXMA 8-24-13 Necrosis Percent 42 DA-A	GLXMA 8-24-13 Stunt Percent 42 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code								
1	STATEMENT	5.25	EC	1.31	lb ai/a	32	fl oz/a	PRE	A	2 b	0 a	0 a	0 a	1 bc	1 ab	0 a	0 a
2	STATEMENT	5.25	EC	1.64	lb ai/a	40	fl oz/a	PRE	A	3 ab	1 a	0 a	0 a	1 ab	1 a	0 a	0 a
3	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	A	2 b	1 a	0 a	0 a	1 ab	1 a	0 a	0 a
4	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	PRE	A	4 a	1 a	0 a	2 a	2 a	1 a	0 a	1 a
5	NONTREATED									0 c	0 a	0 a	0 a	0 c	0 b	0 a	0 a
LSD (P=.05)										1.0	0.7	0.0	0.0	0.9	0.8	0.0	0.6
Standard Deviation										0.7	0.5	0.0	0.0	0.6	0.5	0.0	0.4
CV										33.85	94.87	0.0	0.0	68.04	68.85	0.0	243.43
Replicate F										2.909	2.667	0.000	0.000	0.889	0.688	0.000	0.375
Replicate Prob(F)										0.0782	0.0951	1.0000	1.0000	0.4747	0.5768	1.0000	0.7727
Treatment F										14.455	2.778	0.000	0.000	4.200	3.750	0.000	1.500
Treatment Prob(F)										0.0002	0.0761	1.0000	1.0000	0.0235	0.0334	1.0000	0.2634

Statement Preemergence in Soybean.

Trial ID: 13-1-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 8-3-13 Control Percent 21 DA-A	AMBTR 8-17-13 Control Percent 35 DA-A	AMBTR 8-31-13 Control Percent 49 DA-A	AMATA 8-3-13 Control Percent 21 DA-A	AMATA 8-17-13 Control Percent 35 DA-A	AMATA 8-31-13 Control Percent 49 DA-A
1	STATEMENT	5.25	EC	1.31	lb ai/a	32	fl oz/a	PRE	A	28 c	29 b	25 b	99 a	99 a	99 a
2	STATEMENT	5.25	EC	1.64	lb ai/a	40	fl oz/a	PRE	A	43 a	51 a	50 a	99 a	99 a	99 a
3	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	A	35 b	45 ab	38 ab	99 a	99 a	99 a
4	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	PRE	A	40 ab	54 a	50 a	99 a	99 a	99 a
5	NONTREATED									0 d	0 c	0 c	0 a	0 a	0 b
LSD (P=.05)										6.7	16.7	13.5	0.0	0.0	0.7
Standard Deviation										4.4	10.8	8.8	0.0	0.0	0.4
CV										15.1	30.24	26.94	0.0	0.0	0.57
Replicate F										0.348	0.296	0.239	0.000	0.000	1.000
Replicate Prob(F)										0.7914	0.8277	0.8674	1.0000	1.0000	0.4262
Treatment F										61.696	16.914	22.826	0.000	0.000	39106.004
Treatment Prob(F)										0.0001	0.0001	0.0001	1.0000	1.0000	0.0001

Statement Preemergence in Soybean.

Trial ID: 13-1-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 8-3-13 Control Percent 21 DA-A	ABUTH 8-17-13 Control Percent 35 DA-A	ABUTH 8-31-13 Control Percent 49 DA-A	GGGAN 8-3-13 Control Percent 21 DA-A	GGGAN 8-17-13 Control Percent 35 DA-A	GGGAN 8-31-13 Control Percent 49 DA-A
1	STATEMENT	5.25	EC	1.31	lb ai/a	32	fl oz/a	PRE	A	28 b	19 b	3 b	99 a	98 a	98 a
2	STATEMENT	5.25	EC	1.64	lb ai/a	40	fl oz/a	PRE	A	33 ab	36 a	20 a	99 a	98 a	98 a
3	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	A	28 b	29 ab	10 ab	99 a	99 a	98 a
4	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	PRE	A	36 a	33 a	19 a	99 a	99 a	99 a
5	NONTREATED									0 c	0 c	0 b	0 a	0 b	0 b
LSD (P=.05)										7.7	10.0	12.8	0.0	1.1	1.3
Standard Deviation										5.0	6.5	8.3	0.0	0.7	0.9
CV										20.2	27.97	81.14	0.0	0.87	1.12
Replicate F										2.583	3.734	2.717	0.000	4.393	5.130
Replicate Prob(F)										0.1018	0.0418	0.0913	1.0000	0.0264	0.0164
Treatment F										32.800	19.995	4.807	0.000	16612.502	9996.914
Treatment Prob(F)										0.0001	0.0001	0.0151	1.0000	0.0001	0.0001

Southern Illinois University

Statement Preemergence in Soybean.

Trial ID: 13-1-MME30 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Cheminova (Fomme 1301).
2. Ratings: CI / chlorosis / necrosis / stunt at 14, 28, and 42 DA-A; WC 21, 35, and 49 DA-A.
3. Yield.
4. Following the PRE application the first rainfall event, beginning 7 days later, was 0.59 inch over 1 day.
5. Soybean injury at 14 DA-A was leaf malformation / drawstring.
6. GGGAN = Annual grasses including 50% SETFA (giant foxtail) and 50% PANDI (fall panicum).
7. Harvested 11-10-13, (2) 30 inch rows by 28 ft.

Preemergence Weed Control in Soybean with Sipcam Products - Site 2.

Trial ID: 13-1-MW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-12-13
Completion Date: 11-11-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the performance of Stalwart tank mixtures and experimental Sipcam products for preemergence weed control in soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 7-12-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** GGGAN
Common Name: grasses, annual
Description: Mixture of SETFA and PANDI

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 3 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 4 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 31 FT **Total Plot Length:** 31 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.5 **Texture:** SIL silt loam
pH: 6 **Soil Name:** Winfield
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	58	lb/A
K	286	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Preemergence Weed Control in Soybean with Sipcam Products - Site 2.

Trial ID: 13-1-MW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-30-13					7	DAY	61	86	F
2.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
3.	7-7-13					7	DAY	62	94	F
4.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
5.	7-14-13					7	DAY	64	94	F
6.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
7.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
8.	7-21-13					7	DAY	56	91	F
9.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
10.	7-28-13					7	DAY	52	87	F
11.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
12.	8-2-13	0.13	IN	RAIN	rain	1	DAY			
13.	8-4-13					7	DAY	62	87	F
14.	8-8-13	0.14	IN	RAIN	rain	2	DAY			
15.	8-12-13	0.56	IN	RAIN	rain	1	DAY			
16.	8-25-13					7	DAY	62	100	F
17.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
18.	9-1-13					7	DAY	57	92	F
19.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A
Application Date:	7-13-13
Appl. Start Time:	19:30
Appl. Stop Time:	19:45
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	RJW
Air Temperature, Unit:	75 F
% Relative Humidity:	69
Wind Velocity, Unit:	4 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	76 F
Soil Moisture:	NORMAL
% Cloud Cover:	20
Next Moisture Occurred On:	7-20-13
Time to Next Moisture, Unit:	7 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	GGGAN W
Stage Majority, Percent:	NA
Pest 2 Code, Type, Scale:	AMBTR W
Stage Majority, Percent:	NA
Pest 3 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	NA
Pest 4 Code, Type, Scale:	ABUTH W
Stage Majority, Percent:	NA

Preemergence Weed Control in Soybean with Sipcam Products - Site 2.

Trial ID: 13-1-MW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TTI
Nozzle Size:	11002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Preemergence Weed Control in Soybean with Sipcam Products - Site 2.

Trial ID: 13-1-MW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								GLXMA 11-11-13 Moisture Percent	GLXMA 11-11-13 Test wt. lb/bu	GLXMA 11-11-13 Yield bu/A	GLXMA 7-27-13 Injury Percent 14 DA-A	GLXMA 8-10-13 Injury Percent 28 DA-A	GLXMA 8-24-13 Injury Percent 42 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	SA-0370102	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	15.6 a	56.1 b	18 b	5 de	3 c	2 cd
2	STALWART	8	EC	1	lb ai/a	1	pt/a	PRE	A	15.0 a	56.1 b	16 b	20 a	16 a	16 a
	SA-0330101	100	SL	10	fl oz/a	10	fl oz/a	PRE	A						
3	SA-0070116	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	15.5 a	56.1 b	25 a	7 cd	4 bc	3 bc
4	STALWART	8	EC	1	lb ai/a	1	pt/a	PRE	A	15.3 a	56.0 b	30 a	9 b	6 b	5 b
	SA-0400101	100	WG	2	oz/a	2	oz/a	PRE	A						
5	SA-0370103	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	15.2 a	56.2 ab	14 bc	2 ef	1 d	0 d
6	SA-0070115	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	15.3 a	56.0 b	19 b	8 bc	3 c	5 b
7	NONTREATED									14.3 a	56.4 a	9 c	0 f	0 d	0 d
LSD (P=.05)										0.97	0.26	5.8	2.7	1.6	2.0
Standard Deviation										0.65	0.17	3.9	1.8	1.1	1.4
CV										4.31	0.31	21.06	24.9	22.91	32.65
Replicate F										0.524	1.927	0.841	4.096	5.937	4.522
Replicate Prob(F)										0.6712	0.1613	0.4893	0.0222	0.0053	0.0156
Treatment F										1.556	2.799	12.894	53.288	101.084	68.360
Treatment Prob(F)										0.2171	0.0420	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Preemergence Weed Control in Soybean with Sipcam Products - Site 2.

Trial ID: 13-1-MW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GGGAN 7-27-13 Control Percent 14 DA-A	GGGAN 8-10-13 Control Percent 28 DA-A	GGGAN 8-24-13 Control Percent 42 DA-A	AMBTR 7-27-13 Control Percent 14 DA-A	AMBTR 8-10-13 Control Percent 28 DA-A	AMBTR 8-24-13 Control Percent 42 DA-A
1	SA-0370102	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	99 a	98 b	97 c	49 c	53 c	40 c
2	STALWART	8	EC	1	lb ai/a	1	pt/a	PRE	A	99 a	98 b	97 c	64 b	65 b	49 bc
	SA-0330101	100	SL	10	fl oz/a	10	fl oz/a	PRE	A						
3	SA-0070116	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	99 a	99 a	98 b	71 b	68 b	63 b
4	STALWART	8	EC	1	lb ai/a	1	pt/a	PRE	A	99 a	98 b	97 c	86 a	87 a	80 a
	SA-0400101	100	WG	2	oz/a	2	oz/a	PRE	A						
5	SA-0370103	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	99 a	98 b	98 c	25 d	25 d	10 d
6	SA-0070115	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	99 a	99 a	99 a	66 b	63 bc	55 b
7	NONTREATED									0 a	0 c	0 d	0 e	0 e	0 d
LSD (P=.05)										0.0	0.7	0.7	12.2	11.7	14.8
Standard Deviation										0.0	0.5	0.5	8.2	7.9	10.0
CV										0.0	0.56	0.6	15.95	15.37	23.62
Replicate F										0.000	1.000	1.667	1.102	1.080	3.822
Replicate Prob(F)										1.0000	0.4155	0.2097	0.3738	0.3825	0.0280
Treatment F										0.000	24411.950	21793.574	52.414	55.388	32.500
Treatment Prob(F)										1.0000	0.0001	0.0001	0.0001	0.0001	0.0001

Preemergence Weed Control in Soybean with Sipcam Products - Site 2.

Trial ID: 13-1-MW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 7-27-13 Control Percent 14 DA-A	AMATA 8-10-13 Control Percent 28 DA-A	AMATA 8-24-13 Control Percent 42 DA-A	ABUTH 7-27-13 Control Percent 14 DA-A	ABUTH 8-10-13 Control Percent 28 DA-A	ABUTH 8-24-13 Control Percent 42 DA-A
1	SA-0370102	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	95 b	93 c	84 b	87 c	98 a	97 a
2	STALWART	8	EC	1	lb ai/a	1	pt/a	PRE	A	99 a	99 a	98 a	97 ab	97 a	95 a
	SA-0330101	100	SL	10	fl oz/a	10	fl oz/a	PRE	A						
3	SA-0070116	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	99 a	99 a	96 a	97 ab	98 a	98 a
4	STALWART	8	EC	1	lb ai/a	1	pt/a	PRE	A	99 a	99 a	99 a	99 a	98 a	96 a
	SA-0400101	100	WG	2	oz/a	2	oz/a	PRE	A						
5	SA-0370103	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	97 a	96 b	95 a	66 d	98 a	97 a
6	SA-0070115	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	99 a	98 ab	95 a	89 bc	99 a	99 a
7	NONTREATED									0 c	0 d	0 c	0 e	0 b	0 b
LSD (P=.05)										2.2	2.0	4.6	8.8	3.5	5.3
Standard Deviation										1.5	1.4	3.1	6.0	2.4	3.6
CV										1.8	1.65	3.79	7.8	2.82	4.28
Replicate F										2.437	2.365	0.947	2.823	1.346	1.103
Replicate Prob(F)										0.0980	0.1051	0.4389	0.0681	0.2908	0.3735
Treatment F										2394.621	2850.535	552.245	141.908	975.199	424.376
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Preemergence Weed Control in Soybean with Sipcam Products - Site 2.

Trial ID: 13-1-MW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Sipcam (2013-5-IL).
2. Ratings: CI/WC 14, 28, and 42 DA-A.
3. Yield, destroy grain.
4. Following the PRE application the first rainfall event, beginning 7 days later, was 0.59 inch over 1 day.
5. GGGAN = Annual grasses including 50% SETFA (giant foxtail) and 50% PANDI (fall panicum).
6. Harvested 11-11-13, (2) 30 inch rows by 28 ft.

Valor and Fierce Evaluations in Soybean.

Trial ID: 13-1-W70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-12-13
Completion Date: 11-9-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evalaute weed control and soybean yield from preemergence herbicides followed by glyphosate compared with sequential glyphosate applications.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 7-12-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** GGGAN
Common Name: grasses, annual
Description: Mixture of SETFA and PANDI

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 3 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 4 Type: W **Code:** AMBEL Ambrosia artemisiifolia L.
Common Name: ragweed, common

Pest 5 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 31 FT **Total Plot Length:** 31 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 6 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.5 **Texture:** SIL silt loam
pH: 6 **Soil Name:** Winfield
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	58	lb/A
K	286	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Valor and Fierce Evaluations in Soybean.

Trial ID: 13-1-W70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-30-13					7	DAY	61	86	F
2.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
3.	7-7-13					7	DAY	62	94	F
4.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
5.	7-14-13					7	DAY	64	94	F
6.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
7.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
8.	7-21-13					7	DAY	56	91	F
9.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
10.	7-28-13					7	DAY	52	87	F
11.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
12.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
13.	8-4-13					7	DAY	62	87	F
14.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
15.	8-11-13					7	DAY	54	85	F
16.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
17.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
18.	8-18-13					7	DAY	61	91	F
19.	8-18-13					7	DAY	61	91	F
20.	8-25-13					7	DAY	62	100	F
21.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
22.	9-1-13					7	DAY	57	92	F
23.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A	B	C
Application Date:	7-13-13	8-9-13	8-23-13
Appl. Start Time:	18:30	10:30	10:00
Appl. Stop Time:	19:00	11:00	10:30
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	28DAP	42DAP
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	RJW	RJW	RFK
Air Temperature, Unit:	82 F	79 F	81 F
% Relative Humidity:	55	72	74
Wind Velocity, Unit:	6 MPH	3 MPH	2 MPH
Wind Direction:	S	NE	E
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	76 F	75 F	75 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	20	75	0
Next Moisture Occurred On:	7-20-13	8-12-13	8-31-13
Time to Next Moisture, Unit:	7 DAY	3 DAY	8 DAY

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V5	R2
Stage Minimum, Percent:		V4	R2
Stage Maximum, Percent:		V5	R2
Height, Unit:		12 IN	18 IN
Height Minimum, Maximum:		10 12	14 18

Southern Illinois University

Valor and Fierce Evaluations in Soybean.

Trial ID: 13-1-W70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	GGGAN W	GGGAN W	GGGAN W
Stage Majority, Percent:	NA	4	10+
Stage Minimum, Percent:		2	10
Stage Maximum, Percent:		6	10+
Height, Unit:		4 IN	18 IN
Height Minimum, Maximum:		1 8	10 20
Density, Unit:		3 FT2	0.1 FT2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	8	10+
Stage Minimum, Percent:		2	10
Stage Maximum, Percent:		12	10+
Height, Unit:		7 IN	30 IN
Height Minimum, Maximum:		1 14	20 50
Density, Unit:		1.5 FT2	1 FT2
Pest 3 Code, Type, Scale:	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	10	10+
Stage Minimum, Percent:		4	10
Stage Maximum, Percent:		14	10+
Height, Unit:		5 IN	20 IN
Height Minimum, Maximum:		2 12	20 32
Density, Unit:		2.5 FT2	0.01 FT2
Pest 4 Code, Type, Scale:	AMBEL W	AMBEL W	AMBEL W
Stage Majority, Percent:	NA	NA	10
Stage Minimum, Percent:			10
Stage Maximum, Percent:			10+
Height, Unit:			20 IN
Height Minimum, Maximum:			10 30
Density, Unit:			0.01 FT2
Pest 5 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	NA	10
Stage Minimum, Percent:			8
Stage Maximum, Percent:			10
Height, Unit:			10 IN
Height Minimum, Maximum:			8 16
Density, Unit:			0.01 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	TTI	XR	XR
Nozzle Size:	11002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Valor and Fierce Evaluations in Soybean.

Trial ID: 13-1-W70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 11-9-13 Moisture Percent	GLXMA 11-9-13 Test wt. lb/bu	GLXMA 11-9-13 Yield bu/A	GLXMA 8-23-13 Injury Percent 0 DA-C 14 DA-B	GLXMA 9-6-13 Injury Percent 14 DA-C
1	NONTREATED									13.1 a	57.1 a	12 c	0 a	0 a
2	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	28DAP	B	13.4 a	56.9 a	36 ab	0 a	0 a
	AMS	100	SG	2.5	lb/a	2.5	lb/a	28DAP	B					
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C					
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	13.3 a	57.0 a	37 ab	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C					
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	13.2 a	57.0 a	38 ab	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C					
5	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	13.4 a	56.9 a	36 ab	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C					
6	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	13.1 a	57.1 a	38 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C					
7	AUTHORITY ASSIST	4	SC	0.156	lb ai/a	5	fl oz/a	PRE	A	13.4 a	56.9 a	33 b	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C					
8	PREFIX	5.29	EC	1.32	lb ai/a	1	qt/a	PRE	A	13.2 a	57.0 a	40 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C					
LSD (P=.05)										0.28	0.17	5.3	0.0	0.0
Standard Deviation										0.24	0.15	4.5	0.0	0.0
CV										1.81	0.26	13.32	0.0	0.0
Replicate F										0.570	0.389	2.668	0.000	0.000
Replicate Prob(F)										0.7225	0.8531	0.0382	1.0000	1.0000
Treatment F										1.622	1.786	25.092	0.000	0.000
Treatment Prob(F)										0.1616	0.1224	0.0001	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=3

Valor and Fierce Evaluations in Soybean.

Trial ID: 13-1-W70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GGGAN 8-23-13 Control Percent 0 DA-C 14 DA-B	GGGAN 9-6-13 Control Percent 14 DA-C	GGGAN 10-9-13 Control Percent At Harvest	AMBTR 8-23-13 Control Percent 0 DA-C 14 DA-B	AMBTR 9-6-13 Control Percent 14 DA-C	AMBTR 10-9-13 Control Percent At Harvest
1	NONTREATED									0 d	0 a	0 a	0 e	0 e	0 e
2	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	28DAP	B	99 a	99 a	99 a	98 a	99 a	98 a
	AMS	100	SG	2.5	lb/a	2.5	lb/a	28DAP	B						
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	77 c	99 a	99 a	74 c	94 cd	96 cd
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	84 b	99 a	99 a	81 bc	96 bc	97 bc
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
5	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	97 a	99 a	99 a	87 b	95 bcd	97 b
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
6	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	98 a	99 a	99 a	86 b	97 b	97 bc
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
7	AUTHORITY ASSIST	4	SC	0.156	lb ai/a	5	fl oz/a	PRE	A	79 bc	99 a	99 a	21 d	93 d	96 d
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
8	PREFIX	5.29	EC	1.32	lb ai/a	1	qt/a	PRE	A	97 a	99 a	99 a	81 bc	96 bc	97 bc
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
LSD (P=.05)										5.1	0.0	0.0	9.7	1.7	0.8
Standard Deviation										4.3	0.0	0.0	8.3	1.4	0.7
CV										5.46	0.0	0.0	12.53	1.73	0.83
Replicate F										1.365	0.000	0.000	1.933	2.789	1.267
Replicate Prob(F)										0.2609	1.0000	1.0000	0.1137	0.0319	0.3001
Treatment F										355.117	0.000	0.000	110.091	3273.411	14092.359
Treatment Prob(F)										0.0001	1.0000	1.0000	0.0001	0.0001	0.0001

Valor and Fierce Evaluations in Soybean.

Trial ID: 13-1-W70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 8-23-13 Control Percent 0 DA-C 14 DA-B	AMATA 9-6-13 Control Percent 14 DA-C	AMATA 10-9-13 Control Percent At Harvest
1	NONTREATED									0 d	0 c	0 c
2	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	28DAP	B	92 bc	97 b	98 b
	AMS	100	SG	2.5	lb/a	2.5	lb/a	28DAP	B			
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C			
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C			
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	94 ab	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C			
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C			
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	95 ab	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C			
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C			
5	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C			
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C			
6	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C			
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C			
7	AUTHORITY ASSIST	4	SC	0.156	lb ai/a	5	fl oz/a	PRE	A	89 c	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C			
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C			
8	PREFIX	5.29	EC	1.32	lb ai/a	1	qt/a	PRE	A	98 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C			
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C			
LSD (P=.05)										5.5	0.7	0.6
Standard Deviation										4.6	0.6	0.5
CV										5.56	0.67	0.54
Replicate F										0.968	1.000	0.396
Replicate Prob(F)										0.4507	0.4321	0.8480
Treatment F										320.340	21952.431	33145.650
Treatment Prob(F)										0.0001	0.0001	0.0001

Valor and Fierce Evaluations in Soybean.

Trial ID: 13-1-W70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBEL 8-23-13 Control Percent 0 DA-C 14 DA-B	AMBEL 9-6-13 Control Percent 14 DA-C	AMBEL 10-9-13 Control Percent At Harvest	ABUTH 8-23-13 Control Percent 0 DA-C 14 DA-B	ABUTH 9-6-13 Control Percent 14 DA-C	ABUTH 10-9-13 Control Percent At Harvest
1	NONTREATED									0 b	0 b	0 a	0 d	0 b	0 b
2	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	28DAP	B	99 a	99 a	99 a	97 ab	99 a	99 a
	AMS	100	SG	2.5	lb/a	2.5	lb/a	28DAP	B						
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	97 a	99 a	99 a	94 ab	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	99 a	99 a	99 a	98 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
5	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	98 a	99 a	99 a	98 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
6	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
7	AUTHORITY ASSIST	4	SC	0.156	lb ai/a	5	fl oz/a	PRE	A	96 a	99 a	99 a	88 b	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
8	PREFIX	5.29	EC	1.32	lb ai/a	1	qt/a	PRE	A	98 a	99 a	99 a	51 c	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DAP	C						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
LSD (P=.05)										3.0	0.2	0.0	9.9	0.2	0.5
Standard Deviation										2.6	0.1	0.0	8.4	0.1	0.4
CV										3.0	0.17	0.0	10.77	0.17	0.48
Replicate F										0.794	1.000	0.000	0.959	1.000	0.778
Replicate Prob(F)										0.5617	0.4321	1.0000	0.4557	0.4321	0.5724
Treatment F										1092.063	352667.321	0.000	106.442	352667.321	42797.713
Treatment Prob(F)										0.0001	0.0001	1.0000	0.0001	0.0001	0.0001

Southern Illinois University

Valor and Fierce Evaluations in Soybean.

Trial ID: 13-1-W70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Valent (Fierce 64.01).
2. Ratings: CI/WC at 14 DA-B (28DAP), and 14 DA-C (42DAP), and at harvest.
3. Yield.
4. Following the PRE application the first rainfall event, beginning 7 days later, was 0.59 inch over 1 day.
5. GGGAN = Annual grasses including 50% SETFA (giant foxtail) and 50% PANDI (fall panicum).
6. Harvested 11-9-13, (2) 30 inch rows by 28 ft.

DuPont Soybean Programs.

Trial ID: 13-24B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-13-13
Completion Date: 11-10-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate Dupont preemergence herbicide programs in soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 7-13-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 2 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 3 Type: W **Code:** CYPES Cyperus esculentus L.
Common Name: nutsedge, yellow

Pest 4 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 5 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 3 **Texture:** SIL silt loam
pH: 6.5 **Soil Name:** Bethalto
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	56	lb/A
K	297	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

DuPont Soybean Programs.

Trial ID: 13-24B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
2.	6-2-13					7	DAY	50	80	F
3.	6-9-13					7	DAY	59	94	F
4.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
5.	6-16-13					7	DAY	61	90	F
6.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-23-13					7	DAY	64	92	F
9.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
10.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
11.	6-30-13					7	DAY	61	86	F
12.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
13.	7-7-13					7	DAY	62	94	F
14.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
15.	7-14-13					7	DAY	64	94	F
16.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
17.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
18.	7-21-13					7	DAY	56	91	F
19.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
20.	7-28-13					7	DAY	52	87	F
21.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
22.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
23.	8-4-13					7	DAY	62	87	F
24.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
25.	8-11-13					7	DAY	54	85	F
26.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
27.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
28.	8-18-13					7	DAY	61	91	F
29.	8-25-13					7	DAY	62	100	F
30.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
31.	9-1-13					7	DAY	57	92	F
32.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A	B
Application Date:	7-14-13	8-7-13
Appl. Start Time:	9:30	10:00
Appl. Stop Time:	10:00	10:30
Application Method:	Spray	Spray
Application Timing:	PRE	POST
Application Placement:	BROSOI	BROFOL
Applied By:	RJW	NTH
Air Temperature, Unit:	81 F	77 F
% Relative Humidity:	69	94
Wind Velocity, Unit:	4 MPH	3 MPH
Wind Direction:	N	NE
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	77 F	75 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	0	70
Next Moisture Occurred On:	7-20-13	8-8-13
Time to Next Moisture, Unit:	6 DAY	1 DAY

DuPont Soybean Programs.

Trial ID: 13-24B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V5
Stage Minimum, Percent:		V4
Stage Maximum, Percent:		V5
Height, Unit:		14 IN
Height Minimum, Maximum:		10 14

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	6
Stage Minimum, Percent:		COTY
Stage Maximum, Percent:		10
Height, Unit:		6 IN
Height Minimum, Maximum:		0.5 12
Density, Unit:		1 FT2
Pest 2 Code, Type, Scale:	IPOHE W	IPOHE W
Stage Majority, Percent:	NA	8
Stage Minimum, Percent:		COTY
Stage Maximum, Percent:		20
Height, Unit:		4 IN
Height Minimum, Maximum:		0.5 14
Density, Unit:		1 FT2
Pest 3 Code, Type, Scale:	CYPES W	CYPES W
Stage Majority, Percent:	NA	10
Stage Minimum, Percent:		6
Stage Maximum, Percent:		18
Height, Unit:		8 IN
Height Minimum, Maximum:		4 14
Density, Unit:		4 FT2
Pest 4 Code, Type, Scale:	AMATA W	AMATA W
Stage Majority, Percent:	NA	NA
Pest 5 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	NA

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

DuPont Soybean Programs.

Trial ID: 13-24B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 11-10-13 Moisture Percent	GLXMA 11-10-13 Test wt. lb/bu	GLXMA 11-10-13 Yield bu/A	GLXMA 8-7-13 Injury Percent 0 DA-B 24 DA-A	GLXMA 9-8-13 Injury Percent 32 DA-B 56 DA-A	GLXMA 9-8-13 Injury Percent No POST 56 DA-A
1	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	13.5 a	57.0 a	46 ab	2 cd	0 a	0
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
2	ENVIVE	41.3	WG	0.129	lb ai/a	5	oz/a	PRE	A	13.6 a	56.9 a	48 a	2 cd	0 a	0
	SENCOR	75	WG	0.234	lb ai/a	5	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	13.4 a	57.0 a	42 b	1 de	0 a	0
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
4	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	A	13.5 a	56.9 a	46 ab	2 cd	0 a	0
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
5	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	13.6 a	56.9 a	47 ab	1 de	0 a	0
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
6	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	13.6 a	56.9 a	46 ab	1 de	0 a	0
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
7	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	13.6 a	56.9 a	43 ab	3 b	0 a	0
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
8	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	13.5 a	56.9 a	44 ab	2 bcd	0 a	0
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
9	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	13.6 a	56.9 a	44 ab	5 a	0 a	0
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
10	PREFIX	5.29	EC	1.32	lb ai/a	1	qt/a	PRE	A	13.5 a	56.9 a	46 ab	2 bcd	0 a	0
	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
11	MATADOR	4.7	SC	1.76	lb ai/a	3	pt/a	PRE	A	13.4 a	57.0 a	43 ab	0 e	0 a	0
	CANOPY	75	WG	0.14	lb ai/a	3	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
12	INTIMIDATOR	4.81	SL	1.2	lb ai/a	1	qt/a	PRE	A	13.4 a	57.0 a	48 ab	3 bc	0 a	0
	CANOPY	75	WG	0.14	lb ai/a	3	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

DuPont Soybean Programs.

Trial ID: 13-24B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 11-10-13 Moisture Percent	GLXMA 11-10-13 Test wt. lb/bu	GLXMA 11-10-13 Yield bu/A	GLXMA 8-7-13 Injury Percent 0 DA-B 24 DA-A	GLXMA 9-8-13 Injury Percent 32 DA-B 56 DA-A	GLXMA 9-8-13 Injury Percent No POST 56 DA-A
13	PREFIX	5.29	EC	1.32	lb ai/a	1	qt/a	PRE	A	13.4 a	57.0 a	46 ab	1 de	0 a	0
	SCEPTER	70	WG	0.123	lb ai/a	2.8	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
14	NONTREATED									13.1 a	57.1 a	22 c	0 e	0 a	0
LSD (P=.05)										0.44	0.21	5.8	1.3	0.0	.
Standard Deviation										0.31	0.15	4.1	0.9	0.0	.
CV										2.31	0.26	9.3	54.69	0.0	.
Replicate F										2.919	5.487	98.065	0.650	0.000	
Replicate Prob(F)										0.0461	0.0030	0.0001	0.5877	1.0000	
Treatment F										0.677	0.593	10.383	7.650	0.000	
Treatment Prob(F)										0.7726	0.8443	0.0001	0.0001	1.0000	

DuPont Soybean Programs.

Trial ID: 13-24B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 8-7-13 Control Percent 0 DA-B	AMBTR 9-8-13 Control Percent 32 DA-B	AMBTR 9-8-13 Control Percent No POST	IPOHE 8-7-13 Control Percent 0 DA-B	IPOHE 9-8-13 Control Percent 32 DA-B	IPOHE 9-8-13 Control Percent No POST
	Pest Code									AMBTR	AMBTR	AMBTR	IPOHE	IPOHE	IPOHE
	Crop Code														
	Rating Date									8-7-13	9-8-13	9-8-13	8-7-13	9-8-13	9-8-13
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing									0 DA-B	32 DA-B	No POST	0 DA-B	32 DA-B	No POST
	Trt-Eval Interval									24 DA-A	56 DA-A	56 DA-A	24 DA-A	56 DA-A	56 DA-A
1	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	77 bc	99 a	10	88 ab	95 abc	50
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
2	ENVIVE	41.3	WG	0.129	lb ai/a	5	oz/a	PRE	A	88 a	97 b	15	94 a	96 ab	55
	SENCOR	75	WG	0.234	lb ai/a	5	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	39 e	98 ab	15	87 ab	94 abc	50
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
4	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	A	78 abc	98 ab	40	90 ab	93 abc	50
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
5	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	78 abc	98 ab	65	88 ab	93 abc	40
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
6	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	80 abc	98 ab	50	85 bc	90 c	70
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
7	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	85 abc	98 ab	50	90 ab	91 abc	70
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
8	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	75 cd	98 ab	20	87 ab	95 abc	65
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
9	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	80 abc	97 b	40	89 ab	96 a	65
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
10	PREFIX	5.29	EC	1.32	lb ai/a	1	qt/a	PRE	A	66 d	99 a	55	74 d	96 a	40
	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
11	MATADOR	4.7	SC	1.76	lb ai/a	3	pt/a	PRE	A	40 e	99 a	0	76 cd	94 abc	60
	CANOPY	75	WG	0.14	lb ai/a	3	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
12	INTIMIDATOR	4.81	SL	1.2	lb ai/a	1	qt/a	PRE	A	79 abc	99 a	50	78 cd	91 bc	60
	CANOPY	75	WG	0.14	lb ai/a	3	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						

DuPont Soybean Programs.

Trial ID: 13-24B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR	AMBTR	AMBTR	IPOHE	IPOHE	IPOHE
	Pest Code									AMBTR	AMBTR	AMBTR	IPOHE	IPOHE	IPOHE
	Crop Code														
	Rating Date									8-7-13	9-8-13	9-8-13	8-7-13	9-8-13	9-8-13
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing									0 DA-B	32 DA-B	No POST	0 DA-B	32 DA-B	No POST
	Trt-Eval Interval									24 DA-A	56 DA-A	56 DA-A	24 DA-A	56 DA-A	56 DA-A
13	PREFIX	5.29	EC	1.32	lb ai/a	1	qt/a	PRE	A	86 ab	98 ab	50	70 d	96 a	60
	SCEPTER	70	WG	0.123	lb ai/a	2.8	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
14	NONTREATED									0 f	0 c	0	0 e	0 d	0
	LSD (P=.05)									10.3	1.3	.	8.6	5.1	.
	Standard Deviation									7.2	0.8	.	6.0	3.0	.
	CV									10.65	0.88	.	7.67	3.48	.
	Replicate F									5.188	1.436		8.251	0.561	
	Replicate Prob(F)									0.0041	0.2561		0.0002	0.5777	
	Treatment F									47.161	3200.139		61.880	206.588	
	Treatment Prob(F)									0.0001	0.0001		0.0001	0.0001	

DuPont Soybean Programs.

Trial ID: 13-24B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CYPES 8-7-13 Control Percent 0 DA-B 24 DA-A	CYPES 9-8-13 Control Percent 32 DA-B 56 DA-A	CYPES 9-8-13 Control Percent No POST 56 DA-A	AMATA 8-7-13 Control Percent 0 DA-B 24 DA-A	AMATA 9-8-13 Control Percent 32 DA-B 56 DA-A	AMATA 9-8-13 Control Percent No POST 56 DA-A
1	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	82 c	97 a	80	99 b	99 a	95
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
2	ENVIVE	41.3	WG	0.129	lb ai/a	5	oz/a	PRE	A	91 ab	96 ab	70	99 a	99 a	95
	SENCOR	75	WG	0.234	lb ai/a	5	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	93 ab	96 ab	65	99 ab	99 a	96
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
4	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	A	84 bc	95 ab	70	99 a	99 a	99
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
5	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	90 abc	95 ab	70	99 a	99 a	99
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
6	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	91 ab	94 b	70	99 a	99 a	85
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
7	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	94 a	96 ab	80	99 a	99 a	85
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
8	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	88 abc	95 ab	80	99 a	99 a	99
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
9	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	95 a	97 ab	90	99 a	99 a	99
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
10	PREFIX	5.29	EC	1.32	lb ai/a	1	qt/a	PRE	A	97 a	96 ab	97	99 a	99 a	99
	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
11	MATADOR	4.7	SC	1.76	lb ai/a	3	pt/a	PRE	A	96 a	96 ab	93	99 a	99 a	99
	CANOPY	75	WG	0.14	lb ai/a	3	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
12	INTIMIDATOR	4.81	SL	1.2	lb ai/a	1	qt/a	PRE	A	93 a	96 ab	95	99 a	99 a	99
	CANOPY	75	WG	0.14	lb ai/a	3	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						

DuPont Soybean Programs.

Trial ID: 13-24B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CYPES 8-7-13 Control Percent 0 DA-B 24 DA-A	CYPES 9-8-13 Control Percent 32 DA-B 56 DA-A	CYPES 9-8-13 Control Percent No POST 56 DA-A	AMATA 8-7-13 Control Percent 0 DA-B 24 DA-A	AMATA 9-8-13 Control Percent 32 DA-B 56 DA-A	AMATA 9-8-13 Control Percent No POST 56 DA-A
13	PREFIX	5.29	EC	1.32	lb ai/a	1	qt/a	PRE	A	96 a	96 ab	93	99 a	99 a	99
	SCEPTER	70	WG	0.123	lb ai/a	2.8	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B						
14	NONTREATED									0 d	0 c	0	0 c	0 a	0
LSD (P=.05)										8.9	2.4	.	0.4	0.0	.
Standard Deviation										6.2	1.4	.	0.3	0.0	.
CV										7.35	1.59	.	0.33	0.0	.
Replicate F										0.027	2.333		0.719	0.000	
Replicate Prob(F)										0.9937	0.1169		0.5469	1.0000	
Treatment F										63.275	982.426		30697.887	0.000	
Treatment Prob(F)										0.0001	0.0001		0.0001	1.0000	

DuPont Soybean Programs.

Trial ID: 13-24B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 8-7-13 Control Percent 0 DA-B 24 DA-A	ABUTH 9-8-13 Control Percent 32 DA-B 56 DA-A	ABUTH 9-8-13 Control Percent No POST 56 DA-A
1	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	99 a	99 a	99
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
2	ENVIVE	41.3	WG	0.129	lb ai/a	5	oz/a	PRE	A	99 a	98 ab	99
	SENCOR	75	WG	0.234	lb ai/a	5	oz/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	99 a	98 ab	95
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
4	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	A	99 a	98 ab	90
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
5	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	99 a	99 a	99
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
6	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	99 a	99 a	99
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
7	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	99 a	99 a	99
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A			
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
8	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	99 a	98 ab	99
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
9	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	99 a	98 ab	99
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A			
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
10	PREFIX	5.29	EC	1.32	lb ai/a	1	qt/a	PRE	A	99 a	97 b	50
	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
11	MATADOR	4.7	SC	1.76	lb ai/a	3	pt/a	PRE	A	99 a	99 a	99
	CANOPY	75	WG	0.14	lb ai/a	3	oz/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
12	INTIMIDATOR	4.81	SL	1.2	lb ai/a	1	qt/a	PRE	A	99 a	98 ab	99
	CANOPY	75	WG	0.14	lb ai/a	3	oz/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			

DuPont Soybean Programs.

Trial ID: 13-24B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 8-7-13 Control Percent 0 DA-B 24 DA-A	ABUTH 9-8-13 Control Percent 32 DA-B 56 DA-A	ABUTH 9-8-13 Control Percent No POST 56 DA-A
13	PREFIX	5.29	EC	1.32	lb ai/a	1	qt/a	PRE	A	99 a	98 ab	99
	SCEPTER	70	WG	0.123	lb ai/a	2.8	oz/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
14	NONTREATED									0 a	0 c	0
LSD (P=.05)										0.0	1.4	.
Standard Deviation										0.0	0.9	.
CV										0.0	0.93	.
Replicate F										0.000	0.823	
Replicate Prob(F)										1.0000	0.4503	
Treatment F										0.000	2862.605	
Treatment Prob(F)										1.0000	0.0001	

DuPont Soybean Programs.

Trial ID: 13-24B Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Dupont.
2. Ratings: CI/WC at 28 and 56 DA-A.
3. POST application B to be made to reps 1-3 only.
4. Blanket application of Aproach (6 floz/A) plus Asana (9.6 floz/A) to be applied at R3 to all plots 10 ft wide.
5. Yield.
6. Following the PRE application the first rainfall event, beginning 6 days later, was 0.59 inch over 1 day.
7. Soybean injury was slight stunting.
8. Harvested 11-10-13, (2) 30 inch rows by 27 ft.

PRE/POST Programs in Soybean - Syngenta, Dow.

Trial ID: 13-51E-M80 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-12-13
Completion Date: 11-9-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Compare crop tolerance and weed efficacy with preemergence soybean herbicides.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 7-12-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 2 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 3 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 27 FT **Total Plot Length:** 27 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 100 LB/A

Soil Description

% OM: 2.8 **Texture:** SIL silt loam
pH: 6.1 **Soil Name:** Pierron
CEC: 10

Additional Measured Elements

Element	Quantity	Unit
P1	87	lb/A
K	343	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

PRE/POST Programs in Soybean - Syngenta, Dow.

Trial ID: 13-51E-M80 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
2.	6-2-13					7	DAY	50	80	F
3.	6-9-13					7	DAY	59	94	F
4.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
5.	6-16-13					7	DAY	61	90	F
6.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-23-13					7	DAY	64	92	F
9.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
10.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
11.	6-30-13					7	DAY	61	86	F
12.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
13.	7-7-13					7	DAY	62	94	F
14.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
15.	7-14-13					7	DAY	64	94	F
16.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
17.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
18.	7-21-13					7	DAY	56	91	F
19.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
20.	7-28-13					7	DAY	52	87	F
21.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
22.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
23.	8-4-13					7	DAY	62	87	F
24.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
25.	8-11-13					7	DAY	54	85	F
26.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
27.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
28.	8-18-13					7	DAY	61	91	F
29.	8-25-13					7	DAY	62	100	F
30.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
31.	9-1-13					7	DAY	57	92	F
32.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A	B	C
Application Date:	7-13-13	8-1-13	8-6-13
Appl. Start Time:	6:00	10:00	10:00
Appl. Stop Time:	6:30	10:15	10:30
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	4-6"W-1	4-6"W-2
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	LXF	NTH	KNW
Air Temperature, Unit:	65 F	81 F	79 F
% Relative Humidity:	93	67	82
Wind Velocity, Unit:	1 MPH	4 MPH	1 MPH
Wind Direction:	E	NW	SE
Dew Presence (Y/N):	Y	N	N
Soil Temperature, Unit:	76 F	74 F	74 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	0	0	80
Next Moisture Occurred On:	7-20-13	8-2-13	8-12-13
Time to Next Moisture, Unit:	7 DAY	1 DAY	6 DAY

PRE/POST Programs in Soybean - Syngenta, Dow.

Trial ID: 13-51E-M80 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V3	V3
Stage Minimum, Percent:		V2	V3
Stage Maximum, Percent:		V3	V3
Height, Unit:		7 IN	8 IN
Height Minimum, Maximum:		4 7	6 8

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W
Stage Majority, Percent:	NA	4	10
Stage Minimum, Percent:		COTY	8
Stage Maximum, Percent:		6	10
Height, Unit:		4 IN	5 IN
Height Minimum, Maximum:		0.5 5	4 6
Density, Unit:		2 FT2	0.1 FT2
Pest 2 Code, Type, Scale:	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	NA	8
Stage Minimum, Percent:			5
Stage Maximum, Percent:			8
Height, Unit:			5 IN
Height Minimum, Maximum:			4 6
Density, Unit:			0.01 FT2
Pest 3 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	4	6
Stage Minimum, Percent:		COTY	4
Stage Maximum, Percent:		6	8
Height, Unit:		4 IN	4 IN
Height Minimum, Maximum:		0.5 6	4 6
Density, Unit:		1 FT2	0.1 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

PRE/POST Programs in Soybean - Syngenta, Dow.

Trial ID: 13-51E-M80 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 11-9-13 Moisture Percent	GLXMA 11-9-13 Test wt. lb/bu	GLXMA 11-9-13 Yield bu/A	GLXMA 7-26-13 Injury Percent 14 DAP 13 DA-A	GLXMA Injury Percent 0 DA-B 0 DA-C	GLXMA Injury Percent 14 DA-B 14 DA-C	GLXMA Injury Percent 28 DA-B 28 DA-C
1	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	13.6 a	56.8 a	55 a	2 bc	0 d	1 d	0 g
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W-1	B							
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B							
2	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	13.4 a	56.9 a	52 ab	1 bc	0 d	21 b	9 c
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	4-6"W-1	B							
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W-1	B							
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B							
3	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	13.6 a	56.8 a	51 ab	1 bc	0 d	18 bc	9 cd
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	4-6"W-1	B							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"W-1	B							
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B							
4	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	PRE	A	13.3 a	57.0 a	53 ab	2 b	0 d	18 bc	4 ef
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	4-6"W-1	B							
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W-1	B							
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B							
5	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	PRE	A	13.5 a	56.9 a	48 abc	1 bc	0 d	17 c	9 cd
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	4-6"W-1	B							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"W-1	B							
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B							
6	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	13.5 a	56.9 a	46 bc	6 a	5 bc	29 a	24 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C							
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W-2	C							
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"W-2	C							
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C							
7	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	13.6 a	56.8 a	42 c	1 bc	8 b	30 a	27 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C							
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W-2	C							
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"W-2	C							
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C							
8	SONIC	70	WG	0.131	lb ai/a	3	oz/a	PRE	A	13.4 a	56.9 a	56 a	1 bc	4 c	3 d	3 fg
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	C							
9	SONIC	70	WG	0.197	lb ai/a	4.5	oz/a	PRE	A	13.5 a	56.9 a	54 ab	1 bc	7 b	2 d	4 ef
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	C							
10	SONIC	70	WG	0.263	lb ai/a	6	oz/a	PRE	A	13.4 a	56.9 a	52 ab	6 a	13 a	3 d	6 de
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	C							
11	NONTREATED									13.4 a	56.9 a	25 d	0 c	0 d	0 d	0 g
LSD (P=.05)										0.66	0.24	8.7	2.1	2.8	3.3	3.2
Standard Deviation										0.46	0.16	6.0	1.5	1.9	2.3	2.2
CV										3.42	0.29	12.42	77.98	57.67	18.14	26.46
Replicate F										0.122	0.457	1.595	4.204	4.973	3.093	0.246
Replicate Prob(F)										0.9464	0.7146	0.2113	0.0135	0.0064	0.0418	0.8638
Treatment F										0.214	0.323	8.776	8.105	20.618	99.280	63.757
Treatment Prob(F)										0.9931	0.9685	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

PRE/POST Programs in Soybean - Syngenta, Dow.

Trial ID: 13-51E-M80 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOHE Control Percent 0 DA-B 0 DA-C	IPOHE Control Percent 14 DA-B 14 DA-C	IPOHE Control Percent 28 DA-B 28 DA-C	AMATA Control Percent 0 DA-B 0 DA-C	AMATA Control Percent 14 DA-B 14 DA-C	AMATA Control Percent 28 DA-B 28 DA-C
1	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	68 c	92 cd	96 cd	99 a	99 b	99 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B						
2	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	69 c	96 abc	97 bcd	99 a	99 a	99 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	4-6"W-1	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B						
3	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	58 d	95 a-d	96 cd	99 a	99 a	99 a
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	4-6"W-1	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B						
4	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	PRE	A	35 e	92 d	96 d	99 a	99 a	99 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	4-6"W-1	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B						
5	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	PRE	A	40 e	95 a-d	96 cd	99 a	99 a	99 a
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	4-6"W-1	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B						
6	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	96 ab	97 ab	97 a-d	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C						
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W-2	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						
7	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	97 a	98 a	98 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C						
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W-2	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						
8	SONIC	70	WG	0.131	lb ai/a	3	oz/a	PRE	A	87 b	93 bcd	97 abc	95 b	99 a	99 b
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-2	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	C						
9	SONIC	70	WG	0.197	lb ai/a	4.5	oz/a	PRE	A	94 ab	95 a-d	98 ab	98 a	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-2	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	C						
10	SONIC	70	WG	0.263	lb ai/a	6	oz/a	PRE	A	95 ab	93 bcd	98 a	99 a	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-2	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	C						
11	NONTREATED									0 f	0 e	0 e	0 c	0 c	0 c
LSD (P=.05)										9.3	3.9	1.6	1.4	0.4	0.2
Standard Deviation										6.4	2.7	1.1	1.0	0.3	0.2
CV										9.61	3.18	1.27	1.1	0.34	0.17
Replicate F										4.185	1.163	4.958	1.761	1.000	1.000
Replicate Prob(F)										0.0137	0.3400	0.0065	0.1759	0.4064	0.4064
Treatment F										95.667	436.900	2714.748	3659.566	39165.404	156737.816
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

PRE/POST Programs in Soybean - Syngenta, Dow.

Trial ID: 13-51E-M80 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH Control Percent 0 DA-B 0 DA-C	ABUTH Control Percent 14 DA-B 14 DA-C	ABUTH Control Percent 28 DA-B 28 DA-C
1	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	70 b	95 d	97 cd
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B			
2	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	94 a	96 cd	97 cd
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	4-6"W-1	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B			
3	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	92 a	95 d	97 d
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	4-6"W-1	B			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B			
4	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	PRE	A	35 c	96 bcd	97 bcd
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	4-6"W-1	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B			
5	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	PRE	A	40 c	97 a-d	98 a-d
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	4-6"W-1	B			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B			
6	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	99 a	98 abc	97 bcd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C			
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W-2	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C			
7	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	95 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C			
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"W-2	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C			
8	SONIC	70	WG	0.131	lb ai/a	3	oz/a	PRE	A	95 a	96 bcd	97 bcd
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	C			
9	SONIC	70	WG	0.197	lb ai/a	4.5	oz/a	PRE	A	95 a	97 a-d	98 abc
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	C			
10	SONIC	70	WG	0.263	lb ai/a	6	oz/a	PRE	A	97 a	98 ab	98 ab
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	C			
11	NONTREATED									0 d	0 e	0 e
LSD (P=.05)										7.8	2.3	1.2
Standard Deviation										5.4	1.6	0.8
CV										7.3	1.84	0.93
Replicate F										3.420	6.881	1.742
Replicate Prob(F)										0.0298	0.0012	0.1797
Treatment F										156.567	1308.725	5126.151
Treatment Prob(F)										0.0001	0.0001	0.0001

PRE/POST Programs in Soybean - Syngenta, Dow.

Trial ID: 13-51E-M80 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Syngenta, Dow.
2. Ratings: CI at 14 DAP; CI/WC at 0, 14, and 28 DA-B.
3. Yield.
4. Following the PRE application the first rainfall event, beginning 7 days later, was 0.59 inch over 1 day.
   Following the 4-6"W-1 application the first rainfall event, beginning 1 day later, was 0.13 inch over 1 day.
   Following the 4-6"W-2 application the first significant rainfall event, beginning 6 days later, was 0.57 inch.
5. Ratings at 0 DA-B or 0 DA-C were on 8-1-13 or 8-6-13, respectively.
   Ratings at 14 DA-B or 14 DA-C were on 8-15-13 or 8-20-13, respectively.
   Ratings at 28 DA-B or 28 DA-C were on 8-29-13 or 9-3-13, respectively.
6. Harvested 11-9-13, (2) 30 inch rows by 24 ft.

Zidua Combinations with Dupont Herbicides in Soybean.

Trial ID: 13-51E-S70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-12-13
Completion Date: 9-6-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the efficacy of Zidua applied in combination with Envive, Canopy or DPX-R5W13.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 7-12-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 3 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 27 FT **Total Plot Length:** 27 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 100 LB/A

Soil Description

% OM: 2.8 **Texture:** SIL silt loam
pH: 6.1 **Soil Name:** Pierron
CEC: 10

Additional Measured Elements

Element	Quantity	Unit
P1	87	lb/A
K	343	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Zidua Combinations with Dupont Herbicides in Soybean.

Trial ID: 13-51E-S70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-9-13					7	DAY	59	94	F
3.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
4.	6-16-13					7	DAY	61	90	F
5.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
6.	6-23-13					7	DAY	64	92	F
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
9.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
10.	6-30-13					7	DAY	61	86	F
11.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
12.	7-7-13					7	DAY	62	94	F
13.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
14.	7-14-13					7	DAY	64	94	F
15.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
16.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
17.	7-21-13					7	DAY	56	91	F
18.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
19.	7-28-13					7	DAY	52	87	F
20.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
21.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
22.	8-4-13					7	DAY	62	87	F
23.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
24.	8-11-13					7	DAY	54	85	F
25.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
26.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
27.	8-18-13					7	DAY	61	91	F

Application Description

	A	B
Application Date:	7-13-13	8-7-13
Appl. Start Time:	6:30	10:30
Appl. Stop Time:	7:00	11:00
Application Method:	Spray	Spray
Application Timing:	PRE	POST
Application Placement:	BROSOI	BROFOL
Applied By:	NTH	NTH
Air Temperature, Unit:	70 F	74 F
% Relative Humidity:	81	94
Wind Velocity, Unit:	2 MPH	3 MPH
Wind Direction:	E	NE
Dew Presence (Y/N):	Y	N
Soil Temperature, Unit:	76 F	75 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	0	70
Next Moisture Occurred On:	7-20-13	8-8-13
Time to Next Moisture, Unit:	7 DAY	1 DAY

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V5
Stage Minimum, Percent:		V4
Stage Maximum, Percent:		V5
Height, Unit:		12 IN
Height Minimum, Maximum:		10 12

Zidua Combinations with Dupont Herbicides in Soybean.

Trial ID: 13-51E-S70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	IPOHE W	IPOHE W
Stage Majority, Percent:	NA	6
Stage Minimum, Percent:		COTY
Stage Maximum, Percent:		25
Height, Unit:		5 IN
Height Minimum, Maximum:		0.5 18
Density, Unit:		1 FT2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	8
Stage Minimum, Percent:		2
Stage Maximum, Percent:		14
Height, Unit:		4 IN
Height Minimum, Maximum:		1 16
Density, Unit:		1 FT2
Pest 3 Code, Type, Scale:	AMATA W	AMATA W
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		COTY
Stage Maximum, Percent:		10
Height, Unit:		3 IN
Height Minimum, Maximum:		0.5 8
Density, Unit:		0.25 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

Zidua Combinations with Dupont Herbicides in Soybean.

Trial ID: 13-51E-S70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-26-13 Injury Percent 14 DAP 13 DA-A	GLXMA 8-7-13 Injury Percent 26 DAP 0 DA-B	GLXMA 9-6-13 Injury Percent 30 DA-B	IPOHE 7-26-13 Control Percent 14 DAP 13 DA-A	IPOHE 8-7-13 Control Percent 26 DAP 0 DA-B	IPOHE 9-6-13 Control Percent 30 DA-B
1	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	0 a	3 bc	0 a	92 a	95 a	95 a
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	AMS	100	SG	2	lb/a	2	lb/a	POST	B						
2	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	0 a	3 bc	0 a	91 ab	96 a	95 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	AMS	100	SG	2	lb/a	2	lb/a	POST	B						
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	0 a	4 b	0 a	78 abc	94 a	93 ab
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	AMS	100	SG	2	lb/a	2	lb/a	POST	B						
4	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	0 a	5 b	0 a	84 abc	95 a	94 ab
	FIERCE	76	WG	0.095	lb ai/a	2	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	AMS	100	SG	2	lb/a	2	lb/a	POST	B						
5	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	0 a	1 cd	0 a	58 d	88 a	94 ab
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	AMS	100	SG	2	lb/a	2	lb/a	POST	B						
6	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	0 a	3 bc	0 a	76 bc	95 a	96 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	AMS	100	SG	2	lb/a	2	lb/a	POST	B						
7	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	A	0 a	4 b	0 a	92 a	97 a	97 a
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	AMS	100	SG	2	lb/a	2	lb/a	POST	B						
8	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	A	0 a	1 cd	0 a	87 abc	96 a	96 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	AMS	100	SG	2	lb/a	2	lb/a	POST	B						
9	CANOPY	75	WG	0.28	lb ai/a	6	oz/a	PRE	A	0 a	10 a	0 a	85 abc	96 a	95 a
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	AMS	100	SG	2	lb/a	2	lb/a	POST	B						
10	CANOPY	75	WG	0.28	lb ai/a	6	oz/a	PRE	A	0 a	4 bc	0 a	77 abc	95 a	96 a
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	AMS	100	SG	2	lb/a	2	lb/a	POST	B						
11	CANOPY	75	WG	0.28	lb ai/a	6	oz/a	PRE	A	0 a	4 b	0 a	73 cd	90 a	90 b
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	AMS	100	SG	2	lb/a	2	lb/a	POST	B						
12	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A	0 a	0 d	0 a	0 e	25 b	68 c
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	AMS	100	SG	2	lb/a	2	lb/a	POST	B						
13	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	0 a	0 d	0 a	80 abc	87 a	97 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B						
	AMS	100	SG	2	lb/a	2	lb/a	POST	B						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Zidua Combinations with Dupont Herbicides in Soybean.

Trial ID: 13-51E-S70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code																							
Crop Code													GLXMA	GLXMA	GLXMA	IPOHE	IPOHE	IPOHE					
Rating Date													7-26-13	8-7-13	9-6-13	7-26-13	8-7-13	9-6-13					
Rating Type													Injury	Injury	Injury	Control	Control	Control					
Rating Unit													Percent	Percent	Percent	Percent	Percent	Percent					
Rating Timing													14 DAP	26 DAP		14 DAP	26 DAP						
Trt-Eval Interval													13 DA-A	0 DA-B	30 DA-B	13 DA-A	0 DA-B	30 DA-B					
Trt No.	Treatment Name		Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code													
14	NONTREATED												0 a	0 d	0 a	0 e	0 c	0 d					
LSD (P=.05)													0.0	2.4	0.0	15.2	10.7	4.4					
Standard Deviation													0.0	1.4	0.0	9.1	6.3	2.6					
CV													0.0	47.3	0.0	13.05	7.73	3.02					
Replicate F													0.000	3.294	0.000	2.271	0.726	2.738					
Replicate Prob(F)													1.0000	0.0531	1.0000	0.1233	0.4933	0.0833					
Treatment F													0.000	10.239	0.000	34.470	67.358	295.416					
Treatment Prob(F)													1.0000	0.0001	1.0000	0.0001	0.0001	0.0001					

Zidua Combinations with Dupont Herbicides in Soybean.

Trial ID: 13-51E-S70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 8-7-13 Control Percent 26 DAP 0 DA-B	AMBTR 9-6-13 Control Percent 30 DA-B	AMATA 8-7-13 Control Percent 26 DAP 0 DA-B	AMATA 9-6-13 Control Percent 30 DA-B
1	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	97 a	99 a	99 a	99 a
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B				
	AMS	100	SG	2	lb/a	2	lb/a	POST	B				
2	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	97 a	99 a	98 ab	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B				
	AMS	100	SG	2	lb/a	2	lb/a	POST	B				
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	99 a	99 a	99 a	99 a
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B				
	AMS	100	SG	2	lb/a	2	lb/a	POST	B				
4	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	94 a	99 a	99 a	99 a
	FIERCE	76	WG	0.095	lb ai/a	2	oz/a	PRE	A				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B				
	AMS	100	SG	2	lb/a	2	lb/a	POST	B				
5	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	93 a	99 a	99 a	99 a
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	PRE	A				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B				
	AMS	100	SG	2	lb/a	2	lb/a	POST	B				
6	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	95 a	99 a	98 ab	99 b
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B				
	AMS	100	SG	2	lb/a	2	lb/a	POST	B				
7	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	A	98 a	99 a	99 a	99 a
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B				
	AMS	100	SG	2	lb/a	2	lb/a	POST	B				
8	DPX-R5W13	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	A	95 a	99 a	98 ab	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B				
	AMS	100	SG	2	lb/a	2	lb/a	POST	B				
9	CANOPY	75	WG	0.28	lb ai/a	6	oz/a	PRE	A	98 a	99 a	99 a	99 a
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B				
	AMS	100	SG	2	lb/a	2	lb/a	POST	B				
10	CANOPY	75	WG	0.28	lb ai/a	6	oz/a	PRE	A	94 a	99 a	99 a	99 a
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	PRE	A				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B				
	AMS	100	SG	2	lb/a	2	lb/a	POST	B				
11	CANOPY	75	WG	0.28	lb ai/a	6	oz/a	PRE	A	97 a	99 a	98 ab	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B				
	AMS	100	SG	2	lb/a	2	lb/a	POST	B				
12	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A	58 b	99 a	96 b	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B				
	AMS	100	SG	2	lb/a	2	lb/a	POST	B				
13	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	96 a	99 a	99 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	B				
	AMS	100	SG	2	lb/a	2	lb/a	POST	B				

Zidua Combinations with Dupont Herbicides in Soybean.

Trial ID: 13-51E-S70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code									AMBTR	AMBTR	AMATA	AMATA
Crop Code												
Rating Date									8-7-13	9-6-13	8-7-13	9-6-13
Rating Type									Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent
Rating Timing									26 DAP		26 DAP	
Trt-Eval Interval									0 DA-B	30 DA-B	0 DA-B	30 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
14	NONTREATED									0 c	0 b	0 c	0 c
LSD (P=.05)										14.6	0.5	2.5	0.3
Standard Deviation										8.7	0.3	1.5	0.2
CV										10.06	0.3	1.61	0.17
Replicate F										0.636	0.000	0.527	1.000
Replicate Prob(F)										0.5373	1.0000	0.5965	0.3816
Treatment F										28.708	27261.146	958.892	88164.317
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Zidua Combinations with Dupont Herbicides in Soybean.

Trial ID: 13-51E-S70 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Dupont (13-116).
2. Ratings: CI/WC at 14 and 28 DAP (or prior to POST) and CI/WC at 28 DA-B.
3. No yield.
4. Following the PRE application the first rainfall event, beginning 7 days later, was 0.59 inch over 1 day.
5. Crop injury was stunting.
6. Not harvested.

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-15-13
Completion Date: 10-25-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Demonstrate crop tolerance and weed control with MANA soybean programs.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832
Description: RR2Y
Planting Date: 6-15-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 3 Type: W **Code:** XANST Xanthium strumarium L.
Common Name: cocklebur, common

Pest 4 Type: W **Code:** AMBEL Ambrosia artemisiifolia L.
Common Name: ragweed, common

Pest 5 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Treated Plot Width: 10 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 56 FT **Total Plot Length:** 56 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 2 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.5 **Texture:** SIL silt loam
pH: 6.7 **Soil Name:** Pierron
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	65	lb/A
K	262	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	3.07	IN	RAIN	rain	4	DAY			
2.	5-5-13					7	DAY	46	80	F
3.	5-9-13	0.35	IN	RAIN	rain	2	DAY			
4.	5-12-13					7	DAY	39	92	F
5.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
6.	5-19-13					7	DAY	45	88	F
7.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
8.	5-26-13					7	DAY	56	86	F
9.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
10.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
11.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
12.	6-2-13					7	DAY	50	80	F
13.	6-9-13					7	DAY	59	94	F
14.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
15.	6-16-13					7	DAY	61	90	F
16.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
17.	6-23-13					7	DAY	64	92	F
18.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
19.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
20.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
21.	6-30-13					7	DAY	61	86	F
22.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
23.	7-7-13					7	DAY	62	94	F
24.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
25.	7-14-13					7	DAY	64	94	F
26.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
27.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
28.	7-21-13					7	DAY	56	91	F
29.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
30.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
31.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
32.	8-4-13					7	DAY	62	87	F
33.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
34.	8-11-13					7	DAY	54	85	F
35.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
36.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
37.	8-18-13					7	DAY	61	91	F
38.	8-25-13					7	DAY	62	100	F
39.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
40.	9-1-13					7	DAY	57	92	F
41.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Description

	A	B	C
Application Date:	6-15-13	6-16-13	7-1-13
Appl. Start Time:	15:30	7:30	14:45
Appl. Stop Time:	16:30	8:00	15:00
Application Method:	Spray	Spray	Spray
Application Timing:	PPI	PRE	2-4"W
Application Placement:	BROSOI	BROSOI	BROFOL
Applied By:	RJW	LXF	RFK
Air Temperature, Unit:	89 F	70 F	73 F
% Relative Humidity:	52	100	65
Wind Velocity, Unit:	5 MPH	2 MPH	5 MPH
Wind Direction:	S	E	N
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	76 F	73 F	73 F
Soil Moisture:	NORMAL	NORMAL	ABONOR
% Cloud Cover:	5	100	100
Next Moisture Occurred On:	6-15-13	6-16-13	7-1-13
Time to Next Moisture, Unit:	5 HR	1 HR	7 HR

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	V1
Stage Minimum, Percent:			V1
Stage Maximum, Percent:			V1
Height, Unit:			4 IN
Height Minimum, Maximum:			3 4

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SETFA W	SETFA W	SETFA W
Stage Majority, Percent:	NA	NA	3
Stage Minimum, Percent:			2
Stage Maximum, Percent:			4
Height, Unit:			2 IN
Height Minimum, Maximum:			2 3
Density, Unit:			0.1 FT2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	NA	5
Stage Minimum, Percent:			5
Stage Maximum, Percent:			6
Height, Unit:			3 IN
Height Minimum, Maximum:			1 4
Density, Unit:			0.1 FT2
Pest 3 Code, Type, Scale:	XANST W	XANST W	XANST W
Stage Majority, Percent:	NA	NA	6
Stage Minimum, Percent:			5
Stage Maximum, Percent:			6
Height, Unit:			3 IN
Height Minimum, Maximum:			1 4
Density, Unit:			1 FT2
Pest 4 Code, Type, Scale:	AMBEL W	AMBEL W	AMBEL W
Stage Majority, Percent:	NA	NA	4
Stage Minimum, Percent:			4
Stage Maximum, Percent:			5
Height, Unit:			2 IN
Height Minimum, Maximum:			1 3
Density, Unit:			0.1 FT2
Pest 5 Code, Type, Scale:	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	NA	6
Stage Minimum, Percent:			5
Stage Maximum, Percent:			6
Height, Unit:			2 IN
Height Minimum, Maximum:			1 3
Density, Unit:			0.1 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	10 FT	10 FT	10 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-25-13 Moisture Percent	GLXMA 10-25-13 Yield bu/A	GLXMA 6-23-13 Injury Percent 7 DA-B	GLXMA 6-30-13 Injury Percent -1 DA-C 14 DA-B	GLXMA 7-8-13 Injury Percent 22 DA-B 7 DA-C	GLXMA 7-15-13 Injury Percent 29 DA-B 14 DA-C	GLXMA 7-31-13 Injury Percent 30 DA-C
1	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	B	12.6 a	57 a	0 a	4 a	4 a	2 bc	0 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
2	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	12.6 a	55 abc	0 a	5 a	4 a	4 ab	0 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
3	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	12.7 a	47 cd	0 a	3 a	2 abc	3 abc	0 a
	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
4	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	12.6 a	50 a-d	0 a	0 a	3 ab	5 a	0 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
5	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	B	12.6 a	58 a	0 a	4 a	2 bc	0 c	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
6	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	B	12.6 a	50 a-d	0 a	4 a	1 bc	0 c	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
7	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	12.6 a	51 a-d	0 a	2 a	3 ab	3 ab	0 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
8	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	12.5 a	56 ab	0 a	5 a	4 a	3 ab	0 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
9	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	12.7 a	48 bcd	0 a	0 a	3 ab	5 a	0 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
10	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	12.6 a	58 a	0 a	4 a	3 ab	2 bc	0 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B							
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
11	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	12.5 a	52 a-d	0 a	4 a	4 a	4 ab	0 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B							
	RUMBLE	1.88	EC	0.376	lb ai/a	1.6	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
12	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	12.6 a	47 cd	0 a	0 a	3 ab	5 a	0 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B							
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
13	NO PRE HERBICIDE									12.7 a	44 d			1 bc	0 c	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=2,4,9,10,11,12,13,14,15

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval									GLXMA 10-25-13 Moisture Percent	GLXMA 10-25-13 Yield bu/A	GLXMA 6-23-13 Injury Percent 7 DA-B	GLXMA 6-30-13 Injury Percent -1 DA-C 14 DA-B	GLXMA 7-8-13 Injury Percent 22 DA-B 7 DA-C	GLXMA 7-15-13 Injury Percent 29 DA-B 14 DA-C	GLXMA 7-31-13 Injury Percent 30 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
14	NONTREATED									13.0 a	5 e	0	0 a	0 c	0 c	0 a
LSD (P=.05)										0.29	9.2	0.0	5.6	2.2	2.8	0.0
Standard Deviation										0.13	4.2	0.0	2.5	1.0	1.3	0.0
CV										1.05	8.78	0.0	94.98	39.24	51.79	0.0
Replicate F										0.082	2.985	0.000	0.151	0.853	2.653	0.000
Replicate Prob(F)										0.7792	0.1096	1.0000	0.7054	0.3725	0.1274	1.0000
Treatment F										1.878	19.549	0.000	1.303	3.247	4.791	0.000
Treatment Prob(F)										0.1422	0.0001	1.0000	0.3420	0.0213	0.0040	1.0000

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 6-30-13 Control Percent -1 DA-C 14 DA-B	SETFA 7-8-13 Control Percent 22 DA-B 7 DA-C	SETFA 7-15-13 Control Percent 29 DA-B 14 DA-C	SETFA 7-31-13 Control Percent 30 DA-C	SETFA 8-15-13 Control Percent 60 DA-B	SETFA 10-9-13 Control Percent At Harvest
1	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	B	99 a	98 a	98 ab	98 a	94 ab	94 abc
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
2	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	95 b	95 a	98 ab	97 a	95 ab	94 abc
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
3	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	99 a	97 a	97 abc	96 a	93 ab	90 cd
	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
4	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	80 d	55 b	94 c	86 b	93 ab	88 d
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
5	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	B	99 a	99 a	99 ab	98 a	96 a	96 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
6	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	B	99 a	99 a	99 ab	97 a	96 a	94 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
7	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	99 a	99 a	99 a	95 a	96 a	94 abc
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
8	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	95 ab	92 a	99 ab	97 a	96 a	96 ab
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
9	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	90 c	75 ab	95 bc	94 a	93 ab	93 bc
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
10	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	99 a	95 a	98 ab	97 a	96 a	97 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
11	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	99 a	92 a	98 ab	96 a	96 a	95 ab
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	RUMBLE	1.88	EC	0.376	lb ai/a	1.6	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
12	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	99 a	55 b	96 abc	95 a	90 b	90 cd
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
13	NO PRE HERBICIDE										85 ab	98 ab	95 a	96 a	95 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code									SETFA	SETFA	SETFA	SETFA	SETFA	SETFA
Crop Code														
Rating Date									6-30-13	7-8-13	7-15-13	7-31-13	8-15-13	10-9-13
Rating Type									Control	Control	Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing									-1 DA-C	22 DA-B	29 DA-B			
Trt-Eval Interval									14 DA-B	7 DA-C	14 DA-C	30 DA-C	60 DA-B	At Harvest
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
14	NONTREATED									0 e	0 c	0 d	0 c	0 c	0 e
LSD (P=.05)										4.3	35.8	3.9	4.2	5.0	4.5
Standard Deviation										1.9	16.6	1.8	2.0	2.3	2.1
CV										2.18	20.45	1.99	2.21	2.67	2.39
Replicate F										0.833	0.088	0.099	1.341	0.322	11.430
Replicate Prob(F)										0.3828	0.7717	0.7579	0.2677	0.5803	0.0049
Treatment F										395.302	5.642	418.700	342.054	234.494	294.272
Treatment Prob(F)										0.0001	0.0019	0.0001	0.0001	0.0001	0.0001

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 6-30-13 Control Percent -1 DA-C 14 DA-B	AMBTR 7-8-13 Control Percent 22 DA-B 7 DA-C	AMBTR 7-15-13 Control Percent 29 DA-B 14 DA-C	AMBTR 7-31-13 Control Percent 30 DA-C	AMBTR 8-15-13 Control Percent 60 DA-B	AMBTR 10-9-13 Control Percent At Harvest
1	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	B	45 bcd	98 a	97 ab	98 a	93 ab	93 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
2	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	75 ab	99 a	99 a	99 a	99 a	98 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
3	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	60 abc	97 a	96 b	93 b	83 b	73 b
	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
4	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	50 bcd	99 a	99 a	98 a	98 a	97 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
5	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	B	70 ab	99 a	97 ab	97 ab	94 ab	94 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
6	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	B	95 a	98 a	98 ab	98 a	97 a	96 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
7	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	15 de	97 a	98 ab	98 a	98 a	95 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
8	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	50 bcd	89 ab	97 ab	98 ab	92 ab	91 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
9	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	50 bcd	79 b	97 ab	97 ab	95 a	93 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
10	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	45 bcd	97 a	98 ab	98 ab	98 a	98 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
11	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	40 bcd	99 a	98 ab	99 a	98 a	97 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	RUMBLE	1.88	EC	0.376	lb ai/a	1.6	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
12	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	25 cde	95 ab	98 ab	98 a	93 ab	90 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
13	NO PRE HERBICIDE										90 ab	98 ab	96 ab	90 ab	89 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code								AMBTR	AMBTR	AMBTR	AMBTR	AMBTR	AMBTR
Crop Code													
Rating Date								6-30-13	7-8-13	7-15-13	7-31-13	8-15-13	10-9-13
Rating Type								Control	Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing								-1 DA-C	22 DA-B	29 DA-B			
Trt-Eval Interval								14 DA-B	7 DA-C	14 DA-C	30 DA-C	60 DA-B	At Harvest
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
14	NONTREATED									0 e	0 c	0 c	0 c	0 c	0 c
LSD (P=.05)										35.4	17.2	2.1	4.5	11.8	11.1
Standard Deviation										15.7	7.9	1.0	2.1	5.5	5.2
CV										32.89	9.02	1.08	2.31	6.25	6.01
Replicate F										0.954	2.105	0.598	1.176	2.860	1.463
Replicate Prob(F)										0.3542	0.1705	0.4533	0.2979	0.1146	0.2480
Treatment F										5.102	21.354	1425.058	310.188	43.723	49.055
Treatment Prob(F)										0.0101	0.0001	0.0001	0.0001	0.0001	0.0001

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	XANST 6-30-13 Control Percent -1 DA-C 14 DA-B	XANST 7-8-13 Control Percent 22 DA-B 7 DA-C	XANST 7-15-13 Control Percent 29 DA-B 14 DA-C	XANST 7-31-13 Control Percent 30 DA-C	XANST 8-15-13 Control Percent 60 DA-B	XANST 10-9-13 Control Percent At Harvest
1	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	B	40 bcd	95 a	97 ab	98 a	99 a	99 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
2	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	65 a	97 a	98 ab	98 a	96 a	95 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
3	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	50 abc	88 ab	94 b	94 ab	98 a	97 a
	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
4	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	20 def	99 a	99 a	98 a	98 a	96 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
5	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	B	55 ab	87 ab	97 ab	95 ab	94 a	89 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
6	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	B	68 a	85 ab	97 ab	96 ab	95 a	94 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
7	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	10 ef	95 a	98 ab	96 ab	99 a	89 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
8	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	30 cde	97 a	99 ab	96 ab	98 a	89 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
9	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	40 bcd	92 ab	94 ab	93 ab	90 ab	85 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
10	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	30 cde	97 a	98 ab	98 a	99 a	97 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
11	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	30 cde	97 a	98 ab	97 ab	97 a	96 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	RUMBLE	1.88	EC	0.376	lb ai/a	1.6	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
12	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	30 cde	93 ab	97 ab	96 ab	96 a	93 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
13	NO PRE HERBICIDE										75 b	94 ab	91 b	72 b	65 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code									XANST	XANST	XANST	XANST	XANST	XANST
Crop Code														
Rating Date									6-30-13	7-8-13	7-15-13	7-31-13	8-15-13	10-9-13
Rating Type									Control	Control	Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing									-1 DA-C	22 DA-B	29 DA-B			
Trt-Eval Interval									14 DA-B	7 DA-C	14 DA-C	30 DA-C	60 DA-B	At Harvest
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
14	NONTREATED									0 f	0 c	0 c	0 c	0 c	0 c
LSD (P=.05)										23.0	19.8	5.0	6.2	19.0	18.0
Standard Deviation										10.3	9.2	2.3	2.9	8.8	8.3
CV										28.7	10.77	2.59	3.25	10.04	9.89
Replicate F										0.442	3.062	0.060	0.069	2.069	6.435
Replicate Prob(F)										0.5211	0.1037	0.8110	0.7976	0.1739	0.0248
Treatment F										7.500	15.299	248.731	157.502	17.727	19.029
Treatment Prob(F)										0.0016	0.0001	0.0001	0.0001	0.0001	0.0001

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBEL 6-30-13 Control Percent -1 DA-C 14 DA-B	AMBEL 7-8-13 Control Percent 22 DA-B 7 DA-C	AMBEL 7-15-13 Control Percent 29 DA-B 14 DA-C	AMBEL 7-31-13 Control Percent 30 DA-C	AMBEL 8-15-13 Control Percent 60 DA-B	AMBEL 10-9-13 Control Percent At Harvest
1	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	B	97 a	98 a	98 ab	96 abc	97 ab	98 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
2	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	95 a	98 a	99 a	99 a	99 a	99 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
3	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	99 a	92 a	95 b	90 c	87 b	90 b
	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
4	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	99 a	98 a	99 a	98 a	99 a	99 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
5	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	B	99 a	92 a	99 a	96 abc	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
6	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	B	98 a	99 a	99 a	98 a	99 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
7	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	70 a	95 a	98 ab	98 a	98 a	98 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
8	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	25 b	97 a	99 a	98 a	97 ab	97 ab
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
9	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	25 b	80 b	99 a	97 abc	99 a	99 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
10	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	83 a	99 a	99 a	97 ab	99 a	99 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
11	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	90 a	97 a	99 a	98 a	99 a	99 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	RUMBLE	1.88	EC	0.376	lb ai/a	1.6	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
12	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	90 a	97 a	99 a	97 abc	99 a	99 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
13	NO PRE HERBICIDE										93 a	98 ab	91 bc	96 ab	95 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code								AMBEL	AMBEL	AMBEL	AMBEL	AMBEL	AMBEL
Crop Code													
Rating Date								6-30-13	7-8-13	7-15-13	7-31-13	8-15-13	10-9-13
Rating Type								Control	Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing								-1 DA-C	22 DA-B	29 DA-B			
Trt-Eval Interval								14 DA-B	7 DA-C	14 DA-C	30 DA-C	60 DA-B	At Harvest
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
14	NONTREATED									0 b	0 c	0 c	0 d	0 c	0 c
LSD (P=.05)										32.7	11.4	3.7	6.7	10.0	8.2
Standard Deviation										14.7	5.3	1.7	3.1	4.7	3.8
CV										19.72	5.98	1.88	3.45	5.15	4.21
Replicate F										0.011	2.726	2.716	0.636	1.032	0.554
Replicate Prob(F)										0.9171	0.1227	0.1233	0.4397	0.3282	0.4698
Treatment F										11.012	48.087	468.699	140.427	63.400	94.577
Treatment Prob(F)										0.0003	0.0001	0.0001	0.0001	0.0001	0.0001

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 6-30-13 Control Percent -1 DA-C 14 DA-B	AMATA 7-8-13 Control Percent 22 DA-B 7 DA-C	AMATA 7-15-13 Control Percent 29 DA-B 14 DA-C	AMATA 7-31-13 Control Percent 30 DA-C	AMATA 8-15-13 Control Percent 60 DA-B	AMATA 10-9-13 Control Percent At Harvest
1	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	B	99 a	99 a	99 a	98 a	97 a	97 ab
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
2	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	98 b	99 a	98 a	98 a	99 a	98 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
3	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	99 a	99 a	99 a	98 a	94 ab	90 ab
	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
4	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	99 a	99 a	99 a	99 a	99 a	97 ab
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
5	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	B	99 a	99 a	98 a	91 b	89 bc	88 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
6	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	B	99 a	99 a	99 a	96 a	95 ab	93 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
7	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	99 a	99 a	99 a	97 a	99 a	97 ab
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
8	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	99 a	99 a	99 a	99 a	98 a	95 ab
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
9	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	99 a	99 a	99 a	98 a	99 a	99 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
10	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	99 a	99 a	99 a	99 a	99 a	99 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
11	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	99 a	97 a	99 a	99 a	92 ab	95 ab
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	RUMBLE	1.88	EC	0.376	lb ai/a	1.6	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
12	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	99 a	97 a	99 a	99 a	99 a	99 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
13	NO PRE HERBICIDE										99 a	92 b	90 b	83 c	78 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code								AMATA	AMATA	AMATA	AMATA	AMATA	AMATA
Crop Code													
Rating Date								6-30-13	7-8-13	7-15-13	7-31-13	8-15-13	10-9-13
Rating Type								Control	Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing								-1 DA-C	22 DA-B	29 DA-B			
Trt-Eval Interval								14 DA-B	7 DA-C	14 DA-C	30 DA-C	60 DA-B	At Harvest
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
14	NONTREATED									0 c	0 b	0 c	0 c	0 d	0 d
LSD (P=.05)										1.0	2.2	1.7	3.3	8.0	9.7
Standard Deviation										0.4	1.0	0.8	1.5	3.7	4.5
CV										0.47	1.12	0.87	1.71	4.21	5.15
Replicate F										0.833	2.167	0.511	0.060	0.579	2.043
Replicate Prob(F)										0.3828	0.1648	0.4874	0.8100	0.4603	0.1765
Treatment F										8154.584	1319.969	2205.367	570.708	97.041	65.990
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Weed Control with MANA Soybean Programs.

Trial ID: 13-2A-E165-S Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: MANA.
2. Ratings: CI at 7, 14, and 30 DA-A and DA-B; WC at 14, 30, and 60 DA-A and DA-B, and at harvest.
3. Photos at 30 DA-A and DA-B and at harvest.
   Photos of CI, overall plot, and individual species weed control.
4. Yield.
5. Following the PPI application the first rainfall event, beginning 5 hours later, was 2.16 inch over 3 days.
   Following the PRE application the first rainfall event, beginning 1 hour later, was 1.97 inch over 2 days.
   Following the 2-4"W application the first rainfall event, beginning 7 hours later, was 2.0 inch over 2 days.
6. Missing data in some plots was due to standing water.
7. Harvested 10-25-13, (2) 30 inch rows by 53 ft.

MANA Postemergence Concepts in Soybean.

Trial ID: 13-2A-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-14-13
Completion Date: 10-26-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate crop tolerance and weed control from new MANA herbicides postemergence in soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 6-14-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 3 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 28 FT **Total Plot Length:** 28 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.5 **Texture:** SIL silt loam
pH: 6.7 **Soil Name:** Pierron
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	65	lb/A
K	262	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

MANA Postemergence Concepts in Soybean.

Trial ID: 13-2A-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	3.07	IN	RAIN	rain	4	DAY			
2.	5-5-13					7	DAY	46	80	F
3.	5-9-13	0.35	IN	RAIN	rain	2	DAY			
4.	5-12-13					7	DAY	39	92	F
5.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
6.	5-19-13					7	DAY	45	88	F
7.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
8.	5-26-13					7	DAY	56	86	F
9.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
10.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
11.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
12.	6-2-13					7	DAY	50	80	F
13.	6-9-13					7	DAY	59	94	F
14.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
15.	6-16-13					7	DAY	61	90	F
16.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
17.	6-23-13					7	DAY	64	92	F
18.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
19.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
20.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
21.	6-30-13					7	DAY	61	86	F
22.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
23.	7-7-13					7	DAY	62	94	F
24.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
25.	7-14-13					7	DAY	64	94	F
26.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
27.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
28.	7-21-13					7	DAY	56	91	F
29.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
30.	7-28-13					7	DAY	52	87	F
31.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
32.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
33.	8-4-13					7	DAY	62	87	F
34.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
35.	8-11-13					7	DAY	54	85	F
36.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
37.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
38.	8-18-13					7	DAY	61	91	F
39.	8-25-13					7	DAY	62	100	F
40.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
41.	9-1-13					7	DAY	57	92	F
42.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

MANA Postemergence Concepts in Soybean.

Trial ID: 13-2A-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Description

	A
Application Date:	7-17-13
Appl. Start Time:	13:30
Appl. Stop Time:	14:00
Application Method:	Spray
Application Timing:	POST
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	92 F
% Relative Humidity:	54
Wind Velocity, Unit:	1 MPH
Wind Direction:	E
Dew Presence (Y/N):	N
Soil Temperature, Unit:	80 F
Soil Moisture:	NORMAL
% Cloud Cover:	70
Next Moisture Occurred On:	7-20-13
Time to Next Moisture, Unit:	3 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	V5
Stage Minimum, Percent:	V4
Stage Maximum, Percent:	V5
Height, Unit:	14 IN
Height Minimum, Maximum:	12 14

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	SETFA W
Stage Majority, Percent:	6
Stage Minimum, Percent:	2
Stage Maximum, Percent:	10
Height, Unit:	5 IN
Height Minimum, Maximum:	3 12
Density, Unit:	0.5 FT2
Pest 2 Code, Type, Scale:	AMBTR W
Stage Majority, Percent:	8
Stage Minimum, Percent:	6
Stage Maximum, Percent:	10
Height, Unit:	4 IN
Height Minimum, Maximum:	2 5
Density, Unit:	0.01 FT2
Pest 3 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	8
Stage Minimum, Percent:	4
Stage Maximum, Percent:	30
Height, Unit:	4 IN
Height Minimum, Maximum:	1 10
Density, Unit:	0.1 FT2

MANA Postemergence Concepts in Soybean.

Trial ID: 13-2A-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

MANA Postemergence Concepts in Soybean.

Trial ID: 13-2A-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-26-13 Moisture Percent	GLXMA 10-26-13 Yield bu/A	GLXMA 7-24-13 Injury Percent 7 DA-A	GLXMA 7-31-13 Injury Percent 14 DA-A	GLXMA 8-16-13 Injury Percent 30 DA-A	GLXMA 9-15-13 Injury Percent 60 DA-A
1	RUMBLE	1.88	EC	0.235	lb ai/a	1	pt/a	POST	A	11.7 a	58 a	9 de	7 cd	3 cde	2 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
2	RUMBLE	1.88	EC	0.376	lb ai/a	1.6	pt/a	POST	A	11.7 a	53 a	12 bc	9 bc	4 bcd	1 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
3	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	POST	A	11.6 a	56 a	10 cd	7 cd	1 de	1 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
4	FLEXSTAR	1.88	EC	0.376	lb ai/a	1.6	pt/a	POST	A	11.8 a	55 a	12 bc	9 bc	5 bc	2 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
5	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	POST	A	11.8 a	52 a	14 b	11 b	6 b	5 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
6	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST	A	11.6 a	55 a	8 e	7 cd	4 bcd	2 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
7	SEE COMMENT #6														
	PUMMEL	100	SL	1.57	lb ai/a	1.5	pt/a	POST	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
8	PUMMEL	100	SL	2.09	lb ai/a	2	pt/a	POST	A	11.8 a	56 a	2 g	1 f	0 e	0 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
9	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	POST	A	11.7 a	54 a	6 f	5 de	1 e	1 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
10	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	POST	A	11.7 a	54 a	5 f	4 e	1 de	0 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
11	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	POST	A	11.6 a	56 a	1 gh	0 f	0 e	0 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
12	EXTREME	2.17	SL	0.71	lb ai/a	42	fl oz/a	POST	A	11.7 a	57 a	2 gh	0 f	0 e	0 b
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

MANA Postemergence Concepts in Soybean.

Trial ID: 13-2A-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-26-13 Moisture Percent	GLXMA 10-26-13 Yield bu/A	GLXMA 7-24-13 Injury Percent 7 DA-A	GLXMA 7-31-13 Injury Percent 14 DA-A	GLXMA 8-16-13 Injury Percent 30 DA-A	GLXMA 9-15-13 Injury Percent 60 DA-A
	Pest Code														
	Crop Code														
	Rating Date														
	Rating Type														
	Rating Unit														
	Rating Timing														
	Trt-Eval Interval														
13	WARRANT	3	CS	0.84	lb ai/a	2.25	pt/a	POST	A	11.7 a	55 a	1 gh	1 f	0 e	0 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
14	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	POST	A	11.7 a	54 a	19 a	16 a	9 a	5 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A	11.8 a	56 a	0 h	0 f	0 e	0 b
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A						
16	NONTREATED									11.8 a	42 a	0 h	0 f	0 e	0 b
	LSD (P=.05)									0.23	8.0	2.0	2.3	2.7	2.2
	Standard Deviation									0.16	5.6	1.4	1.6	1.9	1.5
	CV									1.39	10.26	21.0	31.1	89.55	135.11
	Replicate F									0.937	2.687	0.806	1.168	2.683	3.171
	Replicate Prob(F)									0.4315	0.0586	0.4976	0.3333	0.0589	0.0340
	Treatment F									0.682	1.769	72.474	36.956	7.724	4.611
	Treatment Prob(F)									0.7780	0.0772	0.0001	0.0001	0.0001	0.0001

MANA Postemergence Concepts in Soybean.

Trial ID: 13-2A-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 7-31-13 Control Percent 14 DA-A	SETFA 8-16-13 Control Percent 30 DA-A	SETFA 9-15-13 Control Percent 60 DA-A	SETFA 10-9-13 Control Percent At Harvest
1	RUMBLE	1.88	EC	0.235	lb ai/a	1	pt/a	POST	A	99 a	99 a	99 ab	99 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
2	RUMBLE	1.88	EC	0.376	lb ai/a	1.6	pt/a	POST	A	99 a	98 a	99 ab	99 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
3	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	POST	A	99 a	98 a	98 abc	98 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
4	FLEXSTAR	1.88	EC	0.376	lb ai/a	1.6	pt/a	POST	A	99 a	97 a	98 bcd	98 cd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
5	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	POST	A	99 a	99 a	99 ab	99 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
6	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
7	SEE COMMENT #6												
	PUMMEL	100	SL	1.57	lb ai/a	1.5	pt/a	POST	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
8	PUMMEL	100	SL	2.09	lb ai/a	2	pt/a	POST	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
9	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	POST	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
10	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	POST	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
11	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	POST	A	99 a	99 a	99 ab	99 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
12	EXTREME	2.17	SL	0.71	lb ai/a	42	fl oz/a	POST	A	99 a	99 a	99 ab	99 ab
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				

MANA Postemergence Concepts in Soybean.

Trial ID: 13-2A-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 7-31-13 Control Percent 14 DA-A	SETFA 8-16-13 Control Percent 30 DA-A	SETFA 9-15-13 Control Percent 60 DA-A	SETFA 10-9-13 Control Percent At Harvest
13	WARRANT	3	CS	0.84	lb ai/a	2.25	pt/a	POST	A	99 a	98 a	98 abc	98 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
14	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	POST	A	99 a	96 a	97 d	97 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A	99 a	97 a	97 cd	97 d
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
16	NONTREATED									59 b	59 b	0 e	0 e
LSD (P=.05)										6.1	6.4	1.0	1.0
Standard Deviation										4.3	4.5	0.7	0.7
CV										4.45	4.66	0.8	0.73
Replicate F										0.916	0.363	4.125	5.091
Replicate Prob(F)										0.4415	0.7801	0.0119	0.0043
Treatment F										23.487	21.029	4830.750	5678.455
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

MANA Postemergence Concepts in Soybean.

Trial ID: 13-2A-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 7-31-13 Control Percent 14 DA-A	AMBTR 8-16-13 Control Percent 30 DA-A	AMBTR 9-15-13 Control Percent 60 DA-A	AMBTR 10-9-13 Control Percent At Harvest
1	RUMBLE	1.88	EC	0.235	lb ai/a	1	pt/a	POST	A	99 ab	98 a	98 ab	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
2	RUMBLE	1.88	EC	0.376	lb ai/a	1.6	pt/a	POST	A	99 a	99 a	99 ab	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
3	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	POST	A	99 ab	98 a	98 ab	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
4	FLEXSTAR	1.88	EC	0.376	lb ai/a	1.6	pt/a	POST	A	99 a	99 a	99 ab	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
5	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	POST	A	99 ab	99 a	99 ab	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
6	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST	A	99 a	99 a	99 ab	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
7	SEE COMMENT #6												
	PUMMEL	100	SL	1.57	lb ai/a	1.5	pt/a	POST	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
8	PUMMEL	100	SL	2.09	lb ai/a	2	pt/a	POST	A	98 ab	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
9	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	POST	A	99 a	99 a	99 ab	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
10	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	POST	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
11	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	POST	A	95 b	97 a	98 bc	98 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
12	EXTREME	2.17	SL	0.71	lb ai/a	42	fl oz/a	POST	A	97 ab	98 a	98 ab	98 abc
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				

MANA Postemergence Concepts in Soybean.

Trial ID: 13-2A-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 7-31-13 Control Percent 14 DA-A	AMBTR 8-16-13 Control Percent 30 DA-A	AMBTR 9-15-13 Control Percent 60 DA-A	AMBTR 10-9-13 Control Percent At Harvest
13	WARRANT	3	CS	0.84	lb ai/a	2.25	pt/a	POST	A	98 ab	97 a	98 ab	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
14	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	POST	A	96 ab	96 a	96 d	97 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A	97 ab	97 a	97 cd	97 c
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
16	NONTREATED									65 c	65 b	0 e	0 d
LSD (P=.05)										4.2	4.2	1.3	1.3
Standard Deviation										2.9	2.9	0.9	0.9
CV										3.05	3.05	0.96	1.01
Replicate F										1.336	0.728	7.260	5.368
Replicate Prob(F)										0.2754	0.5409	0.0005	0.0032
Treatment F										34.759	34.412	3339.670	3026.776
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

MANA Postemergence Concepts in Soybean.

Trial ID: 13-2A-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 7-31-13 Control Percent 14 DA-A	AMATA 8-16-13 Control Percent 30 DA-A	AMATA 9-15-13 Control Percent 60 DA-A	AMATA 10-9-13 Control Percent At Harvest
1	RUMBLE	1.88	EC	0.235	lb ai/a	1	pt/a	POST	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
2	RUMBLE	1.88	EC	0.376	lb ai/a	1.6	pt/a	POST	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
3	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	POST	A	99 a	98 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
4	FLEXSTAR	1.88	EC	0.376	lb ai/a	1.6	pt/a	POST	A	99 a	99 a	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
5	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	POST	A	99 a	99 a	99 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
6	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
7	SEE COMMENT #6												
	PUMMEL	100	SL	1.57	lb ai/a	1.5	pt/a	POST	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
8	PUMMEL	100	SL	2.09	lb ai/a	2	pt/a	POST	A	98 a	97 a	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
9	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	POST	A	99 a	99 a	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
10	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	POST	A	99 a	99 a	99 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
11	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	POST	A	97 a	97 a	98 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
12	EXTREME	2.17	SL	0.71	lb ai/a	42	fl oz/a	POST	A	97 a	97 a	97 ab	98 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				

MANA Postemergence Concepts in Soybean.

Trial ID: 13-2A-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA	AMATA	AMATA	AMATA
	Pest Code									AMATA	AMATA	AMATA	AMATA
	Crop Code												
	Rating Date									7-31-13	8-16-13	9-15-13	10-9-13
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									14 DA-A	30 DA-A	60 DA-A	At Harvest
13	WARRANT	3	CS	0.84	lb ai/a	2.25	pt/a	POST	A	98 a	97 a	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
14	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	POST	A	98 a	95 a	95 b	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A	99 a	98 a	98 a	99 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
16	NONTREATED									60 b	60 b	0 c	0 b
	LSD (P=.05)									4.7	4.7	2.2	1.7
	Standard Deviation									3.3	3.3	1.5	1.2
	CV									3.43	3.47	1.66	1.3
	Replicate F									0.558	1.517	0.799	0.799
	Replicate Prob(F)									0.6460	0.2241	0.5015	0.5016
	Treatment F									36.662	35.476	1110.080	1801.658
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Southern Illinois University

MANA Postemergence Concepts in Soybean.

Trial ID: 13-2A-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: MANA.
2. Ratings: CI at 7, 14, and 30 DA-A; WC at 14, 30, and 60 DA-A, and at harvest.
3. Photos requested of CI, weed pressure, overall plot and closeup.
   Photos at 30 DA-A and at harvest.
   POST application timing A is targeted for 4 inch weeds.
4. Blanket PRE application of Valor XLT (3 oz/A) was applied to all plots including the nontreated 7.5 ft wide on 6-15-13.
   Following the PRE application the first rainfall event, beginning 12 hours later, was 2.16 inch over 3 days.
   In the nontreated plots, non-zero weed control is due to the blanket PRE application.
5. Yield.
6. Missing data for treatment 7 was due to a mixing error.
7. Harvested 10-26-13, (2) 30 inch rows by 25 ft.

Southern Illinois University

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-14-13
Completion Date: 10-26-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate crop tolerance and weed control from new MANA herbicides applied preemergence in soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832
Description: RR2Y
Planting Date: 6-14-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant

Pest 3 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 4 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 5 Type: W **Code:** ABUTH Abutilon theophrasti Medik.
Common Name: velvetleaf

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 28 FT **Total Plot Length:** 28 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.5 **Texture:** SIL silt loam
pH: 6.7 **Soil Name:** Pierron
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	65	lb/A
K	262	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	3.07	IN	RAIN	rain	4	DAY			
2.	5-5-13					7	DAY	46	80	F
3.	5-9-13	0.35	IN	RAIN	rain	2	DAY			
4.	5-12-13					7	DAY	39	92	F
5.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
6.	5-19-13					7	DAY	45	88	F
7.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
8.	5-26-13					7	DAY	56	86	F
9.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
10.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
11.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
12.	6-2-13					7	DAY	50	80	F
13.	6-9-13					7	DAY	59	94	F
14.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
15.	6-16-13					7	DAY	61	90	F
16.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
17.	6-23-13					7	DAY	64	92	F
18.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
19.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
20.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
21.	6-30-13					7	DAY	61	86	F
22.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
23.	7-7-13					7	DAY	62	94	F
24.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
25.	7-14-13					7	DAY	64	94	F
26.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
27.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
28.	7-21-13					7	DAY	56	91	F
29.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
30.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
31.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
32.	8-4-13					7	DAY	62	87	F
33.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
34.	8-11-13					7	DAY	54	85	F
35.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
36.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
37.	8-18-13					7	DAY	61	91	F
38.	8-25-13					7	DAY	62	100	F
39.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
40.	9-1-13					7	DAY	57	92	F
41.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Description

	A	B
Application Date:	6-15-13	7-17-13
Appl. Start Time:	8:30	14:00
Appl. Stop Time:	9:15	14:30
Application Method:	Spray	Spray
Application Timing:	PRE	V5
Application Placement:	BROSOI	BROFOL
Applied By:	NTH	RJW
Air Temperature, Unit:	78 F	92 F
% Relative Humidity:	62	54
Wind Velocity, Unit:	6 MPH	1 MPH
Wind Direction:	SW	E
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	74 F	80 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	60	60
Next Moisture Occurred On:	6-15-13	7-20-13
Time to Next Moisture, Unit:	12 HR	3 DAY

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V5
Stage Minimum, Percent:		V4
Stage Maximum, Percent:		V5
Height, Unit:		14 IN
Height Minimum, Maximum:		12 14

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:	NA	10
Stage Minimum, Percent:		3
Stage Maximum, Percent:		20
Height, Unit:		8 IN
Height Minimum, Maximum:		4 18
Density, Unit:		1 FT2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	12
Stage Minimum, Percent:		10
Stage Maximum, Percent:		18
Height, Unit:		12 IN
Height Minimum, Maximum:		6 24
Density, Unit:		1 FT2
Pest 3 Code, Type, Scale:	AMATA W	AMATA W
Stage Majority, Percent:	NA	16
Stage Minimum, Percent:		6
Stage Maximum, Percent:		50
Height, Unit:		8 IN
Height Minimum, Maximum:		4 24
Density, Unit:		1 FT2
Pest 4 Code, Type, Scale:	IPOHE W	IPOHE W
Stage Majority, Percent:	NA	3
Stage Minimum, Percent:		COTY
Stage Maximum, Percent:		6
Height, Unit:		4 IN
Height Minimum, Maximum:		1 6
Density, Unit:		0.001 FT2
Pest 5 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	6
Stage Minimum, Percent:		4
Stage Maximum, Percent:		12
Height, Unit:		6 IN
Height Minimum, Maximum:		2 16
Density, Unit:		0.1 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-26-13 Moisture Percent	GLXMA 10-26-13 Yield bu/A	GLXMA 6-22-13 Injury Percent 7 DA-A	GLXMA 6-29-13 Injury Percent 14 DA-A	GLXMA 7-15-13 Injury Percent -2 DA-B 30 DA-A	GLXMA 8-14-13 Injury Percent 28 DA-B 60 DA-A
1	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	PRE	A	12.1 a	50 bcd	0 a	6 cde	0 d	0 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
2	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	12.0 a	56 ab	0 a	7 cd	0 d	0 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
3	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	A	12.1 a	49 bcd	0 a	5 def	0 d	0 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
4	BOUNDARY	6.5	EC	1.02	lb ai/a	20	fl oz/a	PRE	A	12.1 a	53 a-d	0 a	7 cd	0 d	0 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
5	MANA 25337	100	WG	3.2	oz/a	3.2	oz/a	PRE	A	12.1 a	52 a-d	0 a	3 efg	0 d	0 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
6	MANA 25337	100	WG	4.25	oz/a	4.25	oz/a	PRE	A	12.1 a	52 a-d	0 a	3 efg	5 c	1 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
7	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	PRE	A	11.9 a	52 a-d	0 a	5 def	0 d	0 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
8	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	A	12.1 a	54 abc	0 a	5 def	3 cd	1 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
9	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	PRE	A	12.1 a	53 a-d	0 a	6 cde	5 c	0 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
10	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	A	12.0 a	58 a	0 a	15 a	3 cd	0 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
11	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	PRE	A	12.1 a	50 bcd	0 a	8 bcd	7 c	1 bc
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
12	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	12.2 a	52 a-d	0 a	3 fgh	5 c	2 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
13	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	PRE	A	12.1 a	52 a-d	0 a	8 bc	0 d	0 c
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
14	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	12.2 a	53 a-d	0 a	7 cd	0 d	0 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=2,4,9,10,16,11,17,22,26,12,18,23,27,13,19,24,28,14,20,25,29

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval									GLXMA 10-26-13 Moisture Percent	GLXMA 10-26-13 Yield bu/A	GLXMA 6-22-13 Injury Percent 7 DA-A	GLXMA 6-29-13 Injury Percent 14 DA-A	GLXMA 7-15-13 Injury Percent -2 DA-B 30 DA-A	GLXMA 8-14-13 Injury Percent 28 DA-B 60 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
15	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	PRE	A	11.9 a	54 abc	0 a	1 gh	0 d	0 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
16	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	12.0 a	55 ab	0 a	9 bc	18 a	2 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
17	AUTHORITY ASSIST	4	SC	0.25	lb ai/a	8	fl oz/a	PRE	A	12.2 a	46 d	0 a	10 b	14 b	3 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
18	PARAZONE	3	SL	1.13	lb ai/a	48	fl oz/a	PRE	A	12.0 a	47 cd	0 a	6 cde	0 d	0 c
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
19	NO PRE HERBICIDE									12.0 a	55 ab				0 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B						
20	NONTREATED									12.2 a	8 e	0	0 h	0 d	0 c
LSD (P=.05)										0.33	7.7	0.0	3.2	4.3	1.9
Standard Deviation										0.23	5.5	0.0	2.2	3.0	1.3
CV										1.92	10.92	0.0	36.9	95.0	274.69
Replicate F										1.303	2.404	0.000	2.573	3.760	1.680
Replicate Prob(F)										0.2827	0.0773	1.0000	0.0679	0.0164	0.1815
Treatment F										0.564	13.982	0.000	9.226	11.847	1.841
Treatment Prob(F)										0.9158	0.0001	1.0000	0.0001	0.0001	0.0396

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval									SETFA 6-29-13 Control Percent 14 DA-A	SETFA 7-15-13 Control Percent -2 DA-B 30 DA-A	SETFA 8-14-13 Control Percent 28 DA-B 60 DA-A	SETFA 10-9-13 Control Percent At Harvest
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	PRE	A	99 a	96 ab	98 ab	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
2	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	99 a	97 a	98 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
3	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	A	99 a	95 abc	98 a	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
4	BOUNDARY	6.5	EC	1.02	lb ai/a	20	fl oz/a	PRE	A	99 a	88 bcd	98 ab	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
5	MANA 25337	100	WG	3.2	oz/a	3.2	oz/a	PRE	A	99 a	94 abc	98 a	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
6	MANA 25337	100	WG	4.25	oz/a	4.25	oz/a	PRE	A	98 ab	95 abc	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
7	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	PRE	A	99 a	96 ab	98 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
8	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	A	99 a	97 a	97 ab	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
9	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	PRE	A	93 bc	85 de	98 a	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
10	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	A	99 a	95 abc	97 ab	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
11	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	PRE	A	98 ab	93 a-d	98 ab	98 ab
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
12	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	99 a	88 cd	98 ab	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
13	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	PRE	A	93 bc	79 e	96 b	96 b
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
14	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	89 c	58 f	97 ab	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 6-29-13 Control Percent 14 DA-A	SETFA 7-15-13 Control Percent -2 DA-B 30 DA-A	SETFA 8-14-13 Control Percent 28 DA-B 60 DA-A	SETFA 10-9-13 Control Percent At Harvest
15	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	PRE	A	91 c	78 e	97 ab	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
16	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	99 a	93 abc	98 ab	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
17	AUTHORITY ASSIST	4	SC	0.25	lb ai/a	8	fl oz/a	PRE	A	99 a	93 abc	98 ab	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
18	PARAZONE	3	SL	1.13	lb ai/a	48	fl oz/a	PRE	A	75 d	58 f	97 ab	98 ab
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
19	NO PRE HERBICIDE											99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
20	NONTREATED									0 e	0 g	0 c	0 c
LSD (P=.05)										5.4	7.9	2.3	2.2
Standard Deviation										3.8	5.5	1.7	1.5
CV										4.15	6.65	1.78	1.66
Replicate F										0.835	5.035	0.420	0.550
Replicate Prob(F)										0.4813	0.0040	0.7391	0.6504
Treatment F										146.162	71.448	697.522	807.034
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval									AMBTR 6-29-13 Control Percent 14 DA-A	AMBTR 7-15-13 Control Percent -2 DA-B 30 DA-A	AMBTR 8-14-13 Control Percent 28 DA-B 60 DA-A	AMBTR 10-9-13 Control Percent At Harvest
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	PRE	A	75 a-e	89 ab	93 ab	95 a-d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
2	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	90 ab	95 a	96 a	97 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
3	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	A	50 fgh	44 de	92 ab	92 a-d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
4	BOUNDARY	6.5	EC	1.02	lb ai/a	20	fl oz/a	PRE	A	50 fgh	40 def	88 b	91 cd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
5	MANA 25337	100	WG	3.2	oz/a	3.2	oz/a	PRE	A	80 a-e	80 abc	94 ab	97 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
6	MANA 25337	100	WG	4.25	oz/a	4.25	oz/a	PRE	A	85 a-d	84 abc	93 ab	97 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
7	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	PRE	A	70 b-f	63 cd	88 b	92 bcd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
8	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	A	73 a-e	80 abc	90 ab	97 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
9	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	PRE	A	88 abc	93 ab	95 ab	97 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
10	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	A	85 a-d	95 a	95 ab	96 a-d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
11	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	PRE	A	92 a	97 a	97 a	98 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
12	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	88 abc	91 ab	94 ab	96 a-d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
13	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	PRE	A	43 gh	36 ef	88 b	92 a-d
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
14	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	63 d-g	70 bc	92 ab	95 a-d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 6-29-13 Control Percent 14 DA-A	AMBTR 7-15-13 Control Percent -2 DA-B 30 DA-A	AMBTR 8-14-13 Control Percent 28 DA-B 60 DA-A	AMBTR 10-9-13 Control Percent At Harvest
15	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	PRE	A	63 efg	40 def	91 ab	94 a-d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
16	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	83 a-e	95 a	96 a	97 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
17	AUTHORITY ASSIST	4	SC	0.25	lb ai/a	8	fl oz/a	PRE	A	68 c-f	76 abc	92 ab	95 a-d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
18	PARAZONE	3	SL	1.13	lb ai/a	48	fl oz/a	PRE	A	35 h	20 fg	88 b	91 d
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
19	NO PRE HERBICIDE											97 a	96 a-d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
20	NONTREATED									0 i	0 g	0 c	0 e
	LSD (P=.05)									21.8	23.6	7.3	5.9
	Standard Deviation									15.3	16.5	5.2	4.2
	CV									22.67	24.41	5.88	4.62
	Replicate F									1.869	1.956	2.623	2.976
	Replicate Prob(F)									0.1478	0.1325	0.0600	0.0397
	Treatment F									9.405	12.444	65.387	104.957
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code									AMATA	AMATA	AMATA	AMATA
Crop Code												
Rating Date									6-29-13	7-15-13	8-14-13	10-9-13
Rating Type									Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent
Rating Timing										-2 DA-B	28 DA-B	
Trt-Eval Interval									14 DA-A	30 DA-A	60 DA-A	At Harvest
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	PRE	A	99 a	93 ab	95 c	92 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
2	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	98 a	98 a	98 ab	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
3	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	A	99 a	89 a-d	97 ab	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
4	BOUNDARY	6.5	EC	1.02	lb ai/a	20	fl oz/a	PRE	A	99 a	91 a-d	97 ab	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
5	MANA 25337	100	WG	3.2	oz/a	3.2	oz/a	PRE	A	99 a	83 a-e	98 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
6	MANA 25337	100	WG	4.25	oz/a	4.25	oz/a	PRE	A	97 a	82 a-e	98 ab	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
7	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	PRE	A	97 a	66 e	98 ab	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
8	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	A	99 a	71 cde	97 ab	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
9	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	PRE	A	96 a	79 a-e	97 ab	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
10	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	A	99 a	98 a	97 ab	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
11	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	PRE	A	99 a	99 a	98 a	99 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
12	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	94 a	76 b-e	98 ab	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
13	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	PRE	A	99 a	91 abc	98 ab	97 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
14	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	98 a	32 f	98 ab	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 6-29-13 Control Percent 14 DA-A	AMATA 7-15-13 Control Percent -2 DA-B 30 DA-A	AMATA 8-14-13 Control Percent 28 DA-B 60 DA-A	AMATA 10-9-13 Control Percent At Harvest
15	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	PRE	A	13 b	0 g	96 bc	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
16	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	99 a	88 a-d	98 ab	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
17	AUTHORITY ASSIST	4	SC	0.25	lb ai/a	8	fl oz/a	PRE	A	99 a	98 a	98 ab	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
18	PARAZONE	3	SL	1.13	lb ai/a	48	fl oz/a	PRE	A	97 a	70 de	97 abc	97 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
19	NO PRE HERBICIDE											98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
20	NONTREATED									0 c	0 g	0 d	0 c
LSD (P=.05)										9.6	21.1	2.1	3.3
Standard Deviation										6.7	14.7	1.5	2.4
CV										7.62	19.96	1.64	2.55
Replicate F										1.027	3.064	0.252	0.649
Replicate Prob(F)										0.3889	0.0364	0.8596	0.5873
Treatment F										74.457	17.056	825.828	342.683
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code									IPOHE	IPOHE	IPOHE	IPOHE
Crop Code												
Rating Date									6-29-13	7-15-13	8-14-13	10-9-13
Rating Type									Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent
Rating Timing										-2 DA-B	28 DA-B	
Trt-Eval Interval									14 DA-A	30 DA-A	60 DA-A	At Harvest
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	PRE	A	85 ab	60 de	98 a	96 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
2	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	87 ab	67 b-e	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
3	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	A	72 bc	48 ef	93 b	91 cde
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
4	BOUNDARY	6.5	EC	1.02	lb ai/a	20	fl oz/a	PRE	A	55 c	48 ef	95 ab	93 b-e
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
5	MANA 25337	100	WG	3.2	oz/a	3.2	oz/a	PRE	A	93 ab	70 bcd	97 a	97 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
6	MANA 25337	100	WG	4.25	oz/a	4.25	oz/a	PRE	A	94 ab	86 ab	96 ab	97 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
7	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	PRE	A	85 ab	72 bcd	96 ab	96 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
8	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	A	92 ab	82 abc	96 ab	97 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
9	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	PRE	A	88 ab	63 cde	96 ab	97 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
10	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	A	96 ab	94 a	96 ab	96 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
11	TORMENT	2.5	SL	0.234	lb ae/a	0.75	pt/a	PRE	A	99 a	99 a	98 a	98 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
12	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	97 a	96 a	96 ab	97 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
13	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	PRE	A	50 c	58 de	95 ab	95 a-d
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
14	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	93 ab	60 de	95 ab	96 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOHE 6-29-13 Control Percent 14 DA-A	IPOHE 7-15-13 Control Percent -2 DA-B 30 DA-A	IPOHE 8-14-13 Control Percent 28 DA-B 60 DA-A	IPOHE 10-9-13 Control Percent At Harvest
15	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	PRE	A	90 ab	82 abc	95 ab	97 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
16	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	99 a	99 a	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
17	AUTHORITY ASSIST	4	SC	0.25	lb ai/a	8	fl oz/a	PRE	A	99 a	99 a	98 a	97 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
18	PARAZONE	3	SL	1.13	lb ai/a	48	fl oz/a	PRE	A	15 d	30 f	95 ab	89 e
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
19	NO PRE HERBICIDE											94 ab	91 de
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5	B				
20	NONTREATED									0 d	0 g	0 c	0 f
	LSD (P=.05)									24.7	21.4	3.9	4.7
	Standard Deviation									17.3	15.0	2.8	3.3
	CV									22.07	21.69	3.03	3.69
	Replicate F									3.327	9.459	6.379	5.238
	Replicate Prob(F)									0.0272	0.0001	0.0009	0.0031
	Treatment F									10.979	12.130	243.124	165.256
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Southern Illinois University

MANA Preemergence Concepts in Soybeans.

Trial ID: 13-2A-W150 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1.Protocol: MANA.
2. Ratings: CI/WC at 7, 14, 30, 45, and 60 DA-A; CI 0 DA-B; WC at harvest.
3. Photos 30 DA-A, 0 DA-B, and at harvest.
Plot photos should include overall plot, closeup of individual weed species, and crop phyto (if observed).
4. Yield.
5. On 6-22-13 at 7 DA-A, not enough weed emergence to rate weed control.
On 6-29-13 at 14 DA-A missing crop injury data was due to reduced soybean emergence due to standing water in some plots.
Missing weed control data in some plots was due to standing water.
The planned 45 DA-A evaluation was missed due to a communications error.
6. Following the PRE application the first rainfall event, beginning 12 hours later, was 2.16 inch over 3 days.
7. Harvested 10-26-13, (2) 30 inch rows by 25 ft.

Southern Illinois University

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 11-1-12
Completion Date: 10-28-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the potential for soybean injury following wheat with DuPont herbicides.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: P25R62
Planting Date: 11-1-12
Planting Rate, Unit: 1.5 millionS/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN
Soil Temperature, Unit: 39 F
Soil Moisture: NORMAL
Seed Bed: FINE

Crop 2: GLXMA Glycine max Soybean
Variety: See comments
Planting Date: 6-28-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** STEME Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 2 Type: W **Code:** LAMAM Lamium amplexicaule L.
Common Name: henbit

Site and Design

Treated Plot Width: 10 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	BRSNN	2012

Maintenance

No.	Maintenance Product Name
1.	Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A
2.	Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 2.3 **Texture:** SIL silt loam
pH: 5.8 **Soil Name:** Winfield
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	56	lb/A
K	302	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	10-21-12					7	DAY	34	81	F
2.	10-22-12	0.68	IN	RAIN	rain	2	DAY			
3.	10-25-12	0.41	IN	RAIN	rain	2	DAY			
4.	10-28-12					7	DAY	33	61	F
5.	11-4-12					7	DAY	28	76	F
6.	11-5-12	0.09	IN	RAIN	rain	3	DAY			
7.	11-11-12	1.54	IN	RAIN	rain	2	DAY			
8.	11-11-12					7	DAY	25	67	F
9.	11-18-12					7	DAY	23	67	F
10.	11-22-12	0.23	IN	RAIN	rain	1	DAY			
11.	11-25-12					7	DAY	22	67	F
12.	12-2-12					7	DAY	31	71	F
13.	12-4-12	0.1	IN	RAIN	rain	1	DAY			
14.	12-9-12	0.18	IN	RAIN	rain	2	DAY			
15.	12-9-12					7	DAY	20	60	F
16.	12-15-12	0.44	IN	RAIN	rain	1	DAY			
17.	12-16-12					7	DAY	19	56	F
18.	12-20-12	5.07	IN	RAIN	rain	1	DAY			
19.	12-23-12					7	DAY	14	52	F
20.	12-28-12	0.26	IN	RAIN	rain	1	DAY			
21.	12-30-12					7	DAY	10	41	F
22.	12-31-12	0.11	IN	RAIN	rain	1	DAY			
23.	1-6-13					7	DAY	18	62	F
24.	1-10-13	0.72	IN	RAIN	rain	2	DAY			
25.	1-12-13	1.84	IN	RAIN	rain	2	DAY			
26.	1-13-13					7	DAY	16	64	F
27.	1-20-13					7	DAY	10	45	F
28.	1-27-13					7	DAY	7	67	F
29.	1-29-13	2.36	IN	RAIN	rain	3	DAY			
30.	2-3-13	0.2	IN	RAIN	rain	2	DAY			
31.	2-3-13					7	DAY	22	57	F
32.	2-7-13	0.13	IN	RAIN	rain	1	DAY			
33.	2-10-13	0.74	IN	RAIN	rain	2	DAY			
34.	2-10-13					7	DAY	21	58	F
35.	2-17-13					7	DAY	16	54	F
36.	2-18-13	0.12	IN	RAIN	rain	1	DAY			
37.	2-21-13	0.39	IN	RAIN	rain	2	DAY			
38.	2-24-13					7	DAY	17	49	F
39.	2-26-13	0.8	IN	RAIN	rain	3	DAY			
40.	3-3-13					7	DAY	19	66	F
41.	3-10-13	0.71	IN	RAIN	rain	2	DAY			
42.	3-10-13					7	DAY	25	68	F
43.	3-17-13	1.43	IN	RAIN	rain	3	DAY			
44.	3-17-13					7	DAY	19	53	F
45.	3-24-13	0.41	IN	RAIN	rain	1	DAY			
46.	3-24-13					7	DAY	22	60	F
47.	3-30-13	0.13	IN	RAIN	rain	1	DAY			
48.	3-31-13					7	DAY	27	71	F
49.	4-7-13					7	DAY	34	82	F
50.	4-10-13	1.4	IN	RAIN	rain	2	DAY			
51.	4-14-13					7	DAY	31	82	F
52.	4-16-13	1.05	IN	RAIN	rain	2	DAY			
53.	4-18-13	5.2	IN	RAIN	rain	1	DAY			
54.	4-21-13					7	DAY	35	72	F
55.	4-23-13	1.35	IN	RAIN	rain	2	DAY			
56.	4-27-13	0.3	IN	RAIN	rain	2	DAY			
57.	4-28-13					7	DAY	41	83	F
58.	5-3-13	3.07	IN	RAIN	rain	4	DAY			

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

59.	5-5-13					7	DAY	46	80	F
60.	5-9-13	0.35	IN	RAIN	rain	2	DAY			
61.	5-12-13					7	DAY	39	92	F
62.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
63.	5-19-13					7	DAY	45	88	F
64.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
65.	5-26-13					7	DAY	56	86	F
66.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
67.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
68.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
69.	6-2-13					7	DAY	50	80	F
70.	6-9-13					7	DAY	59	94	F
71.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
72.	6-16-13					7	DAY	61	90	F
73.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
74.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
75.	6-23-13					7	DAY	64	92	F
76.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
77.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
78.	6-30-13					7	DAY	61	86	F
79.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
80.	7-7-13					7	DAY	62	94	F
81.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
82.	7-14-13					7	DAY	64	94	F
83.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
84.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
85.	7-21-13					7	DAY	56	91	F
86.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
87.	7-28-13					7	DAY	52	87	F
88.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
89.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
90.	8-4-13					7	DAY	62	87	F
91.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
92.	8-11-13					7	DAY	54	85	F
93.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
94.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
95.	8-18-13					7	DAY	61	91	F

Application Description

	A	B	C	D
Application Date:	2-28-13	4-29-13	6-28-13	7-26-13
Appl. Start Time:	7:00	8:00	13:30	8:30
Appl. Stop Time:	8:00	8:30	14:00	9:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	120DBP	60DBP	PRE	POST
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	RFK	RFK	RJW	RJW
Air Temperature, Unit:	32 F	57 F	87 F	72 F
% Relative Humidity:	89	100	36	73
Wind Velocity, Unit:	8 MPH	3 MPH	9 MPH	4 MPH
Wind Direction:	W	S	W	S
Dew Presence (Y/N):	N	N	N	N
Soil Temperature, Unit:	37 F	55 F	78 F	75 F
Soil Moisture:	ABONOR	ABONOR	ABONOR	NORMAL
% Cloud Cover:	100	0	25	100
Next Moisture Occurred On:	3-10-13	5-2-13	6-29-13	7-26-13
Time to Next Moisture, Unit:	10 DAY	3 D	28 HR	6 HR

Southern Illinois University

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	TRZAW	TRZAW	TRZAW	TRZAW
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	F2	F6	NA	NA
Stage Minimum, Percent:	F2	F6		
Stage Maximum, Percent:	F2	F6		
Height, Unit:	3 IN	16 IN		
Height Minimum, Maximum:	1 3	12 16		
Crop 2 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	NA	V4
Stage Minimum, Percent:				V4
Stage Maximum, Percent:				V4
Height, Unit:				12 IN
Height Minimum, Maximum:				8 12

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	STEME W	STEME W	STEME W	STEME W
Stage Majority, Percent:	10+	10+	NA	NA
Stage Minimum, Percent:	10	10		
Stage Maximum, Percent:	10+	10+		
Height, Unit:	2 IN	4 IN		
Height Minimum, Maximum:	1 2	2 4		
Density, Unit:	0.001 FT2	0.01 FT2		
Pest 2 Code, Type, Scale:	LAMAM W	LAMAM W	LAMAM W	LAMAM W
Stage Majority, Percent:	10+	10+	NA	NA
Stage Minimum, Percent:	10	10		
Stage Maximum, Percent:	10+	10+		
Height, Unit:	2 IN	6 IN		
Height Minimum, Maximum:	1 2	4 8		
Density, Unit:	0.001 FT2	0.01 FT2		

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	TTI	XR
Nozzle Size:	8002	8002	11002	8002
Boom Length, Unit:	10 FT	10 FT	10 FT	10 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA AG3833 STS 10-28-13 Moisture Percent	GLXMA AG3832 10-28-13 Moisture Percent	GLXMA AG3833 STS 10-28-13 Test wt. lb/bu	GLXMA AG3832 10-28-13 Test wt. lb/bu
1	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	120DBP	A	10.4 a	10.0 a	57.2 a	57.5 a
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
2	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	10.6 a	10.2 a	56.7 a	57.1 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
3	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	120DBP	A	10.2 a	9.9 a	57.6 a	57.9 a
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
4	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	60DBP	B	10.2 a	9.9 a	57.3 a	57.6 a
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
5	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	10.1 a	9.8 a	57.6 a	57.9 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
6	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	60DBP	B	10.1 a	9.9 a	57.7 a	57.9 a
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
7	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	120DBP	A	10.4 a	10.0 a	57.2 a	57.6 a
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
8	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	10.0 a	9.8 a	57.7 a	58.0 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
9	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	120DBP	A	10.0 a	9.8 a	57.7 a	57.9 a
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
10	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	60DBP	B	10.1 a	9.8 a	57.6 a	57.9 a
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
11	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	10.1 a	9.9 a	57.5 a	57.7 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA AG3833 STS 10-28-13 Moisture Percent	GLXMA AG3832 10-28-13 Moisture Percent	GLXMA AG3833 STS 10-28-13 Test wt. lb/bu	GLXMA AG3832 10-28-13 Test wt. lb/bu
12	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	60DBP	B	10.0 a	9.9 a	57.8 a	57.9 a
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
13	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	10.0 a	9.9 a	57.8 a	57.9 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	AMS	100	SG	2	lb/a	2	lb/a	POST	D				
14	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	10.3 a	10.1 a	57.3 a	57.5 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	AMS	100	SG	2	lb/a	2	lb/a	POST	D				
15	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	10.1 a	9.9 a	57.4 a	57.7 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	AMS	100	SG	2	lb/a	2	lb/a	POST	D				
16	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	10.0 a	9.7 a	57.7 a	58.0 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	AMS	100	SG	2	lb/a	2	lb/a	POST	D				
17	NONTREATED									10.0 a	9.9 a	57.7 a	57.8 a
	LSD (P=.05)									0.45	0.39	0.83	0.82
	Standard Deviation									0.27	0.23	0.50	0.49
	CV									2.66	2.36	0.87	0.86
	Replicate F									7.186	1.318	4.457	1.016
	Replicate Prob(F)									0.0026	0.2818	0.0196	0.3733
	Treatment F									1.192	0.927	0.931	0.696
	Treatment Prob(F)									0.3254	0.5492	0.5454	0.7767

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA AG3833 STS 10-28-13 Yield bu/A	GLXMA AG3832 10-28-13 Yield bu/A	STEME 3-14-13 Control Percent 14 DA-A	STEME 3-28-13 Control Percent 28 DA-A	STEME 4-25-13 Control Percent 56 DA-A
1	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	120DBP	A	50 a	42 a	0 a	90 a	99 a
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
2	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	47 a	40 a			
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
3	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	120DBP	A	51 a	44 a			
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
4	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	60DBP	B	49 a	42 a			
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
5	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	53 a	43 a			
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
6	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	60DBP	B	49 a	40 a			
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
7	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	120DBP	A	49 a	37 a			
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
8	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	49 a	36 a			
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
9	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	120DBP	A	50 a	39 a			
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
10	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	60DBP	B	51 a	41 a			
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
11	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	48 a	38 a			
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code									GLXMA	GLXMA	STEME	STEME	STEME
Crop Code													
Crop Variety									AG3833 STS	AG3832			
Rating Date									10-28-13	10-28-13	3-14-13	3-28-13	4-25-13
Rating Type									Yield	Yield	Control	Control	Control
Rating Unit									bu/A	bu/A	Percent	Percent	Percent
Rating Timing													
Trt-Eval Interval											14 DA-A	28 DA-A	56 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
12	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	60DBP	B	51 a	36 a			
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
13	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	49 a	42 a			
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	AMS	100	SG	2	lb/a	2	lb/a	POST	D					
14	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	49 a	41 a			
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	AMS	100	SG	2	lb/a	2	lb/a	POST	D					
15	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	49 a	40 a			
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	AMS	100	SG	2	lb/a	2	lb/a	POST	D					
16	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	57 a	39 a			
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	AMS	100	SG	2	lb/a	2	lb/a	POST	D					
17	NONTREATED									55 a	41 a	0	0	0
LSD (P=.05)										6.3	6.9	0.0	0.0	0.0
Standard Deviation										3.8	4.2	0.0	0.0	0.0
CV										7.58	10.39	0.0	0.0	0.0
Replicate F										2.288	5.881	0.000	0.000	0.000
Replicate Prob(F)										0.1178	0.0067	1.0000	1.0000	1.0000
Treatment F										1.407	0.865	0.000	0.000	0.000
Treatment Prob(F)										0.2001	0.6100	1.0000	1.0000	1.0000

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code									LAMAM	LAMAM	LAMAM		
Crop Code												GLXMA	GLXMA
Crop Variety												AG3833 STS	AG3832
Rating Date									3-14-13	3-28-13	4-25-13	7-12-13	7-12-13
Rating Type									Control	Control	Control	Injury	Injury
Rating Unit									Percent	Percent	Percent	Percent	Percent
Rating Timing												14 DAP	14 DAP
Trt-Eval Interval									14 DA-A	28 DA-A	56 DA-A	14 DA-C	14 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	120DBP	A	0 a	90 a	99 a	0 a	0 a
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
2	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
3	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	120DBP	A				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
4	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	60DBP	B				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
5	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
6	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	60DBP	B				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
7	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	120DBP	A				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
8	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
9	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	120DBP	A				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
10	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	60DBP	B				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
11	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM 3-14-13 Control Percent 14 DA-A	LAMAM 3-28-13 Control Percent 28 DA-A	LAMAM 4-25-13 Control Percent 56 DA-A	GLXMA AG3833 STS 7-12-13 Injury Percent 14 DAP 14 DA-C	GLXMA AG3832 7-12-13 Injury Percent 14 DAP 14 DA-C
12	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	60DBP	B				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
13	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	AMS	100	SG	2	lb/a	2	lb/a	POST	D					
14	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	AMS	100	SG	2	lb/a	2	lb/a	POST	D					
15	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A					
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	AMS	100	SG	2	lb/a	2	lb/a	POST	D					
16	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B				0 a	0 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B					
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B					
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C					
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	AMS	100	SG	2	lb/a	2	lb/a	POST	D					
17	NONTREATED									0	0	0	0 a	0 a
LSD (P=.05)										0.0	0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA AG3833 STS 7-26-13 Injury Percent 28 DAP 0 DA-D	GLXMA AG3832 7-26-13 Injury Percent 28 DAP 0 DA-D	GLXMA AG3833 STS 8-2-13 Injury Percent 35 DA-C 7 DA-D	GLXMA AG3832 8-2-13 Injury Percent 35 DA-C 7 DA-D
1	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	120DBP	A	0 a	1 fg	0 a	1 f
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
2	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	0 a	2 efg	0 a	3 ef
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
3	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	120DBP	A	0 a	3 d-g	0 a	3 f
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
4	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	60DBP	B	0 a	7 cde	0 a	7 c-f
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
5	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	0 a	3 d-g	0 a	4 ef
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
6	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	60DBP	B	0 a	7 bcd	0 a	6 def
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
7	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	120DBP	A	0 a	8 bcd	0 a	10 b-e
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
8	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	0 a	6 def	0 a	7 c-f
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
9	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	120DBP	A	0 a	13 a	0 a	13 bc
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
10	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	60DBP	B	0 a	12 abc	0 a	11 bcd
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
11	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	0 a	13 a	0 a	13 bcd
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA AG3833 STS 7-26-13 Injury Percent 28 DAP 0 DA-D	GLXMA AG3832 7-26-13 Injury Percent 28 DAP 0 DA-D	GLXMA AG3833 STS 8-2-13 Injury Percent 35 DA-C 7 DA-D	GLXMA AG3832 8-2-13 Injury Percent 35 DA-C 7 DA-D
12	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	60DBP	B	0 a	15 a	0 a	15 b
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
13	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	0 a	2 efg	0 a	16 b
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	AMS	100	SG	2	lb/a	2	lb/a	POST	D				
14	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	0 a	1 fg	0 a	11 bcd
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	AMS	100	SG	2	lb/a	2	lb/a	POST	D				
15	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	0 a	12 ab	0 a	30 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	AMS	100	SG	2	lb/a	2	lb/a	POST	D				
16	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	0 a	17 a	1 a	36 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	AMS	100	SG	2	lb/a	2	lb/a	POST	D				
17	NONTREATED									0 a	0 g	0 a	0 f
LSD (P=.05)										0.0	5.1	0.7	7.0
Standard Deviation										0.0	3.0	0.4	4.2
CV										0.0	42.18	714.14	38.43
Replicate F										0.000	1.113	1.000	2.258
Replicate Prob(F)										1.0000	0.3409	0.3791	0.1209
Treatment F										0.000	10.004	1.000	15.717
Treatment Prob(F)										1.0000	0.0001	0.4807	0.0001

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA AG3833 STS 8-9-13 Injury Percent 42 DA-C 14 DA-D	GLXMA AG3832 8-9-13 Injury Percent 42 DA-C 14 DA-D	GLXMA AG3833 STS 8-23-13 Injury Percent 56 DA-C 28 DA-D	GLXMA AG3832 8-23-13 Injury Percent 56 DA-C 28 DA-D
1	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	120DBP	A	0 a	1 g	0 a	0 c
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
2	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	0 a	2 g	0 a	2 abc
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
3	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	120DBP	A	0 a	2 g	0 a	2 abc
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
4	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	60DBP	B	0 a	3 fg	0 a	1 bc
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
5	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	0 a	1 g	0 a	0 c
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
6	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	60DBP	B	0 a	4 efg	0 a	2 abc
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
7	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	120DBP	A	0 a	9 cde	0 a	3 ab
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
8	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	0 a	5 d-g	0 a	2 abc
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
9	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	120DBP	A	0 a	11 c	0 a	4 a
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
10	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	60DBP	B	0 a	10 cde	0 a	1 bc
	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
11	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	0 a	11 cd	0 a	4 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA AG3833 STS 8-9-13 Injury Percent 42 DA-C 14 DA-D	GLXMA AG3832 8-9-13 Injury Percent 42 DA-C 14 DA-D	GLXMA AG3833 STS 8-23-13 Injury Percent 56 DA-C 28 DA-D	GLXMA AG3832 8-23-13 Injury Percent 56 DA-C 28 DA-D
12	ALLY XP	60	WG	0.00375	lb ai/a	0.1	oz/a	60DBP	B	0 a	12 c	0 a	2 abc
	HARMONY EXTRA SG	50	SG	0.084	lb ai/a	2.7	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
13	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	0 a	12 c	0 a	2 abc
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	AMS	100	SG	2	lb/a	2	lb/a	POST	D				
14	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	0 a	8 c-f	0 a	3 ab
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	AMS	100	SG	2	lb/a	2	lb/a	POST	D				
15	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	120DBP	A	0 a	19 b	0 a	3 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	120DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	120DBP	A				
	AMS	100	SG	2	lb/a	2	lb/a	120DBP	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	AMS	100	SG	2	lb/a	2	lb/a	POST	D				
16	ALLY XP	60	WG	0.0025	lb ai/a	0.0667	oz/a	60DBP	B	0 a	27 a	0 a	4 a
	HARMONY EXTRA SG	50	SG	0.056	lb ai/a	1.8	oz/a	60DBP	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	60DBP	B				
	AMS	100	SG	2	lb/a	2	lb/a	60DBP	B				
	ENVIVE	41.3	WG	0.103	lb ai/a	4.00	oz/a	PRE	C				
	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	AMS	100	SG	2	lb/a	2	lb/a	POST	D				
17	NONTREATED									0 a	0 g	0 a	0 c
LSD (P=.05)										0.0	6.0	0.0	2.2
Standard Deviation										0.0	3.6	0.0	1.3
CV										0.0	44.39	0.0	66.21
Replicate F										0.000	3.122	0.000	0.867
Replicate Prob(F)										1.0000	0.0578	1.0000	0.4300
Treatment F										0.000	11.799	0.000	2.871
Treatment Prob(F)										1.0000	0.0001	1.0000	0.0054

Southern Illinois University

Potential for Soybean Injury from Metsulfuron Application in Wheat.

Trial ID: 13-23E-N140 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-13-227).
2. Ratings: WC trt 1 only, 0, 14, 28, and 56 DA-A.
   CI 14, 28, and 56 DAP and 7, 14 and 28 DA Classic application (soybean).
   Rate each soybean variety separately.
3. Following wheat harvest plant soybean.
   Rows 1 and 2 plant AG 3833 STS.
   Rows 3 and 4 plant AG 3832 non-STS.
4. Apply glyphosate POST on soybeans across entire plot as needed.
5. Soybean yield for each soybean variety.
6. Soybean injury was stunting.
7. Non-STS soybeans were shorter, had less pods overall and looked as if they would yield less.
   Harvested 10-28-13, (2) 30 inch rows by 27 ft per soybean variety.

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-26-13
Completion Date: 11-11-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the crop response and yield of soybean following three postemergence application timings of tank-mixtures with glyphosate under weed-free conditions.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG 4005 **BBCH Scale:** BSOY
Description: RR1
Planting Date: 5-26-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** NA
Common Name: crop tolerance only

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 25 FT **Total Plot Length:** 25 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 3 **Texture:** SIL silt loam
pH: 6.1 **Soil Name:** Winfield
CEC: 8

Additional Measured Elements

Element	Quantity	Unit
P1	52	lb/A
K	262	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-7-13					7	DAY	34	82	F
2.	4-10-13	1.4	IN	RAIN	rain	2	DAY			
3.	4-14-13					7	DAY	31	82	F
4.	4-16-13	1.05	IN	RAIN	rain	2	DAY			
5.	4-18-13	5.2	IN	RAIN	rain	1	DAY			
6.	4-21-13					7	DAY	35	72	F
7.	4-23-13	1.35	IN	RAIN	rain	2	DAY			
8.	4-27-13	0.3	IN	RAIN	rain	2	DAY			
9.	4-28-13					7	DAY	41	83	F
10.	5-3-13	3.07	IN	RAIN	rain	4	DAY			
11.	5-5-13					7	DAY	46	80	F
12.	5-9-13	0.35	IN	RAIN	rain	2	DAY			
13.	5-12-13					7	DAY	39	92	F
14.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
15.	5-19-13					7	DAY	45	88	F
16.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
17.	5-26-13					7	DAY	56	86	F
18.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
19.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
20.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
21.	6-2-13					7	DAY	50	80	F
22.	6-9-13					7	DAY	59	94	F
23.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
24.	6-16-13					7	DAY	61	90	F
25.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
26.	6-23-13					7	DAY	64	92	F
27.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
28.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
29.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
30.	6-30-13					7	DAY	61	86	F
31.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
32.	7-7-13					7	DAY	62	94	F
33.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
34.	7-14-13					7	DAY	64	94	F
35.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
36.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
37.	7-21-13					7	DAY	56	91	F
38.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
39.	7-28-13					7	DAY	52	87	F
40.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
41.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
42.	8-4-13					7	DAY	62	87	F
43.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
44.	8-11-13					7	DAY	54	85	F
45.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
46.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
47.	8-18-13					7	DAY	61	91	F
48.	8-25-13					7	DAY	62	100	F
49.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
50.	9-1-13					7	DAY	57	92	F
51.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Description

	A	B	C
Application Date:	6-22-13	7-5-13	7-14-13
Appl. Start Time:	6:15	9:30	7:15
Appl. Stop Time:	7:00	11:00	8:40
Application Method:	Spray	Spray	Spray
Application Timing:	V2-3	V5-6	R2
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	NTH	LXF	LXF
Air Temperature, Unit:	75 F	70 F	72 F
% Relative Humidity:	87	100	87
Wind Velocity, Unit:	2 MPH	1 MPH	1 MPH
Wind Direction:	S	W	E
Dew Presence (Y/N):	Y	Y	Y
Soil Temperature, Unit:	76 F	75 F	77 F
Soil Moisture:	NORMAL	ABONOR	NORMAL
% Cloud Cover:	50	100	5
Next Moisture Occurred On:	6-22-13	7-10-13	7-20-13
Time to Next Moisture, Unit:	9 HR	5 DAY	6 DAY

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	V3	V6	R2
Stage Minimum, Percent:	V2	V5	R2
Stage Maximum, Percent:	V3	V6	R2
Height, Unit:	8 IN	14 IN	18 IN
Height Minimum, Maximum:	6 8	12 14	16 20

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	NA W	NA W	NA W
Stage Majority, Percent:	NA	NA	NA

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-10-13 Height cm At Harvest	GLXMA 11-11-13 Moisture Percent	GLXMA 11-11-13 Test wt. lb/bu	GLXMA 11-11-13 Yield bu/A	GLXMA 11-11-13 200 Seed Wt gram
1	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	102.34 a-g	13.3 a	57.1 a	63 a-e	36.71 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
2	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	102.98 a-f	13.1 a	57.2 a	64 abc	37.26 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	93.98 i	13.2 a	56.9 a	57 c-l	35.39 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	100.97 a-h	13.2 a	57.1 a	55 f-l	34.75 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	97.16 e-i	13.0 a	57.1 a	57 c-l	34.59 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	96.31 f-i	12.9 a	57.2 a	55 h-l	35.70 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	101.49 a-g	13.1 a	57.2 a	64 abc	37.77 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	104.35 abc	13.0 a	57.2 a	61 a-i	36.55 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	103.51 a-e	13.3 a	57.2 a	57 c-l	35.40 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	102.45 a-g	13.1 a	57.2 a	54 i-l	36.04 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	100.65 a-i	12.9 a	57.3 a	57 c-l	35.24 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	97.47 d-i	12.7 a	57.5 a	60 a-i	36.08 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	101.71 a-g	13.2 a	57.1 a	57 c-l	34.75 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	102.98 a-f	13.2 a	57.2 a	61 a-i	35.55 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
15	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	101.49 a-g	13.3 a	57.1 a	67 a	35.93 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
16	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	103.08 a-e	13.0 a	57.4 a	67 ab	36.83 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-10-13 Height cm At Harvest	GLXMA 11-11-13 Moisture Percent	GLXMA 11-11-13 Test wt. lb/bu	GLXMA 11-11-13 Yield bu/A	GLXMA 11-11-13 200 Seed Wt gram
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	94.30 hi	13.0 a	57.2 a	56 d-l	35.79 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	98.21 b-i	13.1 a	57.3 a	57 c-l	36.73 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	97.90 c-i	13.3 a	56.9 a	62 a-h	36.44 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	97.79 c-i	13.3 a	57.1 a	56 d-l	35.60 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	99.59 a-i	13.1 a	57.3 a	56 d-l	35.91 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	97.68 c-i	13.2 a	57.0 a	57 c-l	34.98 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	99.91 a-i	13.0 a	57.2 a	60 a-i	36.48 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	101.39 a-g	13.2 a	57.0 a	52 kl	34.40 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	105.52 a	13.2 a	57.1 a	63 a-d	35.87 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	101.49 a-g	13.0 a	57.2 a	63 a-f	37.07 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	100.54 a-i	12.9 a	57.4 a	63 a-g	36.24 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	100.33 a-i	12.9 a	57.3 a	58 c-l	35.93 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
29	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	104.67 ab	13.0 a	57.3 a	61 a-i	36.34 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
30	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	104.78 ab	12.9 a	57.5 a	62 a-g	35.90 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	98.85 a-i	13.1 a	57.1 a	56 e-l	35.49 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	95.99 ghi	13.3 a	57.1 a	51 l	34.09 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-10-13 Height cm At Harvest	GLXMA 11-11-13 Moisture Percent	GLXMA 11-11-13 Test wt. lb/bu	GLXMA 11-11-13 Yield bu/A	GLXMA 11-11-13 200 Seed Wt gram
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	94.30 hi	13.0 a	57.3 a	55 g-l	34.95 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	101.18 a-g	13.1 a	57.3 a	58 c-l	35.54 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	99.17 a-i	13.2 a	57.1 a	62 a-g	36.48 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	103.72 a-e	13.3 a	57.2 a	64 abc	36.25 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	99.70 a-i	13.3 a	57.2 a	62 a-h	35.37 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	98.85 a-i	13.3 a	57.0 a	52 kl	35.09 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	103.93 a-d	13.5 a	56.8 a	67 a	37.89 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	100.97 a-h	13.3 a	56.9 a	60 a-j	35.94 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	104.14 a-d	13.0 a	57.2 a	58 c-l	35.51 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	99.06 a-i	13.1 a	57.0 a	53 jkl	34.78 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
43	NONTREATED									104.03 a-d	13.0 a	57.3 a	59 b-k	35.99 a
LSD (P=.05)										6.730	0.61	0.76	7.5	2.132
Standard Deviation										4.807	0.44	0.54	5.4	1.523
CV										4.78	3.33	0.95	9.06	4.25
Replicate F										34.778	1.248	1.294	25.520	15.633
Replicate Prob(F)										0.0001	0.2952	0.2793	0.0001	0.0001
Treatment F										1.570	0.529	0.332	2.348	1.239
Treatment Prob(F)										0.0294	0.9903	1.0000	0.0001	0.1832

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Injury Percent 4 DAT	GLXMA Injury Percent 7 DAT	GLXMA Injury Percent 14 DAT	GLXMA Injury Percent 28 DAT	GLXMA Injury Percent 56 DAT	GLXMA Injury Percent At Harvest
1	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 u	0 q	1 ij	0 f	0 b	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 u	0 q	0 j	0 f	0 b	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	20 fgh	23 b-e	14 bc	3 b-f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	22 efg	26 abc	17 ab	5 ab	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	25 bcd	30 a	18 a	5 ab	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	27 abc	29 a	18 a	6 a	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	11 n-q	14 jkl	7 ef	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	14 k-n	15 ijk	7 ef	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	15 j-m	16 h-k	11 cd	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	18 ghi	20 e-h	11 cd	2 c-f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	7 t	9 no	4 f-i	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	9 p-t	9 no	5 fgh	1 ef	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	9 p-t	9 no	4 f-i	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	11 n-r	10 lmn	5 fgh	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	0 u	0 q	0 j	0 f	0 b	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	0 u	0 q	0 j	0 f	0 b	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Injury Percent 4 DAT	GLXMA Injury Percent 7 DAT	GLXMA Injury Percent 14 DAT	GLXMA Injury Percent 28 DAT	GLXMA Injury Percent 56 DAT	GLXMA Injury Percent At Harvest
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	23 def	23 c-f	11 cd	3 a-e	1 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	23 cde	24 bcd	12 c	3 b-e	1 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	27 ab	27 ab	11 cd	5 ab	1 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	29 a	29 a	12 c	4 abc	2 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	13 k-o	13 klm	5 fgh	2 c-f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	18 hi	17 hij	6 efg	3 b-e	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	16 ijk	15 ijk	5 fgh	2 c-f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	19 fgh	18 ghi	6 efg	4 a-d	1 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	12 l-o	7 nop	3 g-j	1 def	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	14 k-n	9 no	3 g-j	1 def	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	12 m-p	9 no	3 g-j	2 c-f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	15 i-l	11 lmn	4 f-i	1 def	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 u	0 q	0 j	0 f	0 b	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 u	0 q	2 hij	0 f	0 b	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	17 hij	19 fgh	11 cd	2 c-f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	20 e-h	22 def	12 c	1 ef	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Injury Percent 4 DAT	GLXMA Injury Percent 7 DAT	GLXMA Injury Percent 14 DAT	GLXMA Injury Percent 28 DAT	GLXMA Injury Percent 56 DAT	GLXMA Injury Percent At Harvest
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	20 e-h	24 bcd	14 bc	2 c-f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	20 fgh	22 d-g	13 c	2 c-f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	7 st	6 op	6 efg	2 c-f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	8 q-t	8 nop	7 ef	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	10 o-s	9 mno	7 ef	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	11 n-q	11 lmn	8 de	2 c-f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	6 t	5 p	6 efg	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	8 rst	6 op	7 ef	1 ef	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	9 p-t	6 op	6 efg	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	11 n-q	8 nop	8 de	2 c-f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 u	0 q	0 j	0 f	0 b	0 a
LSD (P=.05)										3.4	3.8	3.3	2.6	0.8	0.0
Standard Deviation										2.4	2.7	2.3	1.8	0.6	0.0
CV										19.03	21.26	32.78	129.02	486.94	0.0
Replicate F										28.328	21.751	10.375	1.893	4.788	0.000
Replicate Prob(F)										0.0001	0.0001	0.0001	0.1341	0.0034	1.0000
Treatment F										45.340	45.166	18.322	3.026	1.684	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0144	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Stunt Percent 4 DAT	GLXMA Stunt Percent 7 DAT	GLXMA Stunt Percent 14 DAT	GLXMA Stunt Percent 28 DAT	GLXMA Stunt Percent 56 DAT	GLXMA Stunt Percent At Harvest
1	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 h	0 j	0 h	0 f	0 b	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 h	0 j	0 h	0 f	0 b	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	6 b-e	10 abc	8 bc	3 cde	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	3 e-h	10 ab	10 ab	5 abc	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	6 a-d	11 a	12 a	5 ab	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	8 abc	10 ab	11 a	6 a	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 h	2 g-j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 h	2 g-j	1 gh	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 h	3 e-j	4 def	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	3 d-g	5 d-h	7 cd	2 def	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 h	0 j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 h	0 j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 h	0 j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 h	0 j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	0 h	0 j	0 h	0 f	0 b	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	0 h	0 j	0 h	0 f	0 b	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Stunt Percent 4 DAT	GLXMA Stunt Percent 7 DAT	GLXMA Stunt Percent 14 DAT	GLXMA Stunt Percent 28 DAT	GLXMA Stunt Percent 56 DAT	GLXMA Stunt Percent At Harvest
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	5 c-g	6 c-f	4 def	3 bcd	1 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	6 c-f	7 b-e	4 def	2 def	1 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	9 ab	8 bcd	3 efg	2 def	1 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	9 a	10 abc	5 de	2 def	2 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	0 h	2 hij	1 fgh	1 def	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	3 fgh	4 d-i	1 gh	1 ef	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	3 fgh	3 f-j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	2 gh	4 e-j	1 fgh	1 def	1 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	0 h	0 j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	0 h	0 j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	0 h	0 j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	0 h	1 ij	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 h	0 j	0 h	0 f	0 b	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 h	0 j	0 h	0 f	0 b	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 h	3 e-j	1 fgh	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 h	3 f-j	3 e-h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Stunt Percent 4 DAT	GLXMA Stunt Percent 7 DAT	GLXMA Stunt Percent 14 DAT	GLXMA Stunt Percent 28 DAT	GLXMA Stunt Percent 56 DAT	GLXMA Stunt Percent At Harvest
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	0 h	5 d-g	4 def	1 def	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	0 h	2 g-j	2 e-h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	0 h	0 j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	0 h	0 j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	0 h	1 ij	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	0 h	1 ij	1 fgh	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 h	0 j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 h	0 j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 h	0 j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 h	0 j	0 h	0 f	0 b	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 h	0 j	0 h	0 f	0 b	0 a
LSD (P=.05)										3.2	3.6	3.0	2.3	0.8	0.0
Standard Deviation										2.3	2.6	2.2	1.6	0.6	0.0
CV										160.74	100.48	112.9	219.81	486.94	0.0
Replicate F										8.951	7.108	10.447	6.052	4.788	0.000
Replicate Prob(F)										0.0001	0.0002	0.0001	0.0007	0.0034	1.0000
Treatment F										5.372	7.154	8.649	3.177	1.684	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0144	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Chlorosis Percent 4 DAT	GLXMA Chlorosis Percent 7 DAT	GLXMA Chlorosis Percent 14 DAT	GLXMA Chlorosis Percent 28 DAT	GLXMA Chlorosis Percent 56 DAT	GLXMA Chlorosis Percent At Harvest
1	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 c	0 a	1 bcd	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 c	0 a	0 d	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	0 c	0 a	0 d	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	0 c	0 a	0 d	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Chlorosis Percent 4 DAT	GLXMA Chlorosis Percent 7 DAT	GLXMA Chlorosis Percent 14 DAT	GLXMA Chlorosis Percent 28 DAT	GLXMA Chlorosis Percent 56 DAT	GLXMA Chlorosis Percent At Harvest
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	2 b	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	1 bc	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	1 bc	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	1 bc	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	1 bc	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	3 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 c	0 a	0 d	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 c	0 a	2 ab	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 c	0 a	1 bcd	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Chlorosis Percent 4 DAT	GLXMA Chlorosis Percent 7 DAT	GLXMA Chlorosis Percent 14 DAT	GLXMA Chlorosis Percent 28 DAT	GLXMA Chlorosis Percent 56 DAT	GLXMA Chlorosis Percent At Harvest
	Pest Code														
	Crop Code									GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
	Rating Date														
	Rating Type									Chlorosis	Chlorosis	Chlorosis	Chlorosis	Chlorosis	Chlorosis
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing														
	Trt-Eval Interval									4 DAT	7 DAT	14 DAT	28 DAT	56 DAT	At Harvest
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	0 c	0 a	1 cd	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	0 c	0 a	1 abc	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	0 c	0 a	2 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	0 c	0 a	1 abc	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	0 c	0 a	1 abc	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 c	0 a	1 bcd	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 c	0 a	0 d	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 c	0 a	1 bc	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 c	0 a	0 d	0 a	0 a	0 a
	LSD (P=.05)									0.9	0.0	0.9	0.0	0.0	0.0
	Standard Deviation									0.6	0.0	0.6	0.0	0.0	0.0
	CV									365.67	0.0	245.53	0.0	0.0	0.0
	Replicate F									0.749	0.000	0.668	0.000	0.000	0.000
	Replicate Prob(F)									0.5246	1.0000	0.5732	1.0000	1.0000	1.0000
	Treatment F									2.716	0.000	2.670	0.000	0.000	0.000
	Treatment Prob(F)									0.0001	1.0000	0.0001	1.0000	1.0000	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Necrosis Percent 4 DAT	GLXMA Necrosis Percent 7 DAT	GLXMA Necrosis Percent 14 DAT	GLXMA Necrosis Percent 28 DAT	GLXMA Necrosis Percent 56 DAT	GLXMA Necrosis Percent At Harvest
1	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 q	0 r	0 i	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 q	0 r	0 i	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	14 hij	16 c-g	6 ef	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	19 cde	18 bc	7 cd	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	19 cde	20 b	6 ef	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	19 b-e	20 ab	6 cde	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	11 klm	12 ij	5 efg	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	14 hij	14 hi	6 ef	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	15 ghi	15 fgh	6 ef	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	15 f-i	16 d-h	5 efg	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	7 op	8 l-p	4 gh	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	9 no	9 l-o	4 gh	1 bc	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	9 no	9 l-o	4 gh	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	11 lmn	10 jkl	5 fg	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	0 q	0 r	0 i	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	0 q	0 r	0 i	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Necrosis Percent 4 DAT	GLXMA Necrosis Percent 7 DAT	GLXMA Necrosis Percent 14 DAT	GLXMA Necrosis Percent 28 DAT	GLXMA Necrosis Percent 56 DAT	GLXMA Necrosis Percent At Harvest
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	20 bcd	18 bcd	6 ef	1 abc	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	21 abc	19 bc	6 ef	1 bc	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	22 a	20 b	6 cde	3 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	21 ab	22 a	6 ef	2 ab	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	10 mn	9 k-n	3 h	2 ab	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	16 fgh	14 hi	3 h	1 abc	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	13 i-l	11 jk	3 h	1 bc	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	17 def	14 gh	3 h	2 ab	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	12 j-m	7 nop	3 h	1 bc	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	13 ijk	9 l-o	3 h	1 abc	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	11 klm	9 l-o	3 h	1 abc	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	14 hij	10 j-m	4 gh	1 bc	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 q	0 r	0 i	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 q	0 r	0 i	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	15 f-i	15 e-h	10 ab	2 ab	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	16 fg	17 cde	9 b	1 bc	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Necrosis Percent 4 DAT	GLXMA Necrosis Percent 7 DAT	GLXMA Necrosis Percent 14 DAT	GLXMA Necrosis Percent 28 DAT	GLXMA Necrosis Percent 56 DAT	GLXMA Necrosis Percent At Harvest
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	17 efg	17 c-f	10 ab	1 bc	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	17 ef	18 bc	11 a	2 ab	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	7 op	6 pq	5 efg	2 ab	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	8 op	7 opq	5 efg	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	7 op	7 nop	5 efg	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	9 no	8 m-p	6 cde	2 ab	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	6 p	5 q	6 ef	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	8 op	6 pq	6 de	1 bc	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	9 no	6 pq	6 cde	0 c	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	11 klm	8 l-p	7 c	2 ab	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 q	0 r	0 i	0 c	0 a	0 a
LSD (P=.05)										2.4	2.4	1.2	1.3	0.0	0.0
Standard Deviation										1.7	1.7	0.9	0.9	0.0	0.0
CV										15.54	16.78	19.31	144.25	0.0	0.0
Replicate F										24.875	11.327	0.376	0.661	0.000	0.000
Replicate Prob(F)										0.0001	0.0001	0.7703	0.5773	1.0000	1.0000
Treatment F										57.342	57.218	38.830	2.530	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date - May 1.

Trial ID: 13-NF-S-N120 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: ISA - Glyph_Tm_Eplant-SIU.
2. Trial is to be maintained weed-free for the duration of the study.
   Blanket PRE application of Dual Magnum (1.27 lbai/A) plus Firstrate (0.031 lbai/A) was applied on 5-26-13.
   Hand-weeded as needed.
   Ratings: CI (overall, stunting, chlorosis, necrosis) at 4, 7, 14, 28 and 56 DAT.
   CI/ stunting and plant heights at harvest.
3. Target planting date is May 1.
4. Yield is required. Measure weight of 200 seeds/plot.
5. DAT = Days after various postemergence applications
   Ratings at 4 days after the V2-3, V5-6, and R2 applications were on 6-26-13, 7-9-13, and 7-18-13, respectively.
   Ratings at 7 days after the V2-3, V5-6, and R2 applications were on 6-29-13, 7-12-13, and 7-21-13, respectively.
   Ratings at 14 days after the V2-3, V5-6, and R2 applications were on 7-6-13, 7-19-13, and 7-28-13, respectively.
   Ratings at 28 days after the V2-3, V5-6, and R2 applications were on 7-20-13, 8-2-13, and 8-11-13, respectively.
   Ratings at 56 days after the V2-3, V5-6, and R2 applications were on 8-17-13, 8-30-13, and 9-8-13, respectively.
6. Harvested 11-11-13, (2) 30 inch rows by 22 ft.

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-28-13
Completion Date: 11-13-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the crop response and yield of soybean following three postemergence application timings of tank-mixtures with glyphosate under weed-free conditions.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG 4005
Description: RR1
Planting Date: 6-28-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** NA
Common Name: crop tolerance only

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 25 FT **Total Plot Length:** 25 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 3 **Texture:** SIL silt loam
pH: 6.1 **Soil Name:** Winfield
CEC: 8

Additional Measured Elements

Element	Quantity	Unit
P1	52	lb/A
K	262	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
2.	6-2-13					7	DAY	50	80	F
3.	6-9-13					7	DAY	59	94	F
4.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
5.	6-16-13					7	DAY	61	90	F
6.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-23-13					7	DAY	64	92	F
9.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
10.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
11.	6-30-13					7	DAY	61	86	F
12.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
13.	7-7-13					7	DAY	62	94	F
14.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
15.	7-14-13					7	DAY	64	94	F
16.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
17.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
18.	7-21-13					7	DAY	56	91	F
19.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
20.	7-28-13					7	DAY	52	87	F
21.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
22.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
23.	8-4-13					7	DAY	62	87	F
24.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
25.	8-11-13					7	DAY	54	85	F
26.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
27.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
28.	8-18-13					7	DAY	61	91	F
29.	8-25-13					7	DAY	62	100	F
30.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
31.	9-1-13					7	DAY	57	92	F
32.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A	B	C
Application Date:	7-23-13	7-31-13	8-9-13
Appl. Start Time:	8:00	10:00	9:30
Appl. Stop Time:	9:00	11:20	10:30
Application Method:	Spray	Spray	Spray
Application Timing:	V2-3	V5-6	R2
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	LXF	LXF	RJW
Air Temperature, Unit:	82 F	75 F	75 F
% Relative Humidity:	74	94	90
Wind Velocity, Unit:	1 MPH	2 MPH	4 MPH
Wind Direction:	E	E	NE
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	81 F	75 F	75 F
Soil Moisture:	NORMAL	ABONOR	NORMAL
% Cloud Cover:	30	70	50
Next Moisture Occurred On:	7-30-13	8-2-13	8-12-13
Time to Next Moisture, Unit:	7 DAY	2 DAY	3 DAY

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	V3	V6	R2
Stage Minimum, Percent:	V2	V5	R2
Stage Maximum, Percent:	V3	V6	R2
Height, Unit:	12 IN	16 IN	22 IN
Height Minimum, Maximum:	10 12	15 16	18 22

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	NA W	NA W	NA W
Stage Majority, Percent:	NA	NA	NA

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 11-7-13 Height cm At Harvest	GLXMA 11-13-13 Moisture Percent	GLXMA 11-13-13 Test wt. lb/bu	GLXMA 11-13-13 Yield bu/A	GLXMA 11-13-13 200 Seed Wt gram
1	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	87.9 a-h	12.8 a	58.1 a	61 ab	34.69 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
2	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	87.7 a-h	12.8 a	58.1 a	54 c-j	35.35 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	84.6 e-k	12.6 a	58.1 a	55 c-j	32.24 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	85.5 c-k	12.4 a	58.3 a	58 a-f	35.03 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	81.4 j-m	12.4 a	58.4 a	53 e-j	32.45 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	80.8 klm	12.2 a	58.6 a	55 c-i	34.77 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	86.4 a-j	12.6 a	58.1 a	55 c-i	33.86 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	80.9 klm	12.4 a	58.4 a	55 c-j	34.42 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	85.9 b-k	12.5 a	58.4 a	57 a-g	34.64 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	85.1 c-k	12.7 a	58.1 a	55 a-i	34.93 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	83.0 h-l	12.4 a	58.4 a	57 a-g	33.61 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	89.8 abc	12.4 a	58.5 a	62 a	35.07 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	90.8 ab	12.7 a	58.2 a	61 ab	35.10 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	86.8 a-i	12.6 a	58.3 a	60 abc	35.46 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
15	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	85.7 b-k	12.5 a	58.4 a	59 a-e	33.79 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
16	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	88.7 a-f	12.6 a	58.3 a	54 c-j	32.66 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 11-7-13 Height cm At Harvest	GLXMA 11-13-13 Moisture Percent	GLXMA 11-13-13 Test wt. lb/bu	GLXMA 11-13-13 Yield bu/A	GLXMA 11-13-13 200 Seed Wt gram
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	78.2 lm	12.6 a	58.2 a	53 f-j	32.75 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	76.8 m	12.3 a	58.6 a	50 ij	32.39 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	83.4 g-k	12.4 a	58.5 a	54 d-j	34.22 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	82.2 i-l	12.5 a	58.3 a	53 d-j	32.76 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	87.3 a-i	12.7 a	58.1 a	54 d-j	32.61 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	86.1 a-j	12.4 a	58.4 a	55 b-i	32.22 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	85.7 b-k	12.4 a	58.4 a	56 a-i	34.80 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	85.2 c-k	12.6 a	58.3 a	53 e-j	34.98 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	88.4 a-g	12.3 a	58.5 a	57 a-g	35.15 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	84.0 f-k	12.7 a	58.2 a	53 d-j	32.62 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	86.4 a-j	12.5 a	58.5 a	56 a-h	34.84 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	85.0 c-k	12.8 a	58.0 a	53 d-j	33.07 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
29	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	89.7 a-e	12.4 a	58.5 a	59 a-d	34.57 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
30	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	86.5 a-j	12.5 a	58.3 a	56 a-i	34.09 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	87.2 a-i	12.5 a	58.4 a	56 a-i	35.05 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	83.3 g-k	12.7 a	58.3 a	49 j	33.60 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 11-7-13 Height cm At Harvest	GLXMA 11-13-13 Moisture Percent	GLXMA 11-13-13 Test wt. lb/bu	GLXMA 11-13-13 Yield bu/A	GLXMA 11-13-13 200 Seed Wt gram
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	83.0 h-l	12.4 a	58.4 a	51 hij	34.73 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	84.7 d-k	12.4 a	58.6 a	51 g-j	34.76 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	83.5 g-k	12.3 a	58.5 a	54 d-j	34.21 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	86.2 a-j	12.3 a	58.6 a	54 c-j	35.35 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	89.8 abc	12.9 a	58.0 a	58 a-f	35.81 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	84.8 c-k	12.6 a	58.3 a	57 a-g	35.90 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	89.8 a-d	12.8 a	58.1 a	57 a-g	36.06 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	88.3 a-g	12.5 a	58.3 a	55 c-j	35.09 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	87.5 a-h	12.3 a	58.5 a	55 c-j	33.96 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	88.3 a-g	12.4 a	58.4 a	56 a-i	35.90 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
43	NONTREATED									91.0 a	12.7 a	58.2 a	57 a-h	34.93 a
LSD (P=.05)										5.11	0.72	0.79	6.1	2.725
Standard Deviation										3.65	0.51	0.56	4.4	1.946
CV										4.26	4.09	0.97	7.86	5.68
Replicate F										29.240	0.881	0.800	27.427	23.760
Replicate Prob(F)										0.0001	0.4531	0.4958	0.0001	0.0001
Treatment F										3.004	0.425	0.378	1.741	1.318
Treatment Prob(F)										0.0001	0.9990	0.9997	0.0099	0.1233

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Injury Percent 4 DAT	GLXMA Injury Percent 7 DAT	GLXMA Injury Percent 14 DAT	GLXMA Injury Percent 28 DAT	GLXMA Injury Percent 56 DAT	GLXMA Injury Percent At Harvest
1	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	1 o	0 t	0 p	0 k	0 d	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	3 no	0 t	0 p	0 k	0 d	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	24 fgh	26 ef	19 bc	4 f-i	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	26 ef	28 de	18 c	5 efg	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	30 cd	34 ab	23 a	8 cd	1 bc	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	28 de	32 bc	21 b	6 ef	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	19 jk	17 k	12 fg	2 ijk	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	20 ijk	18 jk	13 ef	2 hij	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	21 hij	22 hi	14 ef	2 ijk	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	22 hi	22 hi	13 ef	2 h-k	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	9 m	6 m-p	5 l-o	0 k	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	9 m	7 mno	4 l-o	0 k	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	9 m	7 mn	5 l-o	0 k	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	10 m	7 m	5 l-o	0 k	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	1 o	1 st	0 p	0 k	0 d	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	1 o	4 o-s	0 p	0 k	0 d	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Injury Percent 4 DAT	GLXMA Injury Percent 7 DAT	GLXMA Injury Percent 14 DAT	GLXMA Injury Percent 28 DAT	GLXMA Injury Percent 56 DAT	GLXMA Injury Percent At Harvest
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	31 bc	30 cd	6 j-m	2 ijk	1 cd	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	33 ab	36 a	7 jkl	4 f-i	2 ab	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	34 a	35 a	8 hij	5 efg	1 bc	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	33 ab	36 a	8 hij	5 efg	3 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	23 gh	22 ghi	3 o	1 jk	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	23 fgh	24 fgh	4 no	0 k	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	23 gh	21 hij	4 no	0 k	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	25 efg	25 fg	3 o	1 jk	1 cd	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	15 l	14 l	3 o	0 k	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	18 k	17 k	3 o	0 k	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	19 jk	17 k	3 o	0 k	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	21 hij	20 ij	4 mno	0 k	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 o	0 t	0 p	0 k	0 d	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 o	0 t	0 p	0 k	0 d	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	26 ef	16 kl	17 cd	9 bcd	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	28 de	17 k	17 cd	10 abc	1 cd	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Injury Percent 4 DAT	GLXMA Injury Percent 7 DAT	GLXMA Injury Percent 14 DAT	GLXMA Injury Percent 28 DAT	GLXMA Injury Percent 56 DAT	GLXMA Injury Percent At Harvest
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	31 bc	22 hi	19 bc	11 ab	2 bc	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	29 cd	17 k	15 de	11 a	3 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	5 n	5 m-r	7 ijk	5 efg	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	9 m	6 m-q	9 hi	5 efg	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	10 m	7 m	10 gh	5 efg	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	10 m	7 m	10 gh	7 de	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	4 n	2 rst	3 o	3 ghi	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	4 n	3 q-t	6 j-m	4 fgh	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	5 n	4 p-s	6 k-n	4 fgh	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	6 n	4 n-r	5 k-o	4 f-i	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 o	0 t	0 p	0 k	0 d	0 a
LSD (P=.05)										2.9	2.9	2.3	2.1	1.1	0.0
Standard Deviation										2.1	2.1	1.6	1.5	0.8	0.0
CV										12.94	14.19	21.12	53.93	231.82	0.0
Replicate F										3.773	4.746	0.800	2.142	1.007	0.000
Replicate Prob(F)										0.0124	0.0036	0.4959	0.0982	0.3921	1.0000
Treatment F										115.210	119.172	65.052	18.103	3.856	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Stunt Percent 4 DAT	GLXMA Stunt Percent 7 DAT	GLXMA Stunt Percent 14 DAT	GLXMA Stunt Percent 28 DAT	GLXMA Stunt Percent 56 DAT	GLXMA Stunt Percent At Harvest
1	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 h	0 j	0 h	0 h	0 d	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 h	0 j	0 h	0 h	0 d	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	3 efg	13 bc	7 bc	4 cde	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	3 efg	13 bc	8 b	5 bc	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	8 bc	18 a	12 a	8 a	1 bc	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	5 def	15 b	9 b	6 b	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 h	3 hi	3 def	2 fgh	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 h	6 efg	6 c	2 d-g	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	2 fgh	9 de	4 d	2 fgh	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	5 def	10 cd	6 c	2 efg	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 h	0 j	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 h	0 j	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 h	0 j	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 h	0 j	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	0 h	0 j	0 h	0 h	0 d	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	0 h	0 j	0 h	0 h	0 d	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Stunt Percent 4 DAT	GLXMA Stunt Percent 7 DAT	GLXMA Stunt Percent 14 DAT	GLXMA Stunt Percent 28 DAT	GLXMA Stunt Percent 56 DAT	GLXMA Stunt Percent At Harvest
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	11 a	8 def	1 fgh	2 fgh	1 cd	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	13 a	9 def	2 e-h	4 cde	2 ab	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	13 a	9 d	3 de	5 bc	1 cd	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	11 a	9 def	2 d-g	5 bc	3 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	8 bc	6 fg	0 h	1 gh	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	8 bc	5 gh	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	9 b	5 gh	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	7 bcd	4 ghi	0 h	1 gh	1 cd	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	2 fgh	0 j	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	4 ef	2 ij	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	6 cde	2 ij	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	7 bcd	2 hij	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 h	0 j	0 h	0 h	0 d	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 h	0 j	0 h	0 h	0 d	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	1 gh	0 j	1 gh	2 fgh	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	3 fg	2 ij	1 gh	3 c-f	1 cd	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Stunt Percent 4 DAT	GLXMA Stunt Percent 7 DAT	GLXMA Stunt Percent 14 DAT	GLXMA Stunt Percent 28 DAT	GLXMA Stunt Percent 56 DAT	GLXMA Stunt Percent At Harvest
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	3 efg	2 hij	1 fgh	3 d-g	2 bc	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	2 fgh	2 ij	1 gh	4 bcd	3 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	0 h	0 j	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	0 h	0 j	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	0 h	0 j	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	0 h	0 j	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 h	0 j	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 h	0 j	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 h	0 j	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 h	0 j	0 h	0 h	0 d	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 h	0 j	0 h	0 h	0 d	0 a
LSD (P=.05)										2.6	2.6	1.9	1.8	1.1	0.0
Standard Deviation										1.9	1.9	1.4	1.3	0.8	0.0
CV										62.85	53.24	90.92	98.88	240.13	0.0
Replicate F										0.658	0.609	0.872	1.215	1.105	0.000
Replicate Prob(F)										0.5797	0.6106	0.4575	0.3070	0.3498	1.0000
Treatment F										17.119	26.425	18.276	9.379	3.751	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Chlorosis Percent 4 DAT	GLXMA Chlorosis Percent 7 DAT	GLXMA Chlorosis Percent 14 DAT	GLXMA Chlorosis Percent 28 DAT	GLXMA Chlorosis Percent 56 DAT	GLXMA Chlorosis Percent 56 DAT
1	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	1 bc	0 e	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	3 a	0 e	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	1 bc	1 e	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	1 bc	4 d	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Chlorosis Percent 4 DAT	GLXMA Chlorosis Percent 7 DAT	GLXMA Chlorosis Percent 14 DAT	GLXMA Chlorosis Percent 28 DAT	GLXMA Chlorosis Percent 56 DAT	GLXMA Chlorosis Percent 56 DAT
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	1 bc	6 c	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	1 b	10 a	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	0 c	7 b	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	0 c	10 a	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	0 c	4 d	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	3 a	7 b	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	0 c	4 d	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	3 a	8 b	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	0 c	4 d	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	1 bc	6 c	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	0 c	3 d	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	1 bc	6 c	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Chlorosis Percent 4 DAT	GLXMA Chlorosis Percent 7 DAT	GLXMA Chlorosis Percent 14 DAT	GLXMA Chlorosis Percent 28 DAT	GLXMA Chlorosis Percent 56 DAT	GLXMA Chlorosis Percent 56 DAT
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 c	0 e	0 a	0 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 c	0 e	0 a	0 a	0 a	0 a
LSD (P=.05)										1.2	1.0	0.0	0.0	0.0	0.0
Standard Deviation										0.8	0.7	0.0	0.0	0.0	0.0
CV										279.84	39.62	0.0	0.0	0.0	0.0
Replicate F										2.708	6.392	0.000	0.000	0.000	0.000
Replicate Prob(F)										0.0481	0.0005	1.0000	1.0000	1.0000	1.0000
Treatment F										2.737	70.931	0.000	0.000	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	1.0000	1.0000	1.0000	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Necrosis Percent 4 DAT	GLXMA Necrosis Percent 7 DAT	GLXMA Necrosis Percent 14 DAT	GLXMA Necrosis Percent 28 DAT	GLXMA Necrosis Percent 56 DAT	GLXMA Necrosis Percent 56 DAT
1	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 p	0 p	0 q	0 f	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 p	0 p	0 q	0 f	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	23 ef	18 bcd	13 cde	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	25 de	20 bc	11 efg	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	26 bcd	20 b	15 bc	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	25 de	20 bc	14 bcd	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	19 hi	11 i	7 klm	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	20 gh	12 hi	9 h-k	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	20 gh	14 gh	9 g-j	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	20 gh	12 hi	8 i-l	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	8 mn	6 jkl	4 op	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	9 m	7 jk	4 nop	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	9 m	7 j	4 nop	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	10 m	7 j	4 op	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	0 p	0 p	0 q	0 f	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	0 p	0 p	0 q	0 f	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Necrosis Percent 4 DAT	GLXMA Necrosis Percent 7 DAT	GLXMA Necrosis Percent 14 DAT	GLXMA Necrosis Percent 28 DAT	GLXMA Necrosis Percent 56 DAT	GLXMA Necrosis Percent 56 DAT
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	26 bcd	25 a	6 l-o	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	26 a-d	25 a	6 l-o	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	28 ab	25 a	6 lmn	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	28 abc	26 a	6 lmn	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	19 ghi	17 def	3 p	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	19 ghi	18 cde	4 op	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	17 hij	17 def	4 op	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	21 fg	20 b	3 p	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	13 l	11 i	3 p	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	14 kl	12 hi	3 p	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	16 jkl	15 fg	3 p	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	17 ijk	16 ef	4 nop	0 f	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 p	0 p	0 q	0 f	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 p	0 p	0 q	0 f	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	25 cde	16 def	16 ab	7 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	25 cde	15 fg	16 ab	6 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Necrosis Percent 4 DAT	GLXMA Necrosis Percent 7 DAT	GLXMA Necrosis Percent 14 DAT	GLXMA Necrosis Percent 28 DAT	GLXMA Necrosis Percent 56 DAT	GLXMA Necrosis Percent 56 DAT
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	29 a	19 bc	18 a	7 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	27 a-d	16 efg	12 def	6 a	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	5 o	5 k-n	7 j-m	5 bc	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	9 m	6 j-m	9 g-j	5 b	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	10 m	7 j	10 fgh	5 b	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	10 m	7 j	10 f-i	5 b	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	4 o	2 o	3 p	3 e	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	4 o	3 no	6 lmn	3 e	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	5 o	4 mno	6 l-o	4 cd	0 a	0 a
	ROUNDUP PMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	6 no	4 l-o	5 m-p	4 de	0 a	0 a
	ROUNDUP PMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 p	0 p	0 q	0 f	0 a	0 a
LSD (P=.05)										2.6	2.1	2.3	0.6	0.0	0.0
Standard Deviation										1.8	1.5	1.6	0.4	0.0	0.0
CV										12.97	13.38	26.63	31.47	0.0	0.0
Replicate F										2.037	2.766	1.494	2.410	0.000	0.000
Replicate Prob(F)										0.1120	0.0446	0.2194	0.0701	1.0000	1.0000
Treatment F										110.878	116.207	35.257	116.189	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date - June 15.

Trial ID: 13-NF-S-M110 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: ISA - Glyph_Tm_Lplant-SIU.
2. Trial is to be maintained weed-free for the duration of the study.
   Blanket PRE application of Dual Magnum (1.27 lbai/A) plus Firstrate (0.031 lbai/A),
   then hand-weeded as needed.
   Ratings: CI (overall, stunting, chlorosis, necrosis) at 4, 7, 14, 28 and 56 DAT.
   CI/ stunting and plant heights at harvest.
3. Target planting date is June 15.
4. Yield is required. Measure weight of 200 seeds/plot.
5. DAT = Days after various postemergence applications
   Ratings at 4 days after the V2-3, V5-6, and R2 applications were on 7-27-13, 8-4-13, and 8-13-13, respectively.
   Ratings at 7 days after the V2-3, V5-6, and R2 applications were on 7-30-13, 8-7-13, and 8-16-13, respectively.
   Ratings at 14 days after the V2-3, V5-6, and R2 applications were on 8-6-13, 8-14-13, and 8-23-13, respectively.
   Ratings at 28 days after the V2-3, V5-6, and R2 applications were on 8-20-13, 8-28-13, and 9-6-13, respectively.
   Ratings at 56 days after the V2-3, V5-6, and R2 applications were on 9-17-13, 9-25-13, and 10-4-13, respectively.
6. Harvested 11-13-13, (2) 30 inch rows by 22 ft.

Insecticides and Fungicides

Southern Illinois University

Double-Crop Soybean Fungicide and Insecticide Demonstration - Dupont.

Trial ID: 13-11C-M40-DC-SOY Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 7-8-13
Completion Date: 11-10-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the influence of a mid-August fungicide plus insecticide application on yield of double-crop soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832
Description: RR2Y
Planting Date: 7-8-13
Planting Rate, Unit: 75 LB/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 60 FT **Total Plot Length:** 60 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 2 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	TRZAW	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 2.9 **Texture:** SIL silt loam
pH: 6.4 **Soil Name:** Bethalto
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	57	lb/A
K	275	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Double-Crop Soybean Fungicide and Insecticide Demonstration - Dupont.

Trial ID: 13-11C-M40-DC-SOY Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-30-13					7	DAY	61	86	F
2.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
3.	7-7-13					7	DAY	62	94	F
4.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
5.	7-14-13					7	DAY	64	94	F
6.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
7.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
8.	7-21-13					7	DAY	56	91	F
9.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
10.	7-28-13					7	DAY	52	87	F
11.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
12.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
13.	8-4-13					7	DAY	62	87	F
14.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
15.	8-11-13					7	DAY	54	85	F
16.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
17.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
18.	8-18-13					7	DAY	61	91	F
19.	8-25-13					7	DAY	62	100	F
20.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
21.	9-1-13					7	DAY	57	92	F
22.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A
Application Date:	8-28-13
Appl. Start Time:	10:00
Appl. Stop Time:	10:30
Application Method:	Spray
Application Timing:	R3
Application Placement:	BROFOL
Applied By:	RFK
Air Temperature, Unit:	89 F
% Relative Humidity:	50
Wind Velocity, Unit:	2 MPH
Wind Direction:	W
Dew Presence (Y/N):	N
Soil Temperature, Unit:	75 F
Soil Moisture:	NORMAL
% Cloud Cover:	0
Next Moisture Occurred On:	8-31-13
Time to Next Moisture, Unit:	3 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	R3
Stage Minimum, Percent:	R3
Stage Maximum, Percent:	R3
Height, Unit:	18 IN
Height Minimum, Maximum:	16 18

Pest Stage At Each Application

Pest 1 Code, Type, Scale:	

Double-Crop Soybean Fungicide and Insecticide Demonstration - Dupont.

Trial ID: 13-11C-M40-DC-SOY Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Double-Crop Soybean Fungicide and Insecticide Demonstration - Dupont.

Trial ID: 13-11C-M40-DC-SOY Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 11-10-13 Moisture Percent	GLXMA 11-10-13 Test wt. lb/bu	GLXMA 11-10-13 Yield bu/A	GLXMA 9-18-13 Injury Percent 21 DA-A	SEPTGL GLXMA 9-18-13 Incidence Percent 21 DA-A	SEPTGL GLXMA 9-18-13 Severity Percent 21 DA-A
1	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	A	13.3 a	57.1 a	62 a	0 a	0.0 a	0.0 a
	ASANA XL	0.66	EC	0.0495	lb ai/a	9.6	fl oz/a	R3	A						
2	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	A	13.0 a	57.2 a	67 a	0 a	0.0 a	0.0 a
	ASANA XL	0.66	EC	0.031	lb ai/a	6	fl oz/a	R3	A						
	LANNATE LV	2.4	SL	0.225	lb ai/a	12	fl oz/a	R3	A						
3	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	A	13.2 a	57.1 a	57 a	0 a	0.0 a	0.0 a
	PREVATHON	0.43	SC	0.054	lb ai/a	1	pt/a	R3	A						
4	NO FUNGICIDE									13.0 a	57.2 a	56 a	0 a	0.0 a	0.0 a
	NO INSECTICIDE														
LSD (P=.05)										0.54	0.41	30.1	0.0	0.00	0.00
Standard Deviation										0.17	0.13	9.4	0.0	0.00	0.00
CV										1.28	0.22	15.55	0.0	0.0	0.0
Replicate F										0.142	0.007	0.485	0.000	0.000	0.000
Replicate Prob(F)										0.7311	0.9389	0.5363	1.0000	1.0000	1.0000
Treatment F										1.014	0.672	0.508	0.000	0.000	0.000
Treatment Prob(F)										0.4956	0.6242	0.7039	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Double-Crop Soybean Fungicide and Insecticide Demonstration - Dupont.

Trial ID: 13-11C-M40-DC-SOY Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Dupont (USA-13-755).
2. Ratings: DI/DS at 21 DA-A.
3. Blanket herbicide applications:
   PRE Valor (2 oz/A) + Classic (1.25 oz/A) + Sencor (4.75 oz/A) was applied on 7-8-13;
   POST (before V3) Cinch (1 pt/A) + Abundit Extra (1 qt/A) was applied on 7-26-13.
4. Application timing is R3 soybean and mid-August.
5. Yield.
6. SEPTGL = Septoria glycines, Brown spot of soybean.
7. Harvested 11-10-13, (4) 15 inch rows by 57 ft.

Wheat Fungicides and Weed Control

Southern Illinois University

DuPont Fungicides in Winter Wheat - Demonstration.

Trial ID: 13-11C-M40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 11-1-12
Completion Date: 7-6-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

USAIL 42.5083389 **-** 36.9702949
-87.0199279 **-** -91.5130844

Objectives:
Demonstrate use of fungicides in winter wheat.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: P25R62 **BBCH Scale:** BCER
Planting Date: 11-1-12
Planting Rate, Unit: 1.5 millionS/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN

Pest Description

Pest 1 Type: D **Code:** SEPTSP Septoria sp.
Common Name: Septoria sp.
Description: Septoria leaf blotch

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 60 FT **Total Plot Length:** 60 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 1 **Study Design:** NONRAN Non-Randomized
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	NON-CROP	2012

Maintenance

No.	Maintenance Product Name
1.	Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A
2.	Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 2.9 **Texture:** SIL silt loam
pH: 6.4 **Soil Name:** Bethalto
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	57	lb/A
K	275	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	10-5-12	1.35	IN	RAIN	rain	1	DAY			
2.	10-7-12					7	DAY	34	77	F
3.	10-14-12					7	DAY	44	80	F
4.	10-14-12	0.73	IN	RAIN	rain	1	DAY			
5.	10-17-12	0.61	IN	RAIN	rain	1	DAY			

DuPont Fungicides in Winter Wheat - Demonstration.

Trial ID: 13-11C-M40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

6.	10-21-12					7	DAY	34	81	F
7.	10-22-12	0.68	IN	RAIN	rain	2	DAY			
8.	10-25-12	0.41	IN	RAIN	rain	2	DAY			
9.	10-28-12					7	DAY	33	61	F
10.	11-4-12					7	DAY	28	76	F
11.	11-5-12	0.09	IN	RAIN	rain	3	DAY			
12.	11-11-12					7	DAY	25	67	F
13.	11-11-12	1.54	IN	RAIN	rain	2	DAY			
14.	11-18-12					7	DAY	23	67	F
15.	11-22-12	0.23	IN	RAIN	rain	1	DAY			
16.	11-25-12					7	DAY	22	67	F
17.	12-2-12					7	DAY	31	71	F
18.	12-4-12	0.1	IN	RAIN	rain	1	DAY			
19.	12-9-12					7	DAY	20	60	F
20.	12-9-12	0.18	IN	RAIN	rain	2	DAY			
21.	12-15-12	0.44	IN	RAIN	rain	1	DAY			
22.	12-16-12					7	DAY	19	56	F
23.	12-20-12	5.07	IN	RAIN	rain	1	DAY			
24.	12-23-12					7	DAY	14	52	F
25.	12-28-12	0.26	IN	RAIN	rain	1	DAY			
26.	12-30-12					7	DAY	10	41	F
27.	12-31-12	0.11	IN	RAIN	rain	1	DAY			
28.	1-6-13					7	DAY	18	62	F
29.	1-10-13	0.72	IN	RAIN	rain	2	DAY			
30.	1-12-13	1.84	IN	RAIN	rain	2	DAY			
31.	1-13-13					7	DAY	16	64	F
32.	1-20-13					7	DAY	10	45	F
33.	1-27-13					7	DAY	7	67	F
34.	1-29-13	2.36	IN	RAIN	rain	3	DAY			
35.	2-3-13					7	DAY	22	57	F
36.	2-3-13	0.2	IN	RAIN	rain	2	DAY			
37.	2-7-13	0.13	IN	RAIN	rain	1	DAY			
38.	2-10-13					7	DAY	21	58	F
39.	2-10-13	0.74	IN	RAIN	rain	2	DAY			
40.	2-17-13					7	DAY	16	54	F
41.	2-18-13	0.12	IN	RAIN	rain	1	DAY			
42.	2-21-13	0.39	IN	RAIN	rain	2	DAY			
43.	2-24-13					7	DAY	17	49	F
44.	2-26-13	0.8	IN	RAIN	rain	3	DAY			
45.	3-3-13					7	DAY	19	66	F
46.	3-10-13					7	DAY	25	68	F
47.	3-10-13	0.71	IN	RAIN	rain	2	DAY			
48.	3-17-13					7	DAY	19	53	F
49.	3-17-13	1.43	IN	RAIN	rain	3	DAY			
50.	3-24-13					7	DAY	22	60	F
51.	3-24-13	0.41	IN	RAIN	rain	1	DAY			
52.	3-30-13	0.13	IN	RAIN	rain	1	DAY			
53.	3-31-13					7	DAY	27	71	F
54.	4-7-13					7	DAY	34	82	F
55.	4-10-13	1.4	IN	RAIN	rain	2	DAY			
56.	4-14-13					7	DAY	31	82	F
57.	4-16-13	1.05	IN	RAIN	rain	2	DAY			
58.	4-18-13	5.2	IN	RAIN	rain	1	DAY			
59.	4-21-13					7	DAY	35	72	F
60.	4-23-13	1.35	IN	RAIN	rain	2	DAY			
61.	4-27-13	0.3	IN	RAIN	rain	2	DAY			
62.	4-28-13					7	DAY	41	83	F
63.	5-3-13	3.07	IN	RAIN	rain	4	DAY			
64.	5-5-13					7	DAY	46	80	F
65.	5-9-13	0.35	IN	RAIN	rain	2	DAY			

66.	5-12-13					7	DAY	39	92	F
67.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
68.	5-19-13					7	DAY	45	88	F
69.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
70.	5-26-13					7	DAY	56	86	F
71.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
72.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
73.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
74.	6-2-13					7	DAY	50	80	F
75.	6-9-13					7	DAY	59	94	F
76.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
77.	6-16-13					7	DAY	61	90	F
78.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
79.	6-23-13					7	DAY	64	92	F
80.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
81.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
82.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
83.	6-30-13					7	DAY	61	86	F
84.	7-2-13	2.08	IN	RAIN	rain	2	DAY			

Application Description

	A	B	C
Application Date:	4-22-13	5-8-13	5-20-13
Appl. Start Time:	9:00	11:00	7:00
Appl. Stop Time:	9:30	11:30	7:30
Application Method:	Spray	Spray	Spray
Application Timing:	POST	FLAG	FK10.5
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RFK	RFK	RFK
Air Temperature, Unit:	58 F	78 F	65 F
% Relative Humidity:	53	38	97
Wind Velocity, Unit:	3 MPH	0 MPH	0 MPH
Wind Direction:	SE		
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	54 F	60 F	69 F
Soil Moisture:	ABONOR	ABONOR	ABONOR
% Cloud Cover:	0	0	0
Next Moisture Occurred On:	4-23-13	5-9-13	5-20-13
Time to Next Moisture, Unit:	25 HR	25 HR	16 HR

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	TRZAW	TRZAW	TRZAW
Stage Scale Used:	FEEKES	FEEKES	FEEKES
Stage Majority, Percent:	FK6	FK9	FK10.5
Stage Minimum, Percent:	FK5	FK9	FK10.5
Stage Maximum, Percent:	FK6	FK9	FK10.5
Height, Unit:	14 IN	30 IN	36 IN
Height Minimum, Maximum:	12 14	28 30	36 36

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SEPTSP D	SEPTSP D	SEPTSP D
Stage Majority, Percent:	NA	NA	NA

DuPont Fungicides in Winter Wheat - Demonstration.

Trial ID: 13-11C-M40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

DuPont Fungicides in Winter Wheat - Demonstration.

Trial ID: 13-11C-M40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 7-6-13 Moisture Percent	TRZAW 7-6-13 Test wt. lb/bu	TRZAW 7-6-13 Yield bu/A	TRZAW 5-29-13 Injury Percent 21 DA-B	SEPTSP TRZAW 5-29-13 Incidence Percent 21 DA-B	SEPTSP TRZAW 5-29-13 Severity Percent 21 DA-B
1	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	13.8	53.8	68	0	0.0	0.0
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	PZX74	280	SC	0.091	lb ai/a	5	fl oz/a	FLAG	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FLAG	B						
2	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	13.5	53.9	65	0	0.0	0.0
	KOCIDE 3000	46.1	WG	0.346	lb ai/a	0.75	lb/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	PZX74	280	SC	0.091	lb ai/a	5	fl oz/a	FK10.5	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FK10.5	C						
3	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	13.5	54.0	66	0	0.0	0.0
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
4	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	12.8	54.5	65	0	0.0	0.0
	KOCIDE 3000	46.1	WG	0.346	lb ai/a	0.75	lb/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	PROSARO 421 SC	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FK10.5	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FK10.5	C						
5	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	13.5	54.0	71	0	0.0	0.0
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	FLAG	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FLAG	B						
6	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	13.4	54.0	62	0	0.0	0.0
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
	HEADLINE SC	2.08	SC	0.0975	lb ai/a	6	fl oz/a	FLAG	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FLAG	B						
7	NONTREATED									13.5	54.0	66	0	0.0	0.0
LSD (P=.05)										.	.	.	.	.	.
Standard Deviation										.	.	.	.	.	.
CV										.	.	.	.	.	.

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

DuPont Fungicides in Winter Wheat - Demonstration.

Trial ID: 13-11C-M40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SEPTSP TRZAW 6-12-13 Incidence Percent 35 DA-B	SEPTSP TRZAW 6-12-13 Severity Percent 35 DA-B
1	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	2.0	5.0
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A		
	PZX74	280	SC	0.091	lb ai/a	5	fl oz/a	FLAG	B		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FLAG	B		
2	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	2.0	5.0
	KOCIDE 3000	46.1	WG	0.346	lb ai/a	0.75	lb/a	POST	A		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A		
	PZX74	280	SC	0.091	lb ai/a	5	fl oz/a	FK10.5	C		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FK10.5	C		
3	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	2.0	5.0
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	POST	A		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A		
4	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	1.0	1.0
	KOCIDE 3000	46.1	WG	0.346	lb ai/a	0.75	lb/a	POST	A		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A		
	PROSARO 421 SC	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FK10.5	C		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FK10.5	C		
5	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	2.0	5.0
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A		
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	FLAG	B		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FLAG	B		
6	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	2.0	1.0
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A		
	HEADLINE SC	2.08	SC	0.0975	lb ai/a	6	fl oz/a	FLAG	B		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FLAG	B		
7	NONTREATED									2.0	10.0
LSD (P=.05)										.	.
Standard Deviation										.	.
CV										.	.

Southern Illinois University

DuPont Fungicides in Winter Wheat - Demonstration.

Trial ID: 13-11C-M40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-13-293) Demonstration.
2. Ratings: Diseases 21 DA-B rate all plots, 42 DA-B if needed.
3. Yield.
4. Application A (POST) is Harmony Extra SG application window for winter wheat.
5. SEPTSP was Septoria leaf blotch.
6. Harvested 7-6-13, 4.375 ft by 57 ft.

Evaluation of Metsulfuron for Weed Control in Wheat.

Trial ID: 13-11C-W50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 11-1-12
Completion Date: 7-6-13

Trial Location

City: Belleville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62221

Objectives:
Evaluate the value of low rates of metsulfuron for in-crop product concepts in the Mid-South.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: P25R62 **BBCH Scale:** BCER
Planting Date: 11-1-12
Planting Rate, Unit: 1.5 millionS/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN

Pest Description

Pest 1 Type: W **Code:** RANAB Ranunculus abortivus L.
Common Name: buttercup, smallflower

Pest 2 Type: W **Code:** CAPBP Capsella bursa-pastoris(L.)M
Common Name: shepherdspurse

Pest 3 Type: W **Code:** CARPA Cardamine parviflora L.
Common Name: bittercress, smallflowered

Site and Design

Treated Plot Width: 7.5 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each rep

No.	Previous Crop	Year
1.	NON-CROP	2012

Maintenance

No.	Maintenance Product Name
1.	Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A
2.	Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 2.9 **Texture:** SIL silt loam
pH: 6.4 **Soil Name:** Bethalto
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	57	LB/A
K	275	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	10-5-12	1.35	IN	RAIN	rain	1	DAY			
2.	10-7-12					7	DAY	34	77	F
3.	10-14-12					7	DAY	44	80	F
4.	10-14-12	0.73	IN	RAIN	rain	1	DAY			

Evaluation of Metsulfuron for Weed Control in Wheat.

Trial ID: 13-11C-W50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

5.	10-17-12	0.61	IN	RAIN	rain	1	DAY			
6.	10-21-12					7	DAY	34	81	F
7.	10-22-12	0.68	IN	RAIN	rain	2	DAY			
8.	10-25-12	0.41	IN	RAIN	rain	2	DAY			
9.	10-28-12					7	DAY	33	61	F
10.	11-4-12					7	DAY	28	76	F
11.	11-5-12	0.09	IN	RAIN	rain	3	DAY			
12.	11-11-12					7	DAY	25	67	F
13.	11-11-12	1.54	IN	RAIN	rain	2	DAY			
14.	11-18-12					7	DAY	23	67	F
15.	11-22-12	0.23	IN	RAIN	rain	1	DAY			
16.	11-25-12					7	DAY	22	67	F
17.	12-2-12					7	DAY	31	71	F
18.	12-4-12	0.1	IN	RAIN	rain	1	DAY			
19.	12-9-12					7	DAY	20	60	F
20.	12-9-12	0.18	IN	RAIN	rain	2	DAY			
21.	12-15-12	0.44	IN	RAIN	rain	1	DAY			
22.	12-16-12					7	DAY	19	56	F
23.	12-20-12	5.07	IN	RAIN	rain	1	DAY			
24.	12-23-12					7	DAY	14	52	F
25.	12-28-12	0.26	IN	RAIN	rain	1	DAY			
26.	12-30-12					7	DAY	10	41	F
27.	12-31-12	0.11	IN	RAIN	rain	1	DAY			
28.	1-6-13					7	DAY	18	62	F
29.	1-10-13	0.72	IN	RAIN	rain	2	DAY			
30.	1-12-13	1.84	IN	RAIN	rain	2	DAY			
31.	1-13-13					7	DAY	16	64	F
32.	1-20-13					7	DAY	10	45	F
33.	1-27-13					7	DAY	7	67	F
34.	1-29-13	2.36	IN	RAIN	rain	3	DAY			
35.	2-3-13					7	DAY	22	57	F
36.	2-3-13	0.2	IN	RAIN	rain	2	DAY			
37.	2-7-13	0.13	IN	RAIN	rain	1	DAY			
38.	2-10-13					7	DAY	21	58	F
39.	2-10-13	0.74	IN	RAIN	rain	2	DAY			
40.	2-17-13					7	DAY	16	54	F
41.	2-18-13	0.12	IN	RAIN	rain	1	DAY			
42.	2-21-13	0.39	IN	RAIN	rain	2	DAY			
43.	2-24-13					7	DAY	17	49	F
44.	2-26-13	0.8	IN	RAIN	rain	3	DAY			
45.	3-3-13					7	DAY	19	66	F
46.	3-10-13					7	DAY	25	68	F
47.	3-10-13	0.71	IN	RAIN	rain	2	DAY			
48.	3-17-13					7	DAY	19	53	F
49.	3-17-13	1.43	IN	RAIN	rain	3	DAY			
50.	3-24-13					7	DAY	22	60	F
51.	3-24-13	0.41	IN	RAIN	rain	1	DAY			
52.	3-30-13	0.13	IN	RAIN	rain	1	DAY			
53.	3-31-13					7	DAY	27	71	F
54.	4-7-13					7	DAY	34	82	F
55.	4-10-13	1.4	IN	RAIN	rain	2	DAY			
56.	4-14-13					7	DAY	31	82	F
57.	4-16-13	1.05	IN	RAIN	rain	2	DAY			
58.	4-18-13	5.2	IN	RAIN	rain	1	DAY			
59.	4-21-13					7	DAY	35	72	F
60.	4-23-13	1.35	IN	RAIN	rain	2	DAY			
61.	4-27-13	0.3	IN	RAIN	rain	2	DAY			
62.	4-28-13					7	DAY	41	83	F
63.	5-3-13	3.07	IN	RAIN	rain	4	DAY			
64.	5-5-13					7	DAY	46	80	F

Evaluation of Metsulfuron for Weed Control in Wheat.

Trial ID: 13-11C-W50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

65.	5-9-13	0.35	IN	RAIN	rain	2	DAY			
66.	5-12-13					7	DAY	39	92	F
67.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
68.	5-19-13					7	DAY	45	88	F
69.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
70.	5-26-13					7	DAY	56	86	F
71.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
72.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
73.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
74.	6-2-13					7	DAY	50	80	F
75.	6-9-13					7	DAY	59	94	F
76.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
77.	6-16-13					7	DAY	61	90	F
78.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
79.	6-23-13					7	DAY	64	92	F
80.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
81.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
82.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
83.	6-30-13					7	DAY	61	86	F
84.	7-2-13	2.08	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	4-9-13
Appl. Start Time:	7:00
Appl. Stop Time:	7:30
Application Method:	Spray
Application Timing:	POST
Application Placement:	BROFOL
Applied By:	RFK
Air Temperature, Unit:	65 F
% Relative Humidity:	78
Wind Velocity, Unit:	5 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	56 F
Soil Moisture:	NORMAL
% Cloud Cover:	100
Next Moisture Occurred On:	4-10-13
Time to Next Moisture, Unit:	36 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	TRZAW
Stage Scale Used:	FEEKES
Stage Majority, Percent:	F4
Stage Minimum, Percent:	F4
Stage Maximum, Percent:	F4
Height, Unit:	6 IN
Height Minimum, Maximum:	4. 6

Evaluation of Metsulfuron for Weed Control in Wheat.

Trial ID: 13-11C-W50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	RANAB W
Stage Majority, Percent:	10+
Stage Minimum, Percent:	10
Stage Maximum, Percent:	10+
Height, Unit:	4 IN
Height Minimum, Maximum:	2 6
Density, Unit:	0.1 FT2
Pest 2 Code, Type, Scale:	CAPBP W
Stage Majority, Percent:	10+
Stage Minimum, Percent:	10
Stage Maximum, Percent:	10+
Height, Unit:	8 IN
Height Minimum, Maximum:	6 12
Density, Unit:	0.01 FT2
Pest 3 Code, Type, Scale:	CARPA W
Stage Majority, Percent:	10+
Stage Minimum, Percent:	10
Stage Maximum, Percent:	10+
Height, Unit:	3 IN
Height Minimum, Maximum:	2 4
Density, Unit:	0.01 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Evaluation of Metsulfuron for Weed Control in Wheat.

Trial ID: 13-11C-W50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 7-6-13 Moisture Percent	TRZAW 7-6-13 Test wt. lb/bu	TRZAW 7-6-13 Yield bu/A	TRZAW 4-16-13 Injury Percent 7 DA-A	TRZAW 4-23-13 Injury Percent 14 DA-A	TRZAW 5-7-13 Injury Percent 28 DA-A
1	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	POST	A	14.4 a	53.5 a	61 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
2	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	14.1 a	53.6 a	59 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
3	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	POST	A	14.0 a	53.7 a	62 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
4	EXPRESS	50	SG	0.0094	lb ai/a	0.3	oz/a	POST	A	13.7 a	53.9 a	59 a	0 a	0 a	0 a
	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
5	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	POST	A	13.9 a	53.7 a	65 a	0 a	0 a	0 a
	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
6	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	14.1 a	53.7 a	60 a	0 a	0 a	0 a
	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
7	POWERFLEX HL	13.13	WG	0.0164	lb ai/a	2	oz/a	POST	A	14.0 a	53.7 a	64 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
8	NONTREATED									14.1 a	53.6 a	61 a	0 a	0 a	0 a
LSD (P=.05)										0.40	0.30	11.1	0.0	0.0	0.0
Standard Deviation										0.23	0.17	6.3	0.0	0.0	0.0
CV										1.64	0.32	10.34	0.0	0.0	0.0
Replicate F										4.017	3.155	5.019	0.000	0.000	0.000
Replicate Prob(F)										0.0418	0.0739	0.0227	1.0000	1.0000	1.0000
Treatment F										2.033	1.361	0.365	0.000	0.000	0.000
Treatment Prob(F)										0.1224	0.2945	0.9078	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Evaluation of Metsulfuron for Weed Control in Wheat.

Trial ID: 13-11C-W50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	RANAB 4-23-13 Control Percent 14 DA-A	RANAB 5-7-13 Control Percent 28 DA-A	CAPBP 4-23-13 Control Percent 14 DA-A	CAPBP 5-7-13 Control Percent 28 DA-A	CARPA 4-23-13 Control Percent 14 DA-A	CARPA 5-7-13 Control Percent 28 DA-A
1	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	POST	A	92 a	99 a	98 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
2	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	92 a	99 a	98 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
3	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	POST	A	94 a	99 a	98 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
4	EXPRESS	50	SG	0.0094	lb ai/a	0.3	oz/a	POST	A	90 a	99 a	98 a	99 a	99 a	99 a
	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
5	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	POST	A	92 a	99 a	98 a	99 a	99 a	99 a
	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
6	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	POST	A	94 a	99 a	98 a	99 a	99 a	99 a
	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	POST	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
7	POWERFLEX HL	13.13	WG	0.0164	lb ai/a	2	oz/a	POST	A	93 a	99 a	98 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A						
8	NONTREATED									0 b	0 a	0 a	0 a	0 a	0 a
LSD (P=.05)										5.6	0.0	0.0	0.0	0.0	0.0
Standard Deviation										3.2	0.0	0.0	0.0	0.0	0.0
CV										3.99	0.0	0.0	0.0	0.0	0.0
Replicate F										0.606	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										0.5594	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										308.410	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										0.0001	1.0000	1.0000	1.0000	1.0000	1.0000

Southern Illinois University

Evaluation of Metsulfuron for Weed Control in Wheat.

Trial ID: 13-11C-W50 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont USA-13-224.
2. Ratings: CI 5-7, 14, and 28 DA-A, WC 14 and 28 DA-A.
3. Application A (POST) is Harmony Extra SG application window for winter wheat.
4. Blanket apply POST for grass control as needed.
5. Yield.
6. Harvested 7-6-13, 4.375 ft by 27 ft.

Annual Bluegrass Control in Wheat.

Trial ID: 13-ARC-9 Location: Agronomy Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 10-29-12
Completion Date: 4-9-13

Trial Location

City: Carbondale **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62901

Objectives:
Evaluate the benefit of other herbicides used with Finesse for control of annual bluegrass in winter wheat.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: P25R40 **BBCH Scale:** BCER
Planting Date: 11-5-12
Planting Rate, Unit: 1.4 millionS/A **Planting Method:** SEEDED
Depth, Unit: 0.75 IN
Row Spacing, Unit: 7.5 IN
Soil Moisture: NORMAL
Seed Bed: FRITRA

Pest Description

Pest 1 Type: W **Code:** POAAN Poa annua L.
Common Name: bluegrass, annual

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	NON-CROP	2011

Maintenance

No.	Maintenance Product Name
1.	Fall N 25 LB/A, P2O5 0 LB/A, K2O 0 LB/A
2.	Spring N 123 LB/A, P2O5 46 LB/A, K2O 120 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL silt loam
pH: 6.2 **Soil Name:** Stoy
CEC: 7.4

Additional Measured Elements

Element	Quantity	Unit
P1	66	lb/A
K	274	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: ICN - Carbondale IL **Distance, Unit:** 0.5 MI

Annual Bluegrass Control in Wheat.

Trial ID: 13-ARC-9 Location: Agronomy Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	10-1-12					7	DAY	36	80	F
2.	10-1-12	1.07	IN	RAIN	rain	5	DAY			
3.	10-8-12					7	DAY	32	79	F
4.	10-11-12	1.01	IN	RAIN	rain	4	DAY			
5.	10-15-12					7	DAY	45	79	F
6.	10-17-12	0.99	IN	RAIN	rain	4	DAY			
7.	10-22-12					7	DAY	34	81	F
8.	10-25-12	0.7	IN	RAIN	rain	2	DAY			
9.	10-29-12					7	DAY	28	62	F
10.	11-5-12					7	DAY	29	71	F
11.	11-5-12	0.09	IN	RAIN	rain	3	DAY			
12.	11-11-12	1.49	IN	RAIN	rain	2	DAY			
13.	11-12-12					7	DAY	24	62	F
14.	11-19-12					7	DAY	24	66	F
15.	11-22-12	0.11	IN	RAIN	rain	5	DAY			
16.	11-26-12					7	DAY	21	66	F
17.	12-3-12					7	DAY	31	68	F
18.	12-4-12	0.26	IN	RAIN	rain	4	DAY			
19.	12-9-12	1.09	IN	RAIN	rain	8	DAY			
20.	12-10-12					7	DAY	23	59	F
21.	12-17-12					7	DAY	19	63	F
22.	12-20-12	0.35	IN	RAIN	rain	4	DAY			
23.	12-24-12					7	DAY	8	47	F
24.	12-28-12	0.83	IN	RAIN	rain	6	DAY			
25.	12-31-12					7	DAY	13	40	F
26.	1-7-13					7	DAY	19	64	F
27.	1-10-13	0.57	IN	RAIN	rain	3	DAY			
28.	1-12-13	2.66	IN	RAIN	rain	2	DAY			
29.	1-14-13					7	DAY	22	55	F
30.	1-21-13					7	DAY	16	52	F
31.	1-28-13					7	DAY	13	70	F
32.	1-29-13	2.17	IN	RAIN	rain	4	DAY			
33.	2-4-13					7	DAY	27	66	F
34.	2-7-13	0.25	IN	RAIN	rain	5	DAY			
35.	2-10-13	0.54	IN	RAIN	rain	5	DAY			
36.	2-11-13					7	DAY	24	60	F
37.	2-18-13					7	DAY	23	57	F
38.	2-18-13	1.35	IN	RAIN	rain	4	DAY			
39.	2-25-13					7	DAY	25	54	F
40.	2-26-13	0.67	IN	RAIN	rain	4	DAY			
41.	3-1-13	0.2	IN	RAIN	rain	5	DAY			
42.	3-4-13					7	DAY	26	68	F
43.	3-10-13	0.49	IN	RAIN	rain	2	DAY			
44.	3-11-13					7	DAY	24	74	F
45.	3-17-13	2.87	IN	RAIN	rain	3	DAY			
46.	3-18-13					7	DAY	23	57	F
47.	3-24-13	0.34	IN	RAIN	rain	2	DAY			
48.	3-25-13					7	DAY	24	68	F
49.	3-30-13	0.54	IN	RAIN	rain	2	DAY			
50.	4-1-13					7	DAY	26	75	F
51.	4-8-13					7	DAY	32	81	F
52.	4-10-13	0.85	IN	RAIN	rain	2	DAY			
53.	4-15-13					7	DAY	32	83	F
54.	4-18-13	2.16	IN	RAIN	rain	1	DAY			
55.	4-22-13					7	DAY	32	72	F
56.	4-24-13	0.55	IN	RAIN	rain	2	DAY			
57.	4-27-13	0.37	IN	RAIN	rain	2	DAY			
58.	4-29-13					7	DAY	41	81	F

Annual Bluegrass Control in Wheat.

Trial ID: 13-ARC-9 Location: Agronomy Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Description

	A	B	C
Application Date:	10-30-12	11-6-12	11-30-12
Appl. Start Time:	7:00	7:30	6:45
Application Method:	Spray	Spray	Spray
Application Timing:	7DBP	PRE	SPK-2L
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	JRK	JRK	JRK
Air Temperature, Unit:	44 F	43 F	45 F
% Relative Humidity:	44	66	47
Wind Velocity, Unit:	7 MPH	0 MPH	4 MPH
Wind Direction:	NW		SW
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	45 F	48 F	41 F
Soil Moisture:	NORMAL	ABONOR	NORMAL
% Cloud Cover:	80	90	5
Next Moisture Occurred On:	11-5-13	11-6-12	12-4-12
Time to Next Moisture, Unit:	6 DAY	1 HR	4 DAY

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	TRZAW	TRZAW	TRZAW
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	FK1
Stage Minimum, Percent:			SPIKE
Stage Maximum, Percent:			FK1
Height, Unit:			2.5 IN
Height Minimum, Maximum:			1 2.5

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	POAAN W	POAAN W	POAAN W
Stage Majority, Percent:	NA	NA	NA

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Annual Bluegrass Control in Wheat.

Trial ID: 13-ARC-9 Location: Agronomy Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 12-3-12 Injury Percent 28 DAP	TRZAW 1-7-13 Injury Percent 63 DAP	TRZAW 4-9-13 Injury Percent Mid-Spring	POAAN 4-9-13 Control Percent Mid-Spring
1	FINESSE	75	WG	0.0234	lb ai/a	0.5	oz/a	PRE	B	0 a	0 a	0 a	99 a
2	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	B	0 a	0 a	0 a	99 a
3	FINESSE	75	WG	0.0234	lb ai/a	0.5	oz/a	PRE	B	0 a	0 a	0 a	99 a
	ZIDUA	85	WG	0.053	lb ai/a	1.0	oz/a	PRE	B				
4	FINESSE	75	WG	0.0234	lb ai/a	0.5	oz/a	PRE	B	0 a	0 a	0 a	99 a
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	B				
5	AXIOM	68	WG	0.34	lb ai/a	8	oz/a	SPK-2L	C	0 a	0 a	0 a	99 a
6	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	SPK-2L	C	0 a	0 a	0 a	99 a
	AXIOM	68	WG	0.255	lb ai/a	6	oz/a	SPK-2L	C				
7	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	SPK-2L	C	0 a	0 a	0 a	99 a
	AXIOM	68	WG	0.34	lb ai/a	8	oz/a	SPK-2L	C				
8	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	7DBP	A	0 a	0 a	0 a	99 a
9	FINESSE	75	WG	0.0234	lb ai/a	0.5	oz/a	7DBP	A	0 a	0 a	0 a	99 a
	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	7DBP	A				
10	NONTREATED									0 a	0 a	0 a	99 a
LSD (P=.05)										0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Annual Bluegrass Control in Wheat.

Trial ID: 13-ARC-9 Location: Agronomy Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-13-263).
2. CI/WC at 14, 28, and 56 DAP and Mid-spring.
3. Blanket burndown application of Roundup WeatherMax (32 floz/A) was applied at 7DBP on 10-30-12.
4. There was not enough new emergence of POAAN following the burndown application
   to make weed control evaluations.
   The planned 14 DAP evaluation could not be made due to slow emergence due to cold soil.
   The planned 56 DAP evaluation was delayed due to snow cover.
5. There was no observable wheat injury at any time.
6. Not harvested.

Glyphosate-Resistant Marestail, Waterhemp or Palmer Amaranth Control

Southern Illinois University

General Evaluation of Fall Herbicicdes in Soybean.

Trial ID: 13-FagerS-GenFallSoy Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 11-19-12
Completion Date: 7-8-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Evaluate fall applied herbicide applications for no-till soybean weed control.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG 4232
Description: RR/STS
Planting Date: 5-1-13
Planting Rate, Unit: 155000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** LAMAM Lamium amplexicaule L.
Common Name: henbit

Pest 3 Type: W **Code:** STEME Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 4 Type: W **Code:** VIORA Viola bicolor Pursh
Common Name: pansy, field

Pest 5 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL silt loam
pH: 5.5 **Soil Name:** Alvin
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	LB/A
K	446	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

General Evaluation of Fall Herbicicdes in Soybean.

Trial ID: 13-FagerS-GenFallSoy Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	10-1-12					7	DAY	36	80	F
2.	10-1-12	1.07	IN	RAIN	rain	5	DAY			
3.	10-8-12					7	DAY	32	79	F
4.	10-11-12	1.01	IN	RAIN	rain	4	DAY			
5.	10-15-12					7	DAY	45	79	F
6.	10-17-12	0.99	IN	RAIN	rain	4	DAY			
7.	10-22-12					7	DAY	34	81	F
8.	10-25-12	0.7	IN	RAIN	rain	2	DAY			
9.	10-29-12					7	DAY	28	62	F
10.	11-5-12					7	DAY	29	71	F
11.	11-5-12	0.09	IN	RAIN	rain	3	DAY			
12.	11-11-12	1.49	IN	RAIN	rain	2	DAY			
13.	11-12-12					7	DAY	24	62	F
14.	11-19-12					7	DAY	24	66	F
15.	11-22-12	0.11	IN	RAIN	rain	5	DAY			
16.	11-26-12					7	DAY	21	66	F
17.	12-3-12					7	DAY	31	68	F
18.	12-4-12	0.26	IN	RAIN	rain	4	DAY			
19.	12-9-12	1.09	IN	RAIN	rain	8	DAY			
20.	12-10-12					7	DAY	23	59	F
21.	12-17-12					7	DAY	19	63	F
22.	12-20-12	0.35	IN	RAIN	rain	4	DAY			
23.	12-24-12					7	DAY	8	47	F
24.	12-28-12	0.83	IN	RAIN	rain	6	DAY			
25.	12-31-12					7	DAY	13	40	F
26.	1-7-13					7	DAY	19	64	F
27.	1-10-13	0.57	IN	RAIN	rain	3	DAY			
28.	1-12-13	2.66	IN	RAIN	rain	2	DAY			
29.	1-14-13					7	DAY	22	55	F
30.	1-21-13					7	DAY	16	52	F
31.	1-28-13					7	DAY	13	70	F
32.	1-29-13	2.17	IN	RAIN	rain	4	DAY			
33.	2-4-13					7	DAY	27	66	F
34.	2-7-13	0.25	IN	RAIN	rain	5	DAY			
35.	2-10-13	0.54	IN	RAIN	rain	5	DAY			
36.	2-11-13					7	DAY	24	60	F
37.	2-18-13					7	DAY	23	57	F
38.	2-18-13	1.35	IN	RAIN	rain	4	DAY			
39.	2-25-13					7	DAY	25	54	F
40.	2-26-13	0.67	IN	RAIN	rain	4	DAY			
41.	3-1-13	0.2	IN	RAIN	rain	5	DAY			
42.	3-4-13					7	DAY	26	68	F
43.	3-10-13	0.49	IN	RAIN	rain	2	DAY			
44.	3-11-13					7	DAY	24	74	F
45.	3-17-13	2.87	IN	RAIN	rain	3	DAY			
46.	3-18-13					7	DAY	23	57	F
47.	3-24-13	0.34	IN	RAIN	rain	2	DAY			
48.	3-25-13					7	DAY	24	68	F
49.	3-30-13	0.54	IN	RAIN	rain	2	DAY			
50.	4-1-13					7	DAY	26	75	F
51.	4-8-13					7	DAY	32	81	F
52.	4-10-13	0.85	IN	RAIN	rain	2	DAY			
53.	4-15-13					7	DAY	32	83	F
54.	4-18-13	2.16	IN	RAIN	rain	1	DAY			
55.	4-22-13					7	DAY	32	72	F
56.	4-24-13	0.55	IN	RAIN	rain	2	DAY			
57.	4-27-13	0.37	IN	RAIN	rain	2	DAY			
58.	4-29-13					7	DAY	41	81	F

General Evaluation of Fall Herbicicdes in Soybean.

Trial ID: 13-FagerS-GenFallSoy Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

59.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
60.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
61.	5-6-13					7	DAY	41	80	F
62.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
63.	5-13-13					7	DAY	37	87	F
64.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
65.	5-20-13					7	DAY	43	85	F
66.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
67.	5-27-13					7	DAY	59	86	F
68.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
69.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
70.	6-3-13					7	DAY	50	82	F
71.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
72.	6-10-13					7	DAY	57	93	F
73.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
74.	6-17-13					7	DAY	61	92	F
75.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
76.	6-24-13					7	DAY	64	93	F
77.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
78.	6-30-13	0.3	IN	RAIN	rain	2	DAY			

Application Description

	A	B	C
Application Date:	11-19-12	5-1-13	6-10-13
Appl. Start Time:	8:00	15:30	18:40
Appl. Stop Time:	8:30	16:00	19:10
Application Method:	Spray	Spray	Spray
Application Timing:	FALL	PRE	POST
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RJW	LXF	LXF
Air Temperature, Unit:	44 F	82 F	79 F
% Relative Humidity:	69	48	56
Wind Velocity, Unit:	0 MPH	4 MPH	2 MPH
Wind Direction:		SW	N
Dew Presence (Y/N):	Y	N	N
Soil Temperature, Unit:	43 F	72 F	80 F
Soil Moisture:	NORMAL	ABONOR	NORMAL
% Cloud Cover:	50	75	30
Next Moisture Occurred On:	11-22-13	5-2-13	6-17-13
Time to Next Moisture, Unit:	86 HR	30 HR	7 DAY

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA
Stage Scale Used:	NA	NA	DESC
Stage Majority, Percent:			V4
Stage Minimum, Percent:			V3
Stage Maximum, Percent:			V4
Height, Unit:			6 IN
Height Minimum, Maximum:			5 6

Southern Illinois University

General Evaluation of Fall Herbicicdes in Soybean.

Trial ID: 13-FagerS-GenFallSoy Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	ERICA W	ERICA W	ERICA W
Stage Majority, Percent:	NA	8	30
Stage Minimum, Percent:		COTY	20
Stage Maximum, Percent:		25	50
Height, Unit:		1 IN	6 IN
Height Minimum, Maximum:		0.5 4	4 8
Density, Unit:		2 FT2	0.1 FT2
Pest 2 Code, Type, Scale:	LAMAM W	LAMAM W	LAMAM W
Stage Majority, Percent:	4	4	NA
Stage Minimum, Percent:	2	2	
Stage Maximum, Percent:	6	6	
Height, Unit:	1 IN	2 IN	
Height Minimum, Maximum:	0.5 2	1 3	
Pest 3 Code, Type, Scale:	STEME W	STEME W	STEME W
Stage Majority, Percent:	15	NA	NA
Stage Minimum, Percent:	5		
Stage Maximum, Percent:	20		
Height, Unit:	1.5 IN		
Height Minimum, Maximum:	0.5 2		
Density, Unit:	10 FT2		
Pest 4 Code, Type, Scale:	VIORA W	VIORA W	VIORA W
Stage Majority, Percent:	6	30	NA
Stage Minimum, Percent:	COTY	5	
Stage Maximum, Percent:	10	35	
Height, Unit:	1 IN	5 IN	
Height Minimum, Maximum:	0.5 2	4 6	
Density, Unit:	10 FT2	0.25 FT2	
Pest 5 Code, Type, Scale:	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	2	14
Stage Minimum, Percent:		COTY	COTY
Stage Maximum, Percent:		4	20
Height, Unit:		0.5 IN	6 IN
Height Minimum, Maximum:		0.25 1	0.5 8
Density, Unit:		10 FT2	5 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

General Evaluation of Fall Herbicicdes in Soybean.

Trial ID: 13-FagerS-GenFallSoy Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-10-13 Injury Percent 40 DA-B 0 DA-C	GLXMA 7-8-13 Injury Percent 28 DA-C
1	NONTREATED									0 c	0 a
2	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A	0 c	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A		
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A		
	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B		
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B		
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C		
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	FALL	A	0 c	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A		
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A		
	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B		
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B		
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C		
4	ENVOKE	75	WG	0.0047	lb ai/a	0.1	oz/a	FALL	A	5 b	0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A		
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A		
	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B		
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B		
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C		
5	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A	6 ab	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A		
	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B		
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B		
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C		
6	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B	6 a	0 a
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B		
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C		
LSD (P=.05)										1.2	0.0
Standard Deviation										0.6	0.0
CV										22.32	0.0
Replicate F										1.667	0.000
Replicate Prob(F)										0.2373	1.0000
Treatment F										73.583	0.000
Treatment Prob(F)										0.0001	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

General Evaluation of Fall Herbicicdes in Soybean.

Trial ID: 13-FagerS-GenFallSoy Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Pest Code									ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Crop Code														
	Rating Date									12-10-12	3-1-13	4-1-13	5-1-13	6-10-13	7-8-13
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing													40 DA-B	
	Trt-Eval Interval									21 DA-A	102 DA-A	133 DA-A	0 DAP	0 DA-C	28 DA-C
1	NONTREATED									0 c	0 c	0 d	0 d	0 d	0 c
2	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A	80 a	99 a	99 a	97 a	99 a	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A						
	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C						
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	FALL	A	78 ab	99 a	99 a	97 a	99 a	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A						
	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C						
4	ENVOKE	75	WG	0.0047	lb ai/a	0.1	oz/a	FALL	A	80 a	99 a	98 b	82 b	92 b	89 b
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A						
	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B						
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C						
5	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A	73 b	96 b	96 c	47 c	89 c	88 b
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A						
	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B						
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C						
6	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B					93 b	89 b
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C						
	LSD (P=.05)									6.0	1.0	1.3	9.0	2.9	4.2
	Standard Deviation									3.2	0.5	0.7	4.8	1.6	2.3
	CV									5.07	0.66	0.87	7.39	2.06	3.0
	Replicate F									0.167	1.000	1.714	0.074	3.136	1.335
	Replicate Prob(F)									0.8493	0.4096	0.2401	0.9297	0.0877	0.3062
	Treatment F									366.500	21771.252	12355.858	227.835	1715.157	816.745
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

General Evaluation of Fall Herbicicdes in Soybean.

Trial ID: 13-FagerS-GenFallSoy Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM	LAMAM	LAMAM	LAMAM
	Pest Code									LAMAM	LAMAM	LAMAM	LAMAM
	Crop Code												
	Rating Date									12-10-12	3-1-13	4-1-13	5-1-13
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									21 DA-A	102 DA-A	133 DA-A	0 DAP
1	NONTREATED									0 c	0 c	0 b	0 c
2	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A	78 a	98 a	98 a	98 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C				
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C				
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	FALL	A	73 b	96 b	96 a	98 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A				
	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C				
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C				
4	ENVOKE	75	WG	0.0047	lb ai/a	0.1	oz/a	FALL	A	78 a	98 a	98 a	98 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A				
	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B				
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B				
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C				
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C				
5	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A	73 b	95 b	96 a	94 b
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A				
	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B				
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B				
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C				
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C				
6	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B				
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B				
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C				
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C				
	LSD (P=.05)									4.9	1.8	2.1	3.5
	Standard Deviation									2.6	1.0	1.1	1.9
	CV									4.26	1.25	1.45	2.39
	Replicate F									1.000	0.286	0.211	0.951
	Replicate Prob(F)									0.4096	0.7588	0.8145	0.4259
	Treatment F									520.375	6013.215	4474.000	1644.010
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

General Evaluation of Fall Herbicicdes in Soybean.

Trial ID: 13-FagerS-GenFallSoy Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	STEME	STEME	STEME	STEME	VIORA	VIORA
	Pest Code									STEME	STEME	STEME	STEME	VIORA	VIORA
	Crop Code														
	Rating Date									12-10-12	3-1-13	4-1-13	5-1-13	4-1-13	5-1-13
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing														
	Trt-Eval Interval									21 DA-A	102 DA-A	133 DA-A	0 DAP	133 DA-A	0 DAP
1	NONTREATED									0 c	0 b	0 a	0 c	0 d	0 d
2	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A	78 a	98 a	99 a	99 a	99 a	97 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A						
	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C						
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	FALL	A	72 b	98 a	99 a	99 a	98 a	97 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A						
	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C						
4	ENVOKE	75	WG	0.0047	lb ai/a	0.1	oz/a	FALL	A	77 ab	99 a	99 a	99 a	90 b	68 b
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A						
	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B						
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C						
5	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A	75 ab	96 a	97 a	95 b	80 c	57 c
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A						
	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B						
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C						
6	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B						
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C						
	LSD (P=.05)									5.8	2.5	0.0	3.8	4.3	4.8
	Standard Deviation									3.1	1.3	0.0	2.0	2.3	2.6
	CV									5.13	1.7	0.0	2.57	3.12	4.01
	Replicate F									1.217	0.717	0.000	1.000	1.000	2.786
	Replicate Prob(F)									0.3455	0.5171	1.0000	0.4096	0.4096	0.1207
	Treatment F									358.000	3257.642	0.000	1417.172	994.513	728.561
	Treatment Prob(F)									0.0001	0.0001	1.0000	0.0001	0.0001	0.0001

General Evaluation of Fall Herbicicdes in Soybean.

Trial ID: 13-FagerS-GenFallSoy Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 5-1-13 Control Percent 0 DAP	AMATA-HR 6-10-13 Control Percent 40 DA-B 0 DA-C	AMATA-HR 7-8-13 Control Percent 28 DA-C
1	NONTREATED									0 a	0 e	0 c
2	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A	0 a	74 b	57 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A			
	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C			
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	FALL	A	0 a	73 bc	53 b
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A			
	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST	C			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C			
4	ENVOKE	75	WG	0.0047	lb ai/a	0.1	oz/a	FALL	A	0 a	83 a	71 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A			
	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B			
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B			
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C			
5	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A	0 a	66 cd	50 b
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A			
	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B			
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B			
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C			
6	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	B		64 d	55 b
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B			
	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	POST	C			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	POST	C			
LSD (P=.05)										0.0	8.1	14.7
Standard Deviation										0.0	4.4	8.1
CV										0.0	7.36	16.94
Replicate F										0.000	10.510	16.259
Replicate Prob(F)										1.0000	0.0035	0.0007
Treatment F										0.000	140.189	27.424
Treatment Prob(F)										1.0000	0.0001	0.0001

Southern Illinois University

General Evaluation of Fall Herbicicdes in Soybean.

Trial ID: 13-FagerS-GenFallSoy Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (MJW12-897), Syngenta.
2. WC 21 DA-A, March 1, April 1, and at planting.
   CI/WC 0 and 28 DA-C.
3. Planting, use a RR/STS soybean.
4. Following the PRE application the first rainfall event, beginning 1 day later, was 2.08 inch over 4 days.
5. By 6-10-13, LAMAM, STEME, and VIORA in the nontreated plots were senescing naturally
   and could no longer be evaluated.
6. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
7. Not harvested.

Southern Illinois University

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 11-14-12
Completion Date: 10-18-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Determine the performance of fall and spring applications of residual herbicides for soybean with the primary focus on residual waterhemp control in spring and summer.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 5-1-13
Planting Rate, Unit: 140000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** LAMAM Lamium amplexicaule L.
Common Name: henbit

Pest 3 Type: W **Code:** STEME Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 4 Type: W **Code:** VIORA Viola bicolor Pursh
Common Name: pansy, field

Pest 5 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: NONE control is other than an untreated

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL SILT LOAM
pH: 5.5 **Soil Name:** ALVIN
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	LB/A
K	446	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	10-1-12					7	DAY	36	80	F
2.	10-1-12	1.07	IN	RAIN	rain	5	DAY			
3.	10-8-12					7	DAY	32	79	F
4.	10-11-12	1.01	IN	RAIN	rain	4	DAY			
5.	10-15-12					7	DAY	45	79	F
6.	10-17-12	0.99	IN	RAIN	rain	4	DAY			
7.	10-22-12					7	DAY	34	81	F
8.	10-25-12	0.7	IN	RAIN	rain	2	DAY			
9.	10-29-12					7	DAY	28	62	F
10.	11-5-12					7	DAY	29	71	F
11.	11-5-12	0.09	IN	RAIN	rain	3	DAY			
12.	11-11-12	1.49	IN	RAIN	rain	2	DAY			
13.	11-12-12					7	DAY	24	62	F
14.	11-19-12					7	DAY	24	66	F
15.	11-22-12	0.11	IN	RAIN	rain	5	DAY			
16.	11-26-12					7	DAY	21	66	F
17.	12-3-12					7	DAY	31	68	F
18.	12-4-12	0.26	IN	RAIN	rain	4	DAY			
19.	12-9-12	1.09	IN	RAIN	rain	8	DAY			
20.	12-10-12					7	DAY	23	59	F
21.	12-17-12					7	DAY	19	63	F
22.	12-20-12	0.35	IN	RAIN	rain	4	DAY			
23.	12-24-12					7	DAY	8	47	F
24.	12-28-12	0.83	IN	RAIN	rain	6	DAY			
25.	12-31-12					7	DAY	13	40	F
26.	1-7-13					7	DAY	19	64	F
27.	1-10-13	0.57	IN	RAIN	rain	3	DAY			
28.	1-12-13	2.66	IN	RAIN	rain	2	DAY			
29.	1-14-13					7	DAY	22	55	F
30.	1-21-13					7	DAY	16	52	F
31.	1-28-13					7	DAY	13	70	F
32.	1-29-13	2.17	IN	RAIN	rain	4	DAY			
33.	2-4-13					7	DAY	27	66	F
34.	2-7-13	0.25	IN	RAIN	rain	5	DAY			
35.	2-10-13	0.54	IN	RAIN	rain	5	DAY			
36.	2-11-13					7	DAY	24	60	F
37.	2-18-13					7	DAY	23	57	F
38.	2-18-13	1.35	IN	RAIN	rain	4	DAY			
39.	2-25-13					7	DAY	25	54	F
40.	2-26-13	0.67	IN	RAIN	rain	4	DAY			
41.	3-1-13	0.2	IN	RAIN	rain	5	DAY			
42.	3-4-13					7	DAY	26	68	F
43.	3-10-13	0.49	IN	RAIN	rain	2	DAY			
44.	3-11-13					7	DAY	24	74	F
45.	3-17-13	2.87	IN	RAIN	rain	3	DAY			
46.	3-18-13					7	DAY	23	57	F
47.	3-24-13	0.34	IN	RAIN	rain	2	DAY			
48.	3-25-13					7	DAY	24	68	F
49.	3-30-13	0.54	IN	RAIN	rain	2	DAY			
50.	4-1-13					7	DAY	26	75	F
51.	4-8-13					7	DAY	32	81	F
52.	4-10-13	0.85	IN	RAIN	rain	2	DAY			
53.	4-15-13					7	DAY	32	83	F
54.	4-18-13	2.16	IN	RAIN	rain	1	DAY			
55.	4-22-13					7	DAY	32	72	F
56.	4-24-13	0.55	IN	RAIN	rain	2	DAY			
57.	4-27-13	0.37	IN	RAIN	rain	2	DAY			

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

58.	4-29-13					7	DAY	41	81	F
59.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
60.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
61.	5-6-13					7	DAY	41	80	F
62.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
63.	5-13-13					7	DAY	37	87	F
64.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
65.	5-20-13					7	DAY	43	85	F
66.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
67.	5-27-13					7	DAY	59	86	F
68.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
69.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
70.	6-3-13					7	DAY	50	82	F
71.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
72.	6-10-13					7	DAY	57	93	F
73.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
74.	6-17-13					7	DAY	61	92	F
75.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
76.	6-24-13					7	DAY	64	93	F
77.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
78.	6-30-13	0.3	IN	RAIN	rain	2	DAY			

Application Description

	A	**B**	**C**	**D**
Application Date:	11-19-12	4-2-13	5-1-13	6-3-13
Appl. Start Time:	8:15	10:30	14:15	17:45
Appl. Stop Time:	9:00	11:00	14:45	18:30
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	FALL	EPP30	PRE	POST
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	RJW	RJW	BGY	NTH
Air Temperature, Unit:	44 F	42 F	82 F	81 F
% Relative Humidity:	69	40	48	50
Wind Velocity, Unit:	0 MPH	4 MPH	4 MPH	3 MPH
Wind Direction:		N	S	SE
Dew Presence (Y/N):	Y	N	N	N
Soil Temperature, Unit:	43 F	39 F	72 F	78 F
Soil Moisture:	NORMAL	ABONOR	ABONOR	NORMAL
% Cloud Cover:	50	70	75	5
Next Moisture Occurred On:	11-22-12	4-10-13	5-2-13	6-9-13
Time to Next Moisture, Unit:	92 HR	96 HR	32 HR	6 DAY

Crop Stage At Each Application

	A	**B**	**C**	**D**
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	NA	V3
Stage Minimum, Percent:				V2
Stage Maximum, Percent:				V3
Height, Unit:				6 IN
Height Minimum, Maximum:				2 6

Southern Illinois University

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	ERICA W	ERICA W	ERICA W	ERICA W
Stage Majority, Percent:	NA	4	16	15
Stage Minimum, Percent:		COTY	10	10
Stage Maximum, Percent:		8	25	50+
Height, Unit:		1.5 IN	2.5 IN	3 IN
Height Minimum, Maximum:		0.25 2	0.25 10	1 14
Density, Unit:		2 FT2	2.5 FT2	2 FT2
Pest 2 Code, Type, Scale:	LAMAM W	LAMAM W	LAMAM W	LAMAM W
Stage Majority, Percent:	4	NA	NA	NA
Stage Minimum, Percent:	2			
Stage Maximum, Percent:	6			
Height, Unit:	2 IN			
Height Minimum, Maximum:	0.5 2			
Density, Unit:	5 FT2			
Pest 3 Code, Type, Scale:	STEME W	STEME W	STEME W	STEME W
Stage Majority, Percent:	10	6	NA	NA
Stage Minimum, Percent:	5	4		
Stage Maximum, Percent:	20	15		
Height, Unit:	2 IN	1 IN		
Height Minimum, Maximum:	0.5 2	0.5 2		
Density, Unit:	10 FT2	0.5 FT2		
Pest 4 Code, Type, Scale:	VIORA W	VIORA W	VIORA W	VIORA W
Stage Majority, Percent:	6	NA	NA	NA
Stage Minimum, Percent:	COTY			
Stage Maximum, Percent:	10			
Height, Unit:	1 IN			
Height Minimum, Maximum:	0.5 2			
Density, Unit:	10 FT2			
Pest 5 Code, Type, Scale:	AMATA W	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	NA	NA	12
Stage Minimum, Percent:				2
Stage Maximum, Percent:				40
Height, Unit:				4 IN
Height Minimum, Maximum:				0.5 14
Density, Unit:				10 FT2

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-18-13 Moisture Percent	GLXMA 10-18-13 Yield bu/A	GLXMA 6-3-13 Injury Percent 33 DA-C 0 DA-D	GLXMA 7-1-13 Injury Percent 28 DA-D
1	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	15.4 a	38 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
2	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	FALL	A	15.9 a	35 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
3	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	FALL	A	16.2 a	35 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	FALL	A	15.9 a	34 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
5	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	16.2 a	37 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
6	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	FALL	A	17.0 a	36 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
7	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	15.8 a	33 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C				
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-18-13 Moisture Percent	GLXMA 10-18-13 Yield bu/A	GLXMA 6-3-13 Injury Percent 33 DA-C 0 DA-D	GLXMA 7-1-13 Injury Percent 28 DA-D
8	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	FALL	A	17.9 a	36 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	PRE	C				
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
9	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B	15.3 a	46 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C				
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
10	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	EPP30	B	15.3 a	40 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	PRE	C				
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	EPP30	B	15.6 a	38 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
12	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	EPP30	B	15.4 a	38 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
13	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	EPP30	B	16.2 a	41 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
14	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	EPP30	B	16.2 a	36 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
15	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	C	15.5 a	41 a	0 a	0 a
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				

Southern Illinois University

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-18-13 Moisture Percent	GLXMA 10-18-13 Yield bu/A	GLXMA 6-3-13 Injury Percent 33 DA-C 0 DA-D	GLXMA 7-1-13 Injury Percent 28 DA-D
16	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	PRE	C	15.5 a	51 a	0 a	0 a
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
17	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	C	15.8 a	44 a	0 a	0 a
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
18	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	C	15.8 a	33 a	0 a	0 a
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
19	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A	15.8 a	41 a	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
20	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B	15.4 a	43 a	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
21	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C	15.9 a	37 a	0 a	0 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
LSD (P=.05)										2.10	10.1	0.0	0.0
Standard Deviation										1.27	6.1	0.0	0.0
CV										7.98	15.83	0.0	0.0
Replicate F										1.303	5.582	0.000	0.000
Replicate Prob(F)										0.2831	0.0073	1.0000	1.0000
Treatment F										0.682	1.614	0.000	0.000
Treatment Prob(F)										0.8199	0.0975	1.0000	1.0000

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 4-2-13 Control Percent 134 DA-A 0 DA-B	ERICA-HR 5-1-13 Control Percent 29 DA-B 0 DA-C	ERICA-HR 6-3-13 Control Percent 33 DA-C 0 DA-D	ERICA-HR 7-1-13 Control Percent 28 DA-D
1	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	99 a	99 a	99 a	98 ab
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
2	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	FALL	A	99 a	98 a	98 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
3	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	FALL	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	FALL	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
5	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
6	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	FALL	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
7	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C				
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 4-2-13 Control Percent 134 DA-A 0 DA-B	ERICA-HR 5-1-13 Control Percent 29 DA-B 0 DA-C	ERICA-HR 6-3-13 Control Percent 33 DA-C 0 DA-D	ERICA-HR 7-1-13 Control Percent 28 DA-D
8	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	FALL	A	99 a	98 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	PRE	C				
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
9	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B		99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C				
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
10	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	EPP30	B		99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	PRE	C				
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	EPP30	B		99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
12	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	EPP30	B		99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
13	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	EPP30	B		99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
14	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	EPP30	B		99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
15	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	C			98 a	99 a
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				

Southern Illinois University

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Pest Code									ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Crop Code												
	Rating Date									4-2-13	5-1-13	6-3-13	7-1-13
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing									134 DA-A	29 DA-B	33 DA-C	
	Trt-Eval Interval									0 DA-B	0 DA-C	0 DA-D	28 DA-D
16	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	PRE	C			98 a	98 ab
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
17	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	C			98 a	98 ab
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
18	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	C			98 a	99 a
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
19	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A	96 b	80 b	13 c	73 c
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
20	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B		99 a	47 b	73 c
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
21	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C			93 a	95 b
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
	LSD (P=.05)									0.7	5.8	8.8	4.0
	Standard Deviation									0.4	3.5	5.3	2.4
	CV									0.39	3.57	5.8	2.5
	Replicate F									1.000	0.879	0.454	1.592
	Replicate Prob(F)									0.3897	0.4255	0.6383	0.2162
	Treatment F									16.000	5.337	47.908	30.553
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM 4-2-13 Control Percent 134 DA-A 0 DA-B	LAMAM 5-1-13 Control Percent 29 DA-B 0 DA-C	STEME 4-2-13 Control Percent 134 DA-A 0 DA-B	STEME 5-1-13 Control Percent 29 DA-B 0 DA-C	VIORA 4-2-13 Control Percent 134 DA-A 0 DA-B	VIORA 5-1-13 Control Percent 29 DA-B 0 DA-C
1	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	99 a	99 a	99 a	99 a	99 a	98 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
2	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	FALL	A	99 a	99 a	99 a	99 a	99 a	98 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
3	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	FALL	A	99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	FALL	A	99 a	99 a	99 a	99 a	99 a	98 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
5	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A						
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B						
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
6	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	FALL	A	99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A						
	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	EPP30	B						
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
7	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	99 a	99 a	99 a	99 a	99 a	98 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A						
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C						
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM 4-2-13 Control Percent 134 DA-A 0 DA-B	LAMAM 5-1-13 Control Percent 29 DA-B 0 DA-C	STEME 4-2-13 Control Percent 134 DA-A 0 DA-B	STEME 5-1-13 Control Percent 29 DA-B 0 DA-C	VIORA 4-2-13 Control Percent 134 DA-A 0 DA-B	VIORA 5-1-13 Control Percent 29 DA-B 0 DA-C
8	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	FALL	A	99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A						
	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	PRE	C						
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
9	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B		99 a		99 a		99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B						
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C						
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
10	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	EPP30	B		99 a		99 a		99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B						
	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	PRE	C						
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	EPP30	B		99 a		99 a		99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
12	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	EPP30	B		99 a		99 a		99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
13	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	EPP30	B		99 a		99 a		99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
14	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	EPP30	B		99 a		99 a		99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
15	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	C						
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						

Southern Illinois University

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM	LAMAM	STEME	STEME	VIORA	VIORA
	Pest Code									LAMAM	LAMAM	STEME	STEME	VIORA	VIORA
	Crop Code														
	Rating Date									4-2-13	5-1-13	4-2-13	5-1-13	4-2-13	5-1-13
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing									134 DA-A	29 DA-B	134 DA-A	29 DA-B	134 DA-A	29 DA-B
	Trt-Eval Interval									0 DA-B	0 DA-C	0 DA-B	0 DA-C	0 DA-B	0 DA-C
16	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	PRE	C						
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
17	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	C						
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
18	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	C						
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
19	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A	98 b	97	96 b	91 b	87 b	63 b
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
20	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B		99		98 a		98 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B						
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
21	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C						
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D						
	LSD (P=.05)									0.7	0.0	0.7	3.9	1.5	9.6
	Standard Deviation									0.4	0.0	0.4	2.3	0.8	5.8
	CV									0.39	0.0	0.39	2.39	0.86	5.98
	Replicate F									1.000	0.000	1.000	0.895	1.000	1.205
	Replicate Prob(F)									0.3897	1.0000	0.3897	0.4191	0.3897	0.3137
	Treatment F									4.000	0.000	16.000	2.351	64.474	7.053
	Treatment Prob(F)									0.0088	1.0000	0.0001	0.0226	0.0001	0.0001

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 5-1-13 Control Percent 29 DA-B 0 DA-C	AMATA-HR 6-3-13 Control Percent 33 DA-C 0 DA-D	AMATA-HR 7-1-13 Control Percent 28 DA-D
1	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	47 c	0 k	0 j
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
2	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	FALL	A	59 b	10 jk	0 j
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
3	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	FALL	A	60 b	13 ij	7 ij
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	FALL	A	67 b	3 jk	0 j
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
5	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	94 a	23 hi	7 ij
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
6	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	FALL	A	88 a	27 h	7 ij
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
7	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	45 c	70 de	28 fg
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C			
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 5-1-13 Control Percent 29 DA-B 0 DA-C	AMATA-HR 6-3-13 Control Percent 33 DA-C 0 DA-D	AMATA-HR 7-1-13 Control Percent 28 DA-D
8	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	FALL	A	60 b	76 cd	32 efg
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	PRE	C			
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
9	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B	94 a	90 ab	45 cd
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C			
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
10	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	EPP30	B	93 a	78 cd	37 c-f
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	VALOR XLT	40.3	WG	0.0378	lb ai/a	1.5	oz/a	PRE	C			
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	EPP30	B	99 a	40 g	20 gh
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
12	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	EPP30	B	99 a	65 e	30 fg
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
13	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	EPP30	B	98 a	42 fg	13 hi
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
14	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	EPP30	B	99 a	52 f	20 gh
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
15	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	C		90 ab	60 b
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR
	Pest Code									AMATA-HR	AMATA-HR	AMATA-HR
	Crop Code											
	Rating Date									5-1-13	6-3-13	7-1-13
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing									29 DA-B	33 DA-C	
	Trt-Eval Interval									0 DA-C	0 DA-D	28 DA-D
16	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	PRE	C		97 a	87 a
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
17	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	C		81 bc	35 def
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
18	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	C		85 bc	48 bc
	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
19	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A	0 d	0 k	43 cde
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
20	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B	0 d	0 k	27 fg
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
21	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	PRE	C		0 k	25 fgh
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
	LSD (P=.05)									11.4	10.2	12.8
	Standard Deviation									6.8	6.2	7.7
	CV									9.9	13.75	28.47
	Replicate F									0.100	0.130	2.054
	Replicate Prob(F)									0.9052	0.8782	0.1416
	Treatment F									71.430	101.282	24.122
	Treatment Prob(F)									0.0001	0.0001	0.0001

Southern Illinois University

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 13-FagerS-ISA-Fall Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: ISA (Univ of IL).
2. Ratings: CI at 0 and 28 DA-D. WC at B, C, and D timings for all treated plots; WC 28 DA-D.
3. Yield?
4. For the FALL (A) timing; Roundup Powermax, 2, 4-D LV4, and AMS could be a blanket of entire study area, all plots 10 ft wide. Was applied as a blanket 11-14-12.
5. For the PRE (C) timing; Consider Gramoxone 2 SL as a replacement for Roundup Powermax if Marestail is present. Gramoxone was used, treatment list has been modified to reflect the change.
6. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
7. Following the FALL application the first rainfall event, beginning 3 day later, was 0.11 inch over 5 days.
   Following the EPP30 application the first rainfall event, beginning 8 days later, was 0.85 inch over 2 days.
   Following the PRE application the first rainfall event, beginning 1 day later, was 2.08 inch over 4 days.
8. By 6-3-13, LAMAM, STEME, and VIORA in the nontreated plots were senescing naturally and could no longer be evaluated.
9. Harvested 10-18-13, (2) 30 inch rows by 27 ft.

General Evaluation of Fall Herbicides in Corn.

Trial ID: 13-YRC-FP-GenFallCorn Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 11-19-12
Completion Date: 6-26-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Evaluate fall herbicide applications in combination with PRE applications in corn.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33
Description: SS RIB
Planting Date: 5-1-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** LAMAM - Lamium amplexicaule L.
Common Name: henbit

Pest 3 Type: W **Code:** STEME - Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 4 Type: W **Code:** VERAR Veronica arvensis L.
Common Name: speedwell, corn

Pest 5 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 25 FT **Total Plot Length:** 25 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.82 **Texture:** SIL silt loam
pH: 6.2 **Soil Name:** Alvin
CEC: 6.16

Additional Measured Elements

Element	Quantity	Unit
P1	154	lb/A
K	264	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

General Evaluation of Fall Herbicides in Corn.

Trial ID: 13-YRC-FP-GenFallCorn Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	10-1-12					7	DAY	36	80	F
2.	10-1-12	1.07	IN	RAIN	rain	5	DAY			
3.	10-8-12					7	DAY	32	79	F
4.	10-11-12	1.01	IN	RAIN	rain	4	DAY			
5.	10-15-12					7	DAY	45	79	F
6.	10-17-12	0.99	IN	RAIN	rain	4	DAY			
7.	10-22-12					7	DAY	34	81	F
8.	10-25-12	0.7	IN	RAIN	rain	2	DAY			
9.	10-29-12					7	DAY	28	62	F
10.	11-5-12					7	DAY	29	71	F
11.	11-5-12	0.09	IN	RAIN	rain	3	DAY			
12.	11-11-12	1.49	IN	RAIN	rain	2	DAY			
13.	11-12-12					7	DAY	24	62	F
14.	11-19-12					7	DAY	24	66	F
15.	11-22-12	0.11	IN	RAIN	rain	5	DAY			
16.	11-26-12					7	DAY	21	66	F
17.	12-3-12					7	DAY	31	68	F
18.	12-4-12	0.26	IN	RAIN	rain	4	DAY			
19.	12-9-12	1.09	IN	RAIN	rain	8	DAY			
20.	12-10-12					7	DAY	23	59	F
21.	12-17-12					7	DAY	19	63	F
22.	12-20-12	0.35	IN	RAIN	rain	4	DAY			
23.	12-24-12					7	DAY	8	47	F
24.	12-28-12	0.83	IN	RAIN	rain	6	DAY			
25.	12-31-12					7	DAY	13	40	F
26.	1-7-13					7	DAY	19	64	F
27.	1-10-13	0.57	IN	RAIN	rain	3	DAY			
28.	1-12-13	2.66	IN	RAIN	rain	2	DAY			
29.	1-14-13					7	DAY	22	55	F
30.	1-21-13					7	DAY	16	52	F
31.	1-28-13					7	DAY	13	70	F
32.	1-29-13	2.17	IN	RAIN	rain	4	DAY			
33.	2-4-13					7	DAY	27	66	F
34.	2-7-13	0.25	IN	RAIN	rain	5	DAY			
35.	2-10-13	0.54	IN	RAIN	rain	5	DAY			
36.	2-11-13					7	DAY	24	60	F
37.	2-18-13					7	DAY	23	57	F
38.	2-18-13	1.35	IN	RAIN	rain	4	DAY			
39.	2-25-13					7	DAY	25	54	F
40.	2-26-13	0.67	IN	RAIN	rain	4	DAY			
41.	3-1-13	0.2	IN	RAIN	rain	5	DAY			
42.	3-4-13					7	DAY	26	68	F
43.	3-10-13	0.49	IN	RAIN	rain	2	DAY			
44.	3-11-13					7	DAY	24	74	F
45.	3-17-13	2.87	IN	RAIN	rain	3	DAY			
46.	3-18-13					7	DAY	23	57	F
47.	3-24-13	0.34	IN	RAIN	rain	2	DAY			
48.	3-25-13					7	DAY	24	68	F
49.	3-30-13	0.54	IN	RAIN	rain	2	DAY			
50.	4-1-13					7	DAY	26	75	F
51.	4-8-13					7	DAY	32	81	F
52.	4-10-13	0.85	IN	RAIN	rain	2	DAY			
53.	4-15-13					7	DAY	32	83	F
54.	4-18-13	2.16	IN	RAIN	rain	1	DAY			
55.	4-22-13					7	DAY	32	72	F
56.	4-24-13	0.55	IN	RAIN	rain	2	DAY			
57.	4-27-13	0.37	IN	RAIN	rain	2	DAY			
58.	4-29-13					7	DAY	41	81	F

General Evaluation of Fall Herbicides in Corn.

Trial ID: 13-YRC-FP-GenFallCorn Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

59.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
60.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
61.	5-6-13					7	DAY	41	80	F
62.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
63.	5-13-13					7	DAY	37	87	F
64.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
65.	5-20-13					7	DAY	43	85	F
66.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
67.	5-27-13					7	DAY	59	86	F
68.	5-31-13	0.7	IN	RAIN	rain	3	DAY			

Application Description

	A	B
Application Date:	11-19-12	5-1-13
Appl. Start Time:	9:30	16:15
Appl. Stop Time:	10:15	17:00
Application Method:	Spray	Spray
Application Timing:	FALL	PRE
Application Placement:	BROFOL	BROFOL
Applied By:	JRK	EJM
Air Temperature, Unit:	56 F	85 F
% Relative Humidity:	55	42
Wind Velocity, Unit:	0 MPH	5 MPH
Wind Direction:		SW
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	58 F	62 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	90	80
Next Moisture Occurred On:	11-22-12	5-2-13
Time to Next Moisture, Unit:	3 DAY	30 HR

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMD	ZEAMD
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	NA

General Evaluation of Fall Herbicides in Corn.

Trial ID: 13-YRC-FP-GenFallCorn Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ERICA W	ERICA W
Stage Majority, Percent:	12	15
Stage Minimum, Percent:	6	6
Stage Maximum, Percent:	16	25
Height, Unit:	3 IN	5 IN
Height Minimum, Maximum:	2 4	4 8
Density, Unit:	1 FT2	20 FT2
Pest 2 Code, Type, Scale:	LAMAM W	LAMAM W
Stage Majority, Percent:	4	6
Stage Minimum, Percent:	2	4
Stage Maximum, Percent:	6	8
Height, Unit:	2 IN	8 IN
Height Minimum, Maximum:	1 3	6 10
Density, Unit:	0.5 FT2	4 FT2
Pest 3 Code, Type, Scale:	STEME W	STEME W
Stage Majority, Percent:	6	20
Stage Minimum, Percent:	2	10
Stage Maximum, Percent:	10	40
Height, Unit:	2 IN	8 IN
Height Minimum, Maximum:	1 4	5 12
Density, Unit:	0.3 FT2	5 FT2
Pest 4 Code, Type, Scale:	VERAR W	VERAR W
Stage Majority, Percent:	NA	40
Stage Minimum, Percent:		20
Stage Maximum, Percent:		50+
Height, Unit:		3 IN
Height Minimum, Maximum:		1 4
Density, Unit:		1 FT2
Pest 5 Code, Type, Scale:	AMATA W	AMATA W
Stage Majority, Percent:	NA	2
Stage Minimum, Percent:		2
Stage Maximum, Percent:		2
Height, Unit:		0.5 IN
Height Minimum, Maximum:		0.25 1
Density, Unit:		20 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

General Evaluation of Fall Herbicides in Corn.

Trial ID: 13-YRC-FP-GenFallCorn Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 5-29-13 Injury Percent 28 DAP	ZEAMD 6-26-13 Injury Percent 56 DAP
1	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A	0 a	0 a
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	FALL	A		
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B		
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B		
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B		
2	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	FALL	A	0 a	0 a
	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A		
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	FALL	A		
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B		
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B		
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B		
3	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A	0 a	0 a
	BEANOIL	100	SL	0.5	% v/v	0.5	% v/v	FALL	A		
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B		
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B		
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B		
4	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	FALL	A	0 a	0 a
	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A		
	BEANOIL	100	SL	0.5	% v/v	0.5	% v/v	FALL	A		
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B		
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B		
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B		
5	BASIS BLEND	30	WG	0.0234	lb ai/a	1.25	oz/a	FALL	A	0 a	0 a
	PRINCEP	4	SC	0.5	lb ai/a	1	pt/a	FALL	A		
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A		
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A		
	CINCH ATZ	5.5	SC	2.9	lb ai/a	2.1	qt/a	PRE	B		
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B		
6	BASIS BLEND	30	WG	0.0234	lb ai/a	1.25	oz/a	FALL	A	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A		
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A		
	CINCH ATZ	5.5	SC	2.9	lb ai/a	2.1	qt/a	PRE	B		
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B		
7	PRINCEP	4	SC	1	lb ai/a	32	fl oz/a	FALL	A	0 a	0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A		
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A		
	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	B		
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B		
8	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A		
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A		
	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	B		
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B		
9	NONTREATED									0 a	0 a
LSD (P=.05)										0.0	0.0
Standard Deviation										0.0	0.0
CV										0.0	0.0
Replicate F										0.000	0.000
Replicate Prob(F)										1.0000	1.0000
Treatment F										0.000	0.000
Treatment Prob(F)										1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

General Evaluation of Fall Herbicides in Corn.

Trial ID: 13-YRC-FP-GenFallCorn Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 12-10-12 Control Percent 21 DA-A	ERICA-HR 3-1-13 Control Percent 102 DA-A	ERICA-HR 4-1-13 Control Percent 133 DA-A	ERICA-HR 5-1-13 Control Percent 0 DAP	ERICA-HR 5-29-13 Control Percent 28 DAP	ERICA-HR 6-26-13 Control Percent 56 DAP
1	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A	30 c	37 b	30 c	31 d	93 b	92 b
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	FALL	A						
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B						
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B						
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
2	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	FALL	A	73 ab	98 a	92 b	76 c	97 a	98 a
	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A						
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	FALL	A						
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B						
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B						
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
3	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A	30 c	37 b	23 d	23 d	93 b	92 b
	BEANOIL	100	SL	0.5	% v/v	0.5	% v/v	FALL	A						
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B						
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B						
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
4	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	FALL	A	73 ab	97 a	92 b	76 c	97 a	98 a
	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A						
	BEANOIL	100	SL	0.5	% v/v	0.5	% v/v	FALL	A						
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B						
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B						
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
5	BASIS BLEND	30	WG	0.0234	lb ai/a	1.25	oz/a	FALL	A	77 a	99 a	99 a	94 a	98 a	98 a
	PRINCEP	4	SC	0.5	lb ai/a	1	pt/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A						
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A						
	CINCH ATZ	5.5	SC	2.9	lb ai/a	2.1	qt/a	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B						
6	BASIS BLEND	30	WG	0.0234	lb ai/a	1.25	oz/a	FALL	A	72 b	99 a	98 a	88 ab	98 a	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A						
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A						
	CINCH ATZ	5.5	SC	2.9	lb ai/a	2.1	qt/a	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B						
7	PRINCEP	4	SC	1	lb ai/a	32	fl oz/a	FALL	A	73 ab	99 a	99 a	96 a	99 a	99 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A						
	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	B						
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
8	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A	72 b	99 a	99 a	80 bc	99 a	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A						
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A						
	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	B						
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B						
9	NONTREATED									0 d	0 c	0 e	0 e	0 c	0 c
LSD (P=.05)										5.0	4.3	3.9	10.6	1.8	3.1
Standard Deviation										2.9	2.5	2.2	6.1	1.0	1.8
CV										5.2	3.4	3.18	9.81	1.18	2.07
Replicate F										7.000	3.469	0.675	0.391	0.757	2.286
Replicate Prob(F)										0.0065	0.0560	0.5232	0.6828	0.4853	0.1339
Treatment F										283.750	707.987	973.375	97.560	3053.189	993.650
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

General Evaluation of Fall Herbicides in Corn.

Trial ID: 13-YRC-FP-GenFallCorn Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM	LAMAM	LAMAM	LAMAM
	Pest Code									LAMAM	LAMAM	LAMAM	LAMAM
	Crop Code												
	Rating Date									12-10-12	3-1-13	4-1-13	5-1-13
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									21 DA-A	102 DA-A	133 DA-A	0 DAP
1	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A	33 d	96 b	98 b	96 a
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	FALL	A				
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B				
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B				
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B				
2	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	FALL	A	80 abc	99 a	99 a	98 a
	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A				
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	FALL	A				
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B				
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B				
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B				
3	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A	33 d	98 a	99 a	98 a
	BEANOIL	100	SL	0.5	% v/v	0.5	% v/v	FALL	A				
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B				
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B				
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B				
4	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	FALL	A	85 a	99 a	99 a	99 a
	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A				
	BEANOIL	100	SL	0.5	% v/v	0.5	% v/v	FALL	A				
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B				
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B				
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B				
5	BASIS BLEND	30	WG	0.0234	lb ai/a	1.25	oz/a	FALL	A	75 bc	99 a	99 a	99 a
	PRINCEP	4	SC	0.5	lb ai/a	1	pt/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A				
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A				
	CINCH ATZ	5.5	SC	2.9	lb ai/a	2.1	qt/a	PRE	B				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B				
6	BASIS BLEND	30	WG	0.0234	lb ai/a	1.25	oz/a	FALL	A	73 c	99 a	99 a	97 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A				
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A				
	CINCH ATZ	5.5	SC	2.9	lb ai/a	2.1	qt/a	PRE	B				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B				
7	PRINCEP	4	SC	1	lb ai/a	32	fl oz/a	FALL	A	85 a	99 a	99 a	98 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A				
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A				
	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	B				
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B				
8	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A	83 ab	99 a	98 b	79 b
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A				
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A				
	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	B				
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B				
9	NONTREATED									0 e	0 c	0 c	0 c
	LSD (P=.05)									9.9	1.5	0.8	9.8
	Standard Deviation									5.7	0.8	0.5	5.6
	CV									9.36	0.96	0.55	6.64
	Replicate F									1.480	1.474	2.080	0.732
	Replicate Prob(F)									0.2571	0.2586	0.1574	0.4962
	Treatment F									87.765	4606.869	13998.761	99.260
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

General Evaluation of Fall Herbicides in Corn.

Trial ID: 13-YRC-FP-GenFallCorn Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	STEME	STEME	STEME	STEME	VERAR
	Pest Code									STEME	STEME	STEME	STEME	VERAR
	Crop Code													
	Rating Date									12-10-12	3-1-13	4-1-13	5-1-13	5-1-13
	Rating Type									Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent
	Rating Timing													
	Trt-Eval Interval									21 DA-A	102 DA-A	133 DA-A	0 DAP	0 DAP
1	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A	33 c	96 b	96 b	96 a	98 a
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	FALL	A					
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B					
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B					
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B					
2	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	FALL	A	77 ab	99 a	99 a	99 a	96 a
	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A					
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	FALL	A					
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B					
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B					
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B					
3	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A	37 c	98 ab	98 a	98 a	97 a
	BEANOIL	100	SL	0.5	% v/v	0.5	% v/v	FALL	A					
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B					
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B					
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B					
4	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	FALL	A	83 a	98 ab	98 a	98 a	96 a
	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A					
	BEANOIL	100	SL	0.5	% v/v	0.5	% v/v	FALL	A					
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B					
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B					
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B					
5	BASIS BLEND	30	WG	0.0234	lb ai/a	1.25	oz/a	FALL	A	72 b	99 a	99 a	99 a	48 b
	PRINCEP	4	SC	0.5	lb ai/a	1	pt/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A					
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A					
	CINCH ATZ	5.5	SC	2.9	lb ai/a	2.1	qt/a	PRE	B					
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B					
6	BASIS BLEND	30	WG	0.0234	lb ai/a	1.25	oz/a	FALL	A	73 b	99 a	99 a	99 a	22 c
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A					
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A					
	CINCH ATZ	5.5	SC	2.9	lb ai/a	2.1	qt/a	PRE	B					
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B					
7	PRINCEP	4	SC	1	lb ai/a	32	fl oz/a	FALL	A	80 ab	99 a	99 a	99 a	96 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A					
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A					
	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	B					
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B					
8	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A	73 b	98 ab	99 a	88 b	30 c
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A					
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A					
	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	B					
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B					
9	NONTREATED									0 d	0 c	0 c	0 c	0 d
	LSD (P=.05)									9.2	2.1	1.2	4.7	13.2
	Standard Deviation									5.3	1.2	0.7	2.7	7.6
	CV									9.02	1.42	0.82	3.14	11.77
	Replicate F									3.008	0.675	0.509	0.489	1.194
	Replicate Prob(F)									0.0778	0.5232	0.6105	0.6219	0.3287
	Treatment F									87.752	2098.506	6349.437	433.458	81.350
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

General Evaluation of Fall Herbicides in Corn.

Trial ID: 13-YRC-FP-GenFallCorn Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 5-1-13 Control Percent 0 DAP	AMATA-HR 5-29-13 Control Percent 28 DAP	AMATA-HR 6-26-13 Control Percent 56 DAP
1	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A	63 b	68 d	40 d
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	FALL	A			
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B			
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B			
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B			
2	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	FALL	A	47 d	78 bc	68 b
	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A			
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	FALL	A			
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B			
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B			
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B			
3	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A	73 a	71 bcd	50 cd
	BEANOIL	100	SL	0.5	% v/v	0.5	% v/v	FALL	A			
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B			
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B			
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B			
4	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	FALL	A	53 c	79 b	62 bc
	SIMAZAT 4L	4	SC	1.25	lb ai/a	2.5	pt/a	FALL	A			
	BEANOIL	100	SL	0.5	% v/v	0.5	% v/v	FALL	A			
	TRIZMET II	5.5	SC	2.2	lb ai/a	1.6	qt/a	PRE	B			
	QUIK-QUAT	3	SL	0.75	lb ai/a	1	qt/a	PRE	B			
	BEANOIL	100	SL	0.25	% v/v	0.25	% v/v	PRE	B			
5	BASIS BLEND	30	WG	0.0234	lb ai/a	1.25	oz/a	FALL	A	0 e	73 bcd	63 bc
	PRINCEP	4	SC	0.5	lb ai/a	1	pt/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A			
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A			
	CINCH ATZ	5.5	SC	2.9	lb ai/a	2.1	qt/a	PRE	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B			
6	BASIS BLEND	30	WG	0.0234	lb ai/a	1.25	oz/a	FALL	A	0 e	70 cd	63 bc
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A			
	ABUNDIT EXTRA	3	SL	0.375	lb ae/a	16	fl oz/a	FALL	A			
	CINCH ATZ	5.5	SC	2.9	lb ai/a	2.1	qt/a	PRE	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B			
7	PRINCEP	4	SC	1	lb ai/a	32	fl oz/a	FALL	A	0 e	99 a	97 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A			
	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	B			
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B			
8	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	FALL	A	0 e	97 a	94 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A			
	AMS	100	SG	1	% w/w	8.5	lb/100 gal	FALL	A			
	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	B			
	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	PRE	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	B			
9	NONTREATED									0 e	0 e	0 e
LSD (P=.05)										5.5	9.3	13.5
Standard Deviation										3.2	5.3	7.8
CV										12.0	7.58	13.1
Replicate F										2.884	4.124	1.735
Replicate Prob(F)										0.0852	0.0359	0.2081
Treatment F										308.465	86.610	41.130
Treatment Prob(F)										0.0001	0.0001	0.0001

Southern Illinois University

General Evaluation of Fall Herbicides in Corn.

Trial ID: 13-YRC-FP-GenFallCorn Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Drexel, DuPont (MJW12-897), Syngenta.
2. WC 21 DA-A, March 1, April 1, at planting.
   CI/WC at 28 and 56 DAP.
3. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
4. Following the PRE application the first rainfall event, beginning 1 day later, was 2.08 inch over 4 days.
5. Not harvested.

Southern Illinois University

Horseweed Control from Authority Combinations.

Trial ID: 13-YRC-FMC-ERICA Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-2-13
Completion Date: 10-10-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Compare Authority combinations for horseweed control preplant in soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832
Description: RR2Y
Planting Date: 5-12-13
Planting Rate, Unit: 170000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.82 **Texture:** SIL silt loam
pH: 6.2 **Soil Name:** Alvin
CEC: 6.16

Additional Measured Elements

Element	Quantity	Unit
P1	154	lb/A
K	264	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Horseweed Control from Authority Combinations.

Trial ID: 13-YRC-FMC-ERICA Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-13					7	DAY	26	75	F
2.	4-8-13					7	DAY	32	81	F
3.	4-10-13	0.85	IN	RAIN	rain	2	DAY			
4.	4-15-13					7	DAY	32	83	F
5.	4-18-13	2.16	IN	RAIN	rain	1	DAY			
6.	4-22-13					7	DAY	32	72	F
7.	4-24-13	0.55	IN	RAIN	rain	2	DAY			
8.	4-27-13	0.37	IN	RAIN	rain	2	DAY			
9.	4-29-13					7	DAY	41	81	F
10.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
11.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
12.	5-6-13					7	DAY	41	80	F
13.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
14.	5-13-13					7	DAY	37	87	F
15.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
16.	5-20-13					7	DAY	43	85	F
17.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
18.	5-27-13					7	DAY	59	86	F
19.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
20.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
21.	6-3-13					7	DAY	50	82	F
22.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
23.	6-10-13					7	DAY	57	93	F
24.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
25.	6-17-13					7	DAY	61	92	F
26.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
27.	6-24-13					7	DAY	64	93	F
28.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
29.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
30.	7-1-13					7	DAY	57	88	F
31.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
32.	7-8-13					7	DAY	59	92	F
33.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
34.	7-15-13					7	DAY	68	93	F
35.	7-20-13	1.24	IN	RAIN	rain	2	DAY			
36.	7-22-13					7	DAY	51	90	F
37.	7-27-13	0.13	IN	RAIN	rain	2	DAY			
38.	7-29-13					7	DAY	58	86	F
39.	7-30-13	0.98	IN	RAIN	rain	1	DAY			
40.	8-3-13	0.24	IN	RAIN	rain	3	DAY			
41.	8-5-13	0.53	IN	RAIN	rain	2	DAY			
42.	8-5-13					7	DAY	61	98	F
43.	8-8-13	1.78	IN	RAIN	rain	4	DAY			
44.	8-12-13	0.12	IN	RAIN	rain	2	DAY			
45.	8-12-13					7	DAY	51	84	F
46.	8-17-13	0.21	IN	RAIN	rain	2	DAY			
47.	8-19-13	0.01	IN	RAIN	rain	1	DAY			
48.	8-19-13					7	DAY	60	90	F

Horseweed Control from Authority Combinations.

Trial ID: 13-YRC-FMC-ERICA Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Description

	A	B
Application Date:	5-2-13	5-13-13
Appl. Start Time:	8:45	11:00
Appl. Stop Time:	9:45	11:15
Application Method:	Spray	Spray
Application Timing:	10DBP	PRE
Application Placement:	BROFOL	BROFOL
Applied By:	EJM	RJW
Air Temperature, Unit:	62 F	73 F
% Relative Humidity:	70	28
Wind Velocity, Unit:	1 MPH	2 MPH
Wind Direction:	W	S
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	64 F	62 F
Soil Moisture:	ABONOR	NORMAL
% Cloud Cover:	50	0
Next Moisture Occurred On:	5-2-13	5-16-13
Time to Next Moisture, Unit:	12 HR	3 DAY

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	NA

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ERICA W	ERICA W
Stage Majority, Percent:	20	20
Stage Minimum, Percent:	6	10
Stage Maximum, Percent:	30	30
Height, Unit:	3 IN	3 IN
Height Minimum, Maximum:	0.5 4	0.5 3
Density, Unit:	1 FT2	0.05 FT2
Pest 2 Code, Type, Scale:	AMATA W	AMATA W
Stage Majority, Percent:	COTY	COTY
Stage Minimum, Percent:	COTY	COTY
Stage Maximum, Percent:	5	3
Height, Unit:	0.25 IN	0.25 IN
Height Minimum, Maximum:	0.25 0.5	0.25 0.5
Density, Unit:	30 FT2	30 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

Horseweed Control from Authority Combinations.

Trial ID: 13-YRC-FMC-ERICA Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-10-13 Moisture Percent	GLXMA 10-10-13 Yield bu/A
	Pest Code										
	Crop Code									GLXMA	GLXMA
	Rating Date									10-10-13	10-10-13
	Rating Type									Moisture	Yield
	Rating Unit									Percent	bu/A
	Rating Timing										
	Trt-Eval Interval										
1	AUTHORITY MTZ	45	WG	0.394	lb ai/a	14	oz/a	10DBP	A	16.7 a	72 a
	GRAMOXONE 2 SL	2	SL	0.5	lb ai/a	2	pt/a	10DBP	A		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	10DBP	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A		
2	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	10DBP	A	16.1 a	72 a
	GRAMOXONE 2 SL	2	SL	0.5	lb ai/a	2	pt/a	10DBP	A		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	10DBP	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A		
3	AUTHORITY FIRST	70	WG	0.263	lb ai/a	6	oz/a	10DBP	A	16.7 a	75 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A		
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A		
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A		
4	AUTHORITY XL	70	WG	0.263	lb ai/a	6	oz/a	10DBP	A	17.7 a	67 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A		
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A		
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A		
5	AUTHORITY MAXX	66	WG	0.248	lb ai/a	6	oz/a	10DBP	A	16.4 a	67 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A		
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A		
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A		
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A	16.9 a	73 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A		
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	B		
	VERDICT	5.57	EC	0.218	lb ai/a	5	oz/a	PRE	B		
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A	15.7 a	71 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A		
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	B		
	VERDICT	5.57	EC	0.218	lb ai/a	5	oz/a	PRE	B		
8	NONTREATED									18.8 a	58 a
	LSD (P=.05)									1.86	12.5
	Standard Deviation									1.06	7.1
	CV									6.3	10.32
	Replicate F									3.889	0.512
	Replicate Prob(F)									0.0454	0.6101
	Treatment F									2.480	1.728
	Treatment Prob(F)									0.0702	0.1816

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Horseweed Control from Authority Combinations.

Trial ID: 13-YRC-FMC-ERICA Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-15-13 Injury Percent 3 DAP	GLXMA 5-19-13 Injury Percent 7 DAP	GLXMA 5-27-13 Injury Percent 15 DAP	GLXMA 6-1-13 Injury Percent 30 DA-A	GLXMA 7-1-13 Injury Percent 60 DA-A	GLXMA 7-12-13 Injury Percent 60 DA-B
1	AUTHORITY MTZ	45	WG	0.394	lb ai/a	14	oz/a	10DBP	A		0 a	0 a	3 cd	1 a	0 a
	GRAMOXONE 2 SL	2	SL	0.5	lb ai/a	2	pt/a	10DBP	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
2	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	10DBP	A		0 a	0 a	7 bc	0 a	0 a
	GRAMOXONE 2 SL	2	SL	0.5	lb ai/a	2	pt/a	10DBP	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
3	AUTHORITY FIRST	70	WG	0.263	lb ai/a	6	oz/a	10DBP	A		0 a	0 a	6 bc	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A						
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
4	AUTHORITY XL	70	WG	0.263	lb ai/a	6	oz/a	10DBP	A		0 a	0 a	8 bc	1 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A						
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
5	AUTHORITY MAXX	66	WG	0.248	lb ai/a	6	oz/a	10DBP	A		0 a	0 a	12 ab	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A						
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A		0 a	0 a	17 a	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	B						
	VERDICT	5.57	EC	0.218	lb ai/a	5	oz/a	PRE	B						
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A		0 a	0 a	8 bc	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	B						
	VERDICT	5.57	EC	0.218	lb ai/a	5	oz/a	PRE	B						
8	NONTREATED										0 a	0 a	0 d	0 a	0 a
LSD (P=.05)										.	0.0	0.0	5.6	1.6	0.0
Standard Deviation										.	0.0	0.0	3.2	0.9	0.0
CV										.	0.0	0.0	41.77	358.57	0.0
Replicate F											0.000	0.000	0.443	0.467	0.000
Replicate Prob(F)											1.0000	1.0000	0.6509	0.6365	1.0000
Treatment F											0.000	0.000	7.447	0.800	0.000
Treatment Prob(F)											1.0000	1.0000	0.0008	0.6004	1.0000

Horseweed Control from Authority Combinations.

Trial ID: 13-YRC-FMC-ERICA Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 5-17-13 Control Percent 15 DA-A	ERICA-HR 5-28-13 Control Percent 15 DA-B	ERICA-HR 6-1-13 Control Percent 30 DA-A	ERICA-HR 6-11-13 Control Percent 30 DAP	ERICA-HR 7-1-13 Control Percent 60 DA-A	ERICA-HR 7-12-13 Control Percent 60 DA-B
1	AUTHORITY MTZ	45	WG	0.394	lb ai/a	14	oz/a	10DBP	A	95 b	88 c	85 c	73 c	77 c	80 b
	GRAMOXONE 2 SL	2	SL	0.5	lb ai/a	2	pt/a	10DBP	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
2	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	10DBP	A	97 ab	94 b	93 b	90 b	91 b	93 a
	GRAMOXONE 2 SL	2	SL	0.5	lb ai/a	2	pt/a	10DBP	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
3	AUTHORITY FIRST	70	WG	0.263	lb ai/a	6	oz/a	10DBP	A	99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A						
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
4	AUTHORITY XL	70	WG	0.263	lb ai/a	6	oz/a	10DBP	A	98 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A						
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
5	AUTHORITY MAXX	66	WG	0.248	lb ai/a	6	oz/a	10DBP	A	98 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A						
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A	98 a	99 a	99 a	99 a	99 a	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	B						
	VERDICT	5.57	EC	0.218	lb ai/a	5	oz/a	PRE	B						
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A	98 a	99 a	99 a	99 a	99 a	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A						
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	B						
	VERDICT	5.57	EC	0.218	lb ai/a	5	oz/a	PRE	B						
8	NONTREATED									0 c	0 d	0 d	0 d	0 d	0 c
LSD (P=.05)										2.8	2.0	1.6	3.6	4.9	6.7
Standard Deviation										1.6	1.2	0.9	2.0	2.8	3.8
CV										1.84	1.36	1.06	2.48	3.36	4.55
Replicate F										0.961	0.283	1.000	1.000	0.908	0.505
Replicate Prob(F)										0.4062	0.7581	0.3927	0.3927	0.4258	0.6140
Treatment F										1442.844	2676.624	4469.985	854.479	457.136	245.911
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Horseweed Control from Authority Combinations.

Trial ID: 13-YRC-FMC-ERICA Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 5-17-13 Control Percent 15 DA-A	AMATA-HR 5-28-13 Control Percent 15 DA-B	AMATA-HR 6-1-13 Control Percent 30 DA-A	AMATA-HR 6-11-13 Control Percent 30 DAP	AMATA-HR 7-1-13 Control Percent 60 DA-A
1	AUTHORITY MTZ	45	WG	0.394	lb ai/a	14	oz/a	10DBP	A	99 a	90 b	85 b	71 c	70 d
	GRAMOXONE 2 SL	2	SL	0.5	lb ai/a	2	pt/a	10DBP	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	10DBP	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A					
2	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	10DBP	A	99 a	95 a	92 a	84 b	78 cd
	GRAMOXONE 2 SL	2	SL	0.5	lb ai/a	2	pt/a	10DBP	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	10DBP	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A					
3	AUTHORITY FIRST	70	WG	0.263	lb ai/a	6	oz/a	10DBP	A	99 a	97 a	95 a	92 a	90 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A					
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A					
4	AUTHORITY XL	70	WG	0.263	lb ai/a	6	oz/a	10DBP	A	99 a	97 a	95 a	91 a	89 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A					
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A					
5	AUTHORITY MAXX	66	WG	0.248	lb ai/a	6	oz/a	10DBP	A	99 a	96 a	94 a	91 a	84 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A					
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A					
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A	99 a	97 a	96 a	95 a	95 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A					
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	B					
	VERDICT	5.57	EC	0.218	lb ai/a	5	oz/a	PRE	B					
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A	99 a	96 a	94 a	90 a	89 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A					
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	B					
	VERDICT	5.57	EC	0.218	lb ai/a	5	oz/a	PRE	B					
8	NONTREATED									0 b	0 c	0 c	0 d	0 e
LSD (P=.05)										0.5	2.8	3.9	5.4	7.8
Standard Deviation										0.3	1.6	2.2	3.1	4.5
CV										0.35	1.88	2.72	4.01	6.0
Replicate F										0.467	0.520	0.639	1.799	2.269
Replicate Prob(F)										0.6365	0.6053	0.5423	0.2016	0.1401
Treatment F										41085.804	1389.101	670.800	322.373	145.702
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

Horseweed Control from Authority Combinations.

Trial ID: 13-YRC-FMC-ERICA Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
	Pest Code									AMATA-HR
	Crop Code									
	Rating Date									7-12-13
	Rating Type									Control
	Rating Unit									Percent
	Rating Timing									
	Trt-Eval Interval									60 DA-B
1	AUTHORITY MTZ	45	WG	0.394	lb ai/a	14	oz/a	10DBP	A	62 d
	GRAMOXONE 2 SL	2	SL	0.5	lb ai/a	2	pt/a	10DBP	A	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	10DBP	A	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A	
2	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	10DBP	A	70 cd
	GRAMOXONE 2 SL	2	SL	0.5	lb ai/a	2	pt/a	10DBP	A	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	10DBP	A	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A	
3	AUTHORITY FIRST	70	WG	0.263	lb ai/a	6	oz/a	10DBP	A	86 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A	
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A	
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A	
4	AUTHORITY XL	70	WG	0.263	lb ai/a	6	oz/a	10DBP	A	85 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A	
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A	
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A	
5	AUTHORITY MAXX	66	WG	0.248	lb ai/a	6	oz/a	10DBP	A	75 bcd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A	
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A	
	AIM EC	2	EC	0.0117	lb ai/a	0.75	fl oz/a	10DBP	A	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A	
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A	92 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A	
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	B	
	VERDICT	5.57	EC	0.218	lb ai/a	5	oz/a	PRE	B	
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	10DBP	A	80 abc
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	10DBP	A	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	10DBP	A	
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	B	
	VERDICT	5.57	EC	0.218	lb ai/a	5	oz/a	PRE	B	
8	NONTREATED									0 e
	LSD (P=.05)									14.3
	Standard Deviation									8.1
	CV									11.86
	Replicate F									0.515
	Replicate Prob(F)									0.6084
	Treatment F									38.928
	Treatment Prob(F)									0.0001

Southern Illinois University

Horseweed Control from Authority Combinations.

Trial ID: 13-YRC-FMC-ERICA Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: FMC (Auth-Erica).
2. Ratings: CI 3, 7, 15, and 30 DAP. WC 15, 30 and 60 DA-A and DA-B.
3. Photos of crop injury.
4. Blanket POST application of Glyphosate following 30 DA-B rating if necessary.
   A blanket POST application of Durango DMA (36 floz/A) plus N-Pak AMS (2.5%) was applied on 6-11-13.
5. Yield.
6. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
   DAP = Days after soybean planting.
7. Missing data for soybean injury at 3 DAP was due to no soybean emergence that early.
8. Following the 10DBP application the first rainfall event, beginning 12 hours later, was 2.08 inch over 4 days.
   Following the PRE application the first rainfall event, beginning 3 days later, was 0.23 inch over 2 days,
   then 0.91 inch 7 days after the PRE application.
9. Harvested 10-10-13, (2) 30 inch rows by 26.5 ft.

Winfield Solutions Burndown Weed Control.

Trial ID: 13-FagerS-AGH11021 Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-2-13
Completion Date: 5-30-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Evaluate glyphosate-resistant horseweed control from AGH 11021.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: NONE - Non-crop
Variety: NON-CROP
Planting Method: NA

Pest Description

Pest 1 Type: W **Code:** ERICA Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** VERAR Veronica arvensis L.
Common Name: speedwell, corn

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL silt loam
pH: 5.5 **Soil Name:** Alvin
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	lb/A
K	446	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Winfield Solutions Burndown Weed Control.

Trial ID: 13-FagerS-AGH11021 Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-13					7	DAY	26	75	F
2.	4-8-13					7	DAY	32	81	F
3.	4-10-13	0.85	IN	RAIN	rain	2	DAY			
4.	4-15-13					7	DAY	32	83	F
5.	4-18-13	2.16	IN	RAIN	rain	1	DAY			
6.	4-22-13					7	DAY	32	72	F
7.	4-24-13	0.55	IN	RAIN	rain	2	DAY			
8.	4-27-13	0.37	IN	RAIN	rain	2	DAY			
9.	4-29-13					7	DAY	41	81	F
10.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
11.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
12.	5-6-13					7	DAY	41	80	F
13.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
14.	5-13-13					7	DAY	37	87	F
15.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
16.	5-20-13					7	DAY	43	85	F
17.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
18.	5-27-13					7	DAY	59	86	F
19.	5-31-13	0.7	IN	RAIN	rain	3	DAY			

Application Description

	A
Application Date:	5-2-13
Appl. Start Time:	10:30
Appl. Stop Time:	11:00
Application Method:	Spray
Application Timing:	6-8"MT
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	75 F
% Relative Humidity:	56
Wind Velocity, Unit:	4 MPH
Wind Direction:	W
Dew Presence (Y/N):	N
Soil Temperature, Unit:	60 F
Soil Moisture:	NORMAL
% Cloud Cover:	40
Next Moisture Occurred On:	5-2-13
Time to Next Moisture, Unit:	12 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Winfield Solutions Burndown Weed Control.

Trial ID: 13-FagerS-AGH11021 Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ERICA W
Stage Majority, Percent:	18
Stage Minimum, Percent:	6
Stage Maximum, Percent:	30
Height, Unit:	5 IN
Height Minimum, Maximum:	3 10
Density, Unit:	5 FT2
Pest 2 Code, Type, Scale:	VERAR W
Stage Majority, Percent:	20
Stage Minimum, Percent:	18
Stage Maximum, Percent:	26
Height, Unit:	9 IN
Height Minimum, Maximum:	7 9
Density, Unit:	1 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Winfield Solutions Burndown Weed Control.

Trial ID: 13-FagerS-AGH11021 Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 5-9-13 Control Percent 7 DA-A	ERICA-HR 5-16-13 Control Percent 14 DA-A	ERICA-HR 5-30-13 Control Percent 28 DA-A	VERAR 5-9-13 Control Percent 7 DA-A	VERAR 5-16-13 Control Percent 14 DA-A
1	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"MT	A	28 d	57 d	42 f	20 c	87 a
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A					
2	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"MT	A	36 c	69 c	86 e	25 b	80 b
	AGH 11021	100	SL	0.75	pt/a	0.75	pt/a	6-8"MT	A					
3	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"MT	A	40 b	72 bc	89 cd	28 ab	90 a
	AGH 11021	100	SL	0.75	pt/a	0.75	pt/a	6-8"MT	A					
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A					
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	6-8"MT	A					
4	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"MT	A	40 b	72 bc	88 cde	27 ab	87 a
	AGH 11021	100	SL	0.75	pt/a	0.75	pt/a	6-8"MT	A					
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A					
	SUPERB HC	100	SL	1	pt/a	1	pt/a	6-8"MT	A					
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	6-8"MT	A					
5	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"MT	A	40 b	72 bc	86 de	27 ab	88 a
	AGH 11021	100	SL	0.75	pt/a	0.75	pt/a	6-8"MT	A					
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A					
	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"MT	A					
6	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"MT	A	40 b	71 bc	91 bc	25 b	85 ab
	AGH 11021	100	SL	1.5	pt/a	1.5	pt/a	6-8"MT	A					
7	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"MT	A	43 a	74 b	93 ab	28 ab	88 a
	AGH 11021	100	SL	1.5	pt/a	1.5	pt/a	6-8"MT	A					
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A					
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	6-8"MT	A					
8	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"MT	A	43 a	72 bc	93 ab	30 a	90 a
	AGH 11021	100	SL	2	pt/a	2	pt/a	6-8"MT	A					
9	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"MT	A	45 a	78 a	95 a	30 a	90 a
	AGH 11021	100	SL	2	pt/a	2	pt/a	6-8"MT	A					
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A					
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	6-8"MT	A					
10	NONTREATED									0 e	0 e	0 g	0 d	0 c
LSD (P=.05)										2.5	3.4	2.7	3.8	6.5
Standard Deviation										1.4	2.0	1.6	2.2	3.8
CV										4.05	3.1	2.09	9.14	4.86
Replicate F										4.476	1.401	1.189	8.308	3.611
Replicate Prob(F)										0.0264	0.2719	0.3274	0.0028	0.0480
Treatment F										257.604	407.931	1130.986	49.692	158.911
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Winfield Solutions Burndown Weed Control.

Trial ID: 13-FagerS-AGH11021 Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions (Study 15).
2. WC 7, 14, and 28 DA-A. Target horseweed.
3. No yield (non-crop).
4. ERICA-HR = Herbicide-resistant marestail (glyphosate).
5. By 5-30-13, VERAR in the nontreated plots was senescing naturally and could no longer be evaluated.
6. Not harvested (non-crop).

Fierce plus Dicamba or 2,4-D Burndown Programs.

Trial ID: 13-FagerS-Valent-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 4-20-13
Completion Date: 6-12-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Evaluate weed control from Fierce in combination with 2,4-D or dicamba.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 5-1-13
Planting Rate, Unit: 140000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** VIORA Viola bicolor Pursh
Common Name: pansy, field

Pest 3 Type: W **Code:** VERAR Veronica arvensis L.
Common Name: speedwell, corn

Pest 4 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL silt loam
pH: 5.5 **Soil Name:** Alvin
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	lb/A
K	446	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Fierce plus Dicamba or 2,4-D Burndown Programs.

Trial ID: 13-FagerS-Valent-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-13					7	DAY	26	75	F
2.	4-8-13					7	DAY	32	81	F
3.	4-10-13	0.85	IN	RAIN	rain	2	DAY			
4.	4-15-13					7	DAY	32	83	F
5.	4-18-13	2.16	IN	RAIN	rain	1	DAY			
6.	4-22-13					7	DAY	32	72	F
7.	4-24-13	0.55	IN	RAIN	rain	2	DAY			
8.	4-27-13	0.37	IN	RAIN	rain	2	DAY			
9.	4-29-13					7	DAY	41	81	F
10.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
11.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
12.	5-6-13					7	DAY	41	80	F
13.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
14.	5-13-13					7	DAY	37	87	F
15.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
16.	5-20-13					7	DAY	43	85	F
17.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
18.	5-27-13					7	DAY	59	86	F
19.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
20.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
21.	6-3-13					7	DAY	50	82	F
22.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
23.	6-10-13					7	DAY	57	93	F
24.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
25.	6-17-13					7	DAY	61	92	F
26.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
27.	6-24-13					7	DAY	64	93	F
28.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
29.	6-30-13	0.3	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	4-20-13
Appl. Start Time:	11:00
Appl. Stop Time:	11:45
Application Method:	Spray
Application Timing:	14DBP
Application Placement:	BROFOL
Applied By:	LXF
Air Temperature, Unit:	68 F
% Relative Humidity:	31
Wind Velocity, Unit:	3 MPH
Wind Direction:	W
Dew Presence (Y/N):	N
Soil Temperature, Unit:	46 F
Soil Moisture:	ABONOR
% Cloud Cover:	5
Next Moisture Occurred On:	4-24-13
Time to Next Moisture, Unit:	4 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Fierce plus Dicamba or 2,4-D Burndown Programs.

Trial ID: 13-FagerS-Valent-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ERICA W
Stage Majority, Percent:	25
Stage Minimum, Percent:	15
Stage Maximum, Percent:	30
Height, Unit:	3 IN
Height Minimum, Maximum:	1 4
Density, Unit:	10 FT2
Pest 2 Code, Type, Scale:	VIORA W
Stage Majority, Percent:	25
Stage Minimum, Percent:	15
Stage Maximum, Percent:	30
Height, Unit:	4 IN
Height Minimum, Maximum:	3 6
Density, Unit:	15 FT2
Pest 3 Code, Type, Scale:	VERAR W
Stage Majority, Percent:	40
Stage Minimum, Percent:	20
Stage Maximum, Percent:	50+
Height, Unit:	3 IN
Height Minimum, Maximum:	1 4
Density, Unit:	1 FT2
Pest 4 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Fierce plus Dicamba or 2,4-D Burndown Programs.

Trial ID: 13-FagerS-Valent-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								GLXMA 5-15-13 Injury Percent 14 DAP 25 DA-A	GLXMA 5-29-13 Injury Percent 28 DAP 39 DA-A	GLXMA 6-12-13 Injury Percent 42 DAP 53 DA-A	ERICA-HR 5-8-13 Control Percent 7 DAP 18 DA-A	ERICA-HR 5-15-13 Control Percent 14 DAP 25 DA-A	ERICA-HR 5-29-13 Control Percent 28 DAP 39 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	NONTREATED									0 b	0 e	0 e	0 g	0 e	0 e
2	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	0 b	0 e	0 e	71 f	73 d	70 d
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A						
3	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	0 b	0 e	0 e	98 a	96 ab	88 b
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	14DBP	A						
4	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	0 b	13 d	15 c	86 e	95 ab	96 a
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	14DBP	A						
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A						
5	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	0 b	19 bc	20 b	90 bcd	97 ab	98 a
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	14DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A						
6	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	0 b	17 cd	22 b	93 bc	97 a	99 a
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	14DBP	A						
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A						
7	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	0 b	27 a	27 a	90 cd	96 ab	99 a
	CLARITY	4	SL	0.75	lb ae/a	24	fl oz/a	14DBP	A						
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A						
8	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	40 a	23 ab	27 a	93 bc	98 a	99 a
	CLARITY	4	SL	1.0	lb ae/a	32	fl oz/a	14DBP	A						
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A						
9	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	0 b	0 e	0 e	84 e	82 c	82 c
	DMA 4	3.8	EC	0.25	lb ae/a	8.4	fl oz/a	14DBP	A						
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A						
10	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	0 b	0 e	0 e	89 d	94 ab	93 ab
	DMA 4	3.8	EC	0.5	lb ae/a	16.8	fl oz/a	14DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A						
11	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	0 b	0 e	0 e	91 bcd	93 b	90 b
	DMA 4	3.8	EC	0.5	lb ae/a	16.8	fl oz/a	14DBP	A						
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A						
12	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	0 b	2 e	10 d	93 bc	96 ab	93 ab
	DMA 4	3.8	EC	0.75	lb ae/a	25.3	fl oz/a	14DBP	A						
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A						
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Fierce plus Dicamba or 2,4-D Burndown Programs.

Trial ID: 13-FagerS-Valent-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code														
Crop Code											GLXMA	GLXMA	GLXMA	ERICA-HR	ERICA-HR	ERICA-HR
Rating Date											5-15-13	5-29-13	6-12-13	5-8-13	5-15-13	5-29-13
Rating Type											Injury	Injury	Injury	Control	Control	Control
Rating Unit											Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing											14 DAP	28 DAP	42 DAP	7 DAP	14 DAP	28 DAP
Trt-Eval Interval											25 DA-A	39 DA-A	53 DA-A	18 DA-A	25 DA-A	39 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
13	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A		0 b	0 e	8 d	94 b	97 ab	96 a
	DMA 4	3.8	EC	1.0	lb ae/a	33.7	fl oz/a	14DBP	A							
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A							
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A							
LSD (P=.05)											4.7	5.4	4.2	3.5	4.1	5.9
Standard Deviation											2.8	3.2	2.5	2.1	2.4	3.5
CV											90.14	41.04	25.32	2.55	2.82	4.13
Replicate F											1.000	2.066	5.333	0.330	0.881	0.040
Replicate Prob(F)											0.3827	0.1487	0.0121	0.7224	0.4272	0.9611
Treatment F											48.000	32.040	56.769	445.415	365.756	176.344
Treatment Prob(F)											0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Fierce plus Dicamba or 2,4-D Burndown Programs.

Trial ID: 13-FagerS-Valent-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	VIORA	VERAR	VERAR	AMATA-HR	AMATA-HR
	Pest Code									VIORA	VERAR	VERAR	AMATA-HR	AMATA-HR
	Crop Code													
	Rating Date									5-8-13	5-8-13	5-15-13	5-15-13	5-29-13
	Rating Type									Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent
	Rating Timing									7 DAP	7 DAP	14 DAP	14 DAP	28 DAP
	Trt-Eval Interval									18 DA-A	18 DA-A	25 DA-A	25 DA-A	39 DA-A
1	NONTREATED									0 c	0 c	0 a	0 c	0 d
2	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	92 b	88 b	99 a	0 c	0 d
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A					
3	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	99 a	99 a	99 a	0 c	3 d
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	14DBP	A					
4	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	99 a	99 a	99 a	99 a	75 b
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	14DBP	A					
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A					
5	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	99 a	99 a	99 a	43 b	10 d
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	14DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A					
6	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	99 a	99 a	99 a	99 a	90 a
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	14DBP	A					
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A					
7	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	99 a	99 a	99 a	99 a	77 b
	CLARITY	4	SL	0.75	lb ae/a	24	fl oz/a	14DBP	A					
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A					
8	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	99 a	99 a	99 a	99 a	82 ab
	CLARITY	4	SL	1.0	lb ae/a	32	fl oz/a	14DBP	A					
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A					
9	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	99 a	99 a	99 a	96 a	83 ab
	DMA 4	3.8	EC	0.25	lb ae/a	8.4	fl oz/a	14DBP	A					
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A					
10	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	99 a	99 a	99 a	43 b	23 c
	DMA 4	3.8	EC	0.5	lb ae/a	16.8	fl oz/a	14DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A					
11	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	99 a	99 a	99 a	99 a	83 ab
	DMA 4	3.8	EC	0.5	lb ae/a	16.8	fl oz/a	14DBP	A					
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A					
12	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	99 a	99 a	99 a	99 a	81 ab
	DMA 4	3.8	EC	0.75	lb ae/a	25.3	fl oz/a	14DBP	A					
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A					

Fierce plus Dicamba or 2,4-D Burndown Programs.

Trial ID: 13-FagerS-Valent-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	VIORA	VERAR	VERAR	AMATA-HR	AMATA-HR
Pest Code										VIORA	VERAR	VERAR	AMATA-HR	AMATA-HR
Crop Code														
Rating Date										5-8-13	5-8-13	5-15-13	5-15-13	5-29-13
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing										7 DAP	7 DAP	14 DAP	14 DAP	28 DAP
Trt-Eval Interval										18 DA-A	18 DA-A	25 DA-A	25 DA-A	39 DA-A
13	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	14DBP	A	99 a	99 a	99 a	99 a	81 ab
	DMA 4	3.8	EC	1.0	lb ae/a	33.7	fl oz/a	14DBP	A					
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	14DBP	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	14DBP	A					
LSD (P=.05)										1.3	1.3	0.0	24.1	11.8
Standard Deviation										0.8	0.8	0.0	14.3	7.0
CV										0.88	0.88	0.0	21.22	13.19
Replicate F										1.000	1.000	0.000	1.420	3.668
Replicate Prob(F)										0.3827	0.3827	1.0000	0.2613	0.0407
Treatment F										3504.160	3505.960	0.000	27.687	89.294
Treatment Prob(F)										0.0001	0.0001	1.0000	0.0001	0.0001

Southern Illinois University

Fierce plus Dicamba or 2,4-D Burndown Programs.

Trial ID: 13-FagerS-Valent-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Valent (Fierce 64.02).
2. Ratings: CI 14, 28, and 42 DAP; WC 7, 14, and 28 DAP.
3. Special instructions at planting, can be soybean or non-crop.
4. Yield not requested.
5. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
   DAP = Days after soybean planting.
6. Following the 14DBP application the first rainfall event, beginning 3 days later, was 0.92 inch over 5 days.
7. Not harvested.

BASF Burndown Programs in Soybean.

Trial ID: 13-FagerS-BASF-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 4-29-13
Completion Date: 7-1-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Compare BASF burndown programs in soybean to commercial standards.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 5-12-13
Planting Rate, Unit: 170000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: NONE control is other than an untreated

No.	Previous Crop	Year
1.	NON-CROP	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL silt loam
pH: 5.5 **Soil Name:** Alvin
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	lb/A
K	446	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

BASF Burndown Programs in Soybean.

Trial ID: 13-FagerS-BASF-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-13					7	DAY	26	75	F
2.	4-8-13					7	DAY	32	81	F
3.	4-10-13	0.85	IN	RAIN	rain	2	DAY			
4.	4-15-13					7	DAY	32	83	F
5.	4-18-13	2.16	IN	RAIN	rain	1	DAY			
6.	4-22-13					7	DAY	32	72	F
7.	4-24-13	0.55	IN	RAIN	rain	2	DAY			
8.	4-27-13	0.37	IN	RAIN	rain	2	DAY			
9.	4-29-13					7	DAY	41	81	F
10.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
11.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
12.	5-6-13					7	DAY	41	80	F
13.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
14.	5-13-13					7	DAY	37	87	F
15.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
16.	5-20-13					7	DAY	43	85	F
17.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
18.	5-27-13					7	DAY	59	86	F
19.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
20.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
21.	6-3-13					7	DAY	50	82	F
22.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
23.	6-10-13					7	DAY	57	93	F
24.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
25.	6-17-13					7	DAY	61	92	F
26.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
27.	6-24-13					7	DAY	64	93	F
28.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
29.	6-30-13	0.3	IN	RAIN	rain	2	DAY			

Application Description

	A	B
Application Date:	4-29-13	6-10-13
Appl. Start Time:	10:15	18:15
Appl. Stop Time:	10:40	18:30
Application Method:	Spray	Spray
Application Timing:	4-6"MT	6-8WA-A
Application Placement:	BROFOL	BROFOL
Applied By:	NTH	LXF
Air Temperature, Unit:	56 F	79 F
% Relative Humidity:	75	56
Wind Velocity, Unit:	5 MPH	2 MPH
Wind Direction:	S	N
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	52 F	80 F
Soil Moisture:	ABONOR	NORMAL
% Cloud Cover:	0	30
Next Moisture Occurred On:	5-2-13	6-17-13
Time to Next Moisture, Unit:	84 HR	7 DAY

BASF Burndown Programs in Soybean.

Trial ID: 13-FagerS-BASF-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V3
Stage Minimum, Percent:		V2
Stage Maximum, Percent:		V3
Height, Unit:		5 IN
Height Minimum, Maximum:		4 5

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ERICA W	ERICA W
Stage Majority, Percent:	8	30
Stage Minimum, Percent:	4	20
Stage Maximum, Percent:	15	50+
Height, Unit:	7 IN	6 IN
Height Minimum, Maximum:	1.5 5	4 10
Density, Unit:	8 FT2	1 FT2
Pest 2 Code, Type, Scale:	AMATA W	AMATA W
Stage Majority, Percent:	NA	12
Stage Minimum, Percent:		COTY
Stage Maximum, Percent:		18
Height, Unit:		6 IN
Height Minimum, Maximum:		0.5 10
Density, Unit:		10 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

BASF Burndown Programs in Soybean.

Trial ID: 13-FagerS-BASF-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-23-13 Injury Percent 5 DAE 24 DA-A	GLXMA 7-1-13 Injury Percent 21 DA-B	ERICA-HR 5-20-13 Control Percent 21 DA-A	ERICA-HR 6-10-13 Control Percent 42 DA-A 0 DA-B	ERICA-HR 7-1-13 Control Percent 21 DA-B
1	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	4-6"MT	A	0 a	0 a	95 bc	92 abc	85 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B					
2	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	4-6"MT	A	0 a	0 a	97 ab	94 ab	91 a
	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B					
3	OPTILL PRO (CO-PACK)							4-6"MT	A	0 a	0 a	96 ab	90 bc	84 abc
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	4-6"MT	A					
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B					
4	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	4-6"MT	A	0 a	0 a	97 ab	94 ab	91 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B					
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	4-6"MT	A	0 a	0 a	98 a	96 a	91 a
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B					
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	4-6"MT	A	0 a	0 a	91 d	90 bc	88 a
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B					
7	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	4-6"MT	A	0 a	0 a	94 cd	89 c	74 bc
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B					
8	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	4-6"MT	A	0 a	0 a	92 d	82 d	72 c
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B					

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

BASF Burndown Programs in Soybean.

Trial ID: 13-FagerS-BASF-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-23-13 Injury Percent 5 DAE 24 DA-A	GLXMA 7-1-13 Injury Percent 21 DA-B	ERICA-HR 5-20-13 Control Percent 21 DA-A	ERICA-HR 6-10-13 Control Percent 42 DA-A 0 DA-B	ERICA-HR 7-1-13 Control Percent 21 DA-B
9	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	4-6"MT	A	0 a	0 a	95 bc	94 ab	85 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B					
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	6-8WA-A	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B					
LSD (P=.05)										0.0	0.0	2.7	5.0	11.8
Standard Deviation										0.0	0.0	1.5	2.9	6.8
CV										0.0	0.0	1.62	3.15	8.07
Replicate F										0.000	0.000	5.922	9.919	3.144
Replicate Prob(F)										1.0000	1.0000	0.0119	0.0016	0.0705
Treatment F										0.000	0.000	6.848	6.559	3.126
Treatment Prob(F)										1.0000	1.0000	0.0006	0.0007	0.0250

BASF Burndown Programs in Soybean.

Trial ID: 13-FagerS-BASF-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 5-20-13 Control Percent 21 DA-A	AMATA-HR 6-10-13 Control Percent 42 DA-A 0 DA-B	AMATA-HR 7-1-13 Control Percent 21 DA-B
1	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	4-6"MT	A	0 d	0 d	27 cd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B			
2	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	4-6"MT	A	72 a	35 ab	37 c
	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B			
3	OPTILL PRO (CO-PACK)							4-6"MT	A	45 b	18 c	35 c
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	4-6"MT	A			
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B			
4	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	4-6"MT	A	25 c	17 c	33 cd
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B			
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	4-6"MT	A	10 cd	0 d	18 d
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B			
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	4-6"MT	A	73 a	40 a	38 bc
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B			
7	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	4-6"MT	A	67 a	23 bc	40 bc
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B			
8	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	4-6"MT	A	72 a	37 ab	67 a
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B			

BASF Burndown Programs in Soybean.

Trial ID: 13-FagerS-BASF-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR
	Pest Code									AMATA	AMATA	AMATA
	Crop Code											
	Rating Date									5-20-13	6-10-13	7-1-13
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing										42 DA-A	
	Trt-Eval Interval									21 DA-A	0 DA-B	21 DA-B
9	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	4-6"MT	A	0 d	0 d	54 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4-6"MT	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	6-8WA-A	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	6-8WA-A	B			
	LSD (P=.05)									18.0	15.0	16.6
	Standard Deviation									10.4	8.7	9.6
	CV									25.81	45.85	24.73
	Replicate F									3.591	1.444	2.105
	Replicate Prob(F)									0.0515	0.2650	0.1543
	Treatment F									28.243	10.583	6.651
	Treatment Prob(F)									0.0001	0.0001	0.0007

Southern Illinois University

BASF Burndown Programs in Soybean.

Trial ID: 13-FagerS-BASF-BD Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: BASF (AJ-2).
2. Ratings: CI 5-7 DAE; WC 21-28 DA-A and 0, and 21-28 DA-B
3. Plant soybean 7 DA-A.
4. Yield not requested.
5. The planned 7 DA-A planting was delayed until 13 DA-A due to wet soil conditions.
6. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
   DAE = Days after soybean emergence.
7. Following the 4-6"MT application the first rainfall event, beginning 3 days later, was 2.08 inch over 4 days.
8. Not harvested.

Preemergence Weed Control in Soybean with Sipcam Products - Site 1.

Trial ID: 13-DSO-Sipcam Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-24-13
Completion Date: 10-19-13

Trial Location

City: De Soto **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62924

Objectives:
Evaluate the performance of Stalwart tank mixtures and experimental Sipcam products for preemergence weed control in soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832
Description: RR2Y
Planting Date: 5-24-13
Planting Rate, Unit: 145000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.75 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 15.4 **% OM:** 2.15 **Texture:** SIL silt loam
% Silt: 64.7 **pH:** 6.9 **Soil Name:** Okaw
% Clay: 19.9 **CEC:** 12.4

Additional Measured Elements

Element	Quantity	Unit
P1	94	lb/A
K	468	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Preemergence Weed Control in Soybean with Sipcam Products - Site 1.

Trial ID: 13-DSO-Sipcam Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
2.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
3.	5-6-13					7	DAY	41	80	F
4.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
5.	5-13-13					7	DAY	37	87	F
6.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
7.	5-20-13					7	DAY	43	85	F
8.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
9.	5-27-13					7	DAY	59	86	F
10.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
11.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
12.	6-3-13					7	DAY	50	82	F
13.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
14.	6-10-13					7	DAY	57	93	F
15.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
16.	6-17-13					7	DAY	61	92	F
17.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
18.	6-24-13					7	DAY	64	93	F
19.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
20.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
21.	7-1-13					7	DAY	57	88	F
22.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
23.	7-8-13					7	DAY	59	92	F
24.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
25.	7-15-13					7	DAY	68	93	F
26.	7-20-13	1.24	IN	RAIN	rain	2	DAY			
27.	7-22-13					7	DAY	51	90	F
28.	7-27-13	0.13	IN	RAIN	rain	2	DAY			
29.	7-29-13					7	DAY	58	86	F
30.	7-30-13	0.98	IN	RAIN	rain	1	DAY			
31.	8-3-13	0.24	IN	RAIN	rain	3	DAY			
32.	8-5-13	0.53	IN	RAIN	rain	2	DAY			
33.	8-5-13					7	DAY	61	98	F
34.	8-8-13	1.78	IN	RAIN	rain	4	DAY			
35.	8-12-13	0.12	IN	RAIN	rain	2	DAY			
36.	8-12-13					7	DAY	51	84	F
37.	8-17-13	0.21	IN	RAIN	rain	2	DAY			
38.	8-19-13	0.01	IN	RAIN	rain	1	DAY			
39.	8-19-13					7	DAY	60	90	F

Southern Illinois University

Preemergence Weed Control in Soybean with Sipcam Products - Site 1.

Trial ID: 13-DSO-Sipcam Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Application Description

	A
Application Date:	5-24-13
Appl. Start Time:	15:00
Appl. Stop Time:	15:20
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	NTH
Air Temperature, Unit:	82 F
% Relative Humidity:	31
Wind Velocity, Unit:	2 MPH
Wind Direction:	N
Dew Presence (Y/N):	N
Soil Temperature, Unit:	77 F
Soil Moisture:	NORMAL
% Cloud Cover:	0
Next Moisture Occurred On:	5-30-13
Time to Next Moisture, Unit:	6 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Preemergence Weed Control in Soybean with Sipcam Products - Site 1.

Trial ID: 13-DSO-Sipcam Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-19-13 Moisture Percent	GLXMA 10-19-13 Test wt. lb/bu	GLXMA 10-19-13 Yield bu/A	GLXMA 6-7-13 Injury Percent 14 DA-A	GLXMA 6-21-13 Injury Percent 28 DA-A	GLXMA 7-5-13 Injury Percent 42 DA-A
1	SA-0370102	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	18.3 a	48.7 a	30 a	0 e	0 c	0 b
2	STALWART	8	EC	1	lb ai/a	1	pt/a	PRE	A	18.0 a	48.7 a	46 a	16 a	12 a	4 a
	SA-0330101	100	SL	10	fl oz/a	10	fl oz/a	PRE	A						
3	SA-0070116	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	19.0 a	48.2 a	28 a	4 c	7 b	1 b
4	STALWART	8	EC	1	lb ai/a	1	pt/a	PRE	A	18.6 a	48.0 a	36 a	11 b	14 a	4 a
	SA-0400101	100	WG	2	oz/a	2	oz/a	PRE	A						
5	SA-0370103	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	20.4 a	47.4 a	30 a	2 cd	2 c	0 b
6	SA-0070115	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	19.6 a	48.0 a	27 a	1 de	1 c	0 b
7	NONTREATED									20.7 a	47.3 a	22 a	0 e	0 c	0 b
LSD (P=.05)										3.56	1.67	15.4	1.5	3.3	1.2
Standard Deviation										2.37	1.12	10.3	1.0	2.2	0.8
CV										12.33	2.33	32.67	22.29	44.93	70.38
Replicate F										0.042	0.056	0.028	2.047	1.264	1.000
Replicate Prob(F)										0.9882	0.9820	0.9936	0.1432	0.3165	0.4155
Treatment F										0.785	0.980	2.166	136.708	26.613	18.098
Treatment Prob(F)										0.5941	0.4704	0.1015	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=3,4,5

Preemergence Weed Control in Soybean with Sipcam Products - Site 1.

Trial ID: 13-DSO-Sipcam Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 6-7-13 Control Percent 14 DA-A	AMATA-HR 6-21-13 Control Percent 28 DA-A	AMATA-HR 7-5-13 Control Percent 42 DA-A
1	SA-0370102	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	60 c	51 d	24 c
2	STALWART	8	EC	1	lb ai/a	1	pt/a	PRE	A	99 a	98 a	96 a
	SA-0330101	100	SL	10	fl oz/a	10	fl oz/a	PRE	A			
3	SA-0070116	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	98 a	75 c	28 c
4	STALWART	8	EC	1	lb ai/a	1	pt/a	PRE	A	99 a	95 a	73 b
	SA-0400101	100	WG	2	oz/a	2	oz/a	PRE	A			
5	SA-0370103	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	78 b	54 d	24 c
6	SA-0070115	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	99 a	84 b	31 c
7	NONTREATED									0 d	0 e	0 d
LSD (P=.05)										7.3	8.6	8.3
Standard Deviation										4.9	5.8	5.6
CV										6.48	8.85	14.18
Replicate F										0.582	2.991	0.420
Replicate Prob(F)										0.6347	0.0583	0.7406
Treatment F										222.074	139.239	141.240
Treatment Prob(F)										0.0001	0.0001	0.0001

Southern Illinois University

Preemergence Weed Control in Soybean with Sipcam Products - Site 1.

Trial ID: 13-DSO-Sipcam Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Sipcam (2013-5-IL).
2. Ratings: CI/WC 14, 28, and 42 DA-A.
3. Blanket burndown application of glyphosate (1.5 lbae/A) plus Salvo (12 floz/A) was applied to all plots on 4-2-13.
   Blanket prior to planting of Gramoxone (2.5 pt/A) was applied to all plots on 5-24-13.
   Blanket application of Warrior (1.92 oz/A) was applied to all plots on 6-19-13.
4. Yield.
5. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
6. Following the PRE application the first rainfall event, beginning 6 days later, was 2.37 inch over 3 days.
7. Harvested 10-19-13, (2) 30 inch or (4) 15 inch rows by 26.5 ft.

General Evaluation of Soil Residual Herbicides in Soybean.

Trial ID: 13-DSO-Residual Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-24-13
Completion Date: 7-19-13

Trial Location

City: De Soto **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62924

Objectives:
Determine which herbicide for use in soybean has the greatest level of residual waterhemp control.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 5-24-13
Planting Rate, Unit: 145000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.75 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 15.4 **% OM:** 2.15 **Texture:** SIL silt loam
% Silt: 64.7 **pH:** 6.9 **Soil Name:** Okaw
% Clay: 19.9 **CEC:** 12.4

Additional Measured Elements

Element	Quantity	Unit
P1	94	lb/A
K	468	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

General Evaluation of Soil Residual Herbicides in Soybean.

Trial ID: 13-DSO-Residual Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
2.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
3.	5-6-13					7	DAY	41	80	F
4.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
5.	5-13-13					7	DAY	37	87	F
6.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
7.	5-20-13					7	DAY	43	85	F
8.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
9.	5-27-13					7	DAY	59	86	F
10.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
11.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
12.	6-3-13					7	DAY	50	82	F
13.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
14.	6-10-13					7	DAY	57	93	F
15.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
16.	6-17-13					7	DAY	61	92	F
17.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
18.	6-24-13					7	DAY	64	93	F
19.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
20.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
21.	7-1-13					7	DAY	57	88	F
22.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
23.	7-8-13					7	DAY	59	92	F
24.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
25.	7-15-13					7	DAY	68	93	F
26.	7-20-13	1.24	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	5-24-13
Appl. Start Time:	13:50
Appl. Stop Time:	14:30
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	NTH
Air Temperature, Unit:	82 F
% Relative Humidity:	31
Wind Velocity, Unit:	2 MPH
Wind Direction:	N
Dew Presence (Y/N):	N
Soil Temperature, Unit:	77 F
Soil Moisture:	NORMAL
% Cloud Cover:	0
Next Moisture Occurred On:	5-30-13
Time to Next Moisture, Unit:	6 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	NA

Southern Illinois University

General Evaluation of Soil Residual Herbicides in Soybean.

Trial ID: 13-DSO-Residual Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

General Evaluation of Soil Residual Herbicides in Soybean.

Trial ID: 13-DSO-Residual Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-7-13 Injury Percent 14 DA-A	GLXMA 6-21-13 Injury Percent 28 DA-A	GLXMA 7-19-13 Injury Percent 56 DA-A	AMATA-HR 6-21-13 Control Percent 28 DA-A	AMATA-HR 7-19-13 Control Percent 56 DA-A
1	NONTREATED									0 e	0 i	0 a	0 f	0 g
2	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	5 d	9 efg	0 a	97 a	78 a
3	ENVIVE	41.3	WG	0.129	lb ai/a	5	oz/a	PRE	A	6 cd	26 a	0 a	97 a	43 cde
4	MATADOR S	100	SC	3	pt/a	3	pt/a	PRE	A	2 e	8 efg	0 a	93 abc	45 cde
5	INTIMIDATOR	4.81	SL	1.8	lb ai/a	3	pt/a	PRE	A	0 e	7 fgh	0 a	97 a	57 bc
6	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	PRE	A	0 e	11 def	0 a	96 a	43 cde
7	STATEMENT	5.25	EC	1.31	lb ai/a	32	fl oz/a	PRE	A	0 e	7 fgh	0 a	94 ab	55 bc
8	STATEMENT	5.25	EC	1.64	lb ai/a	40	fl oz/a	PRE	A	0 e	9 efg	0 a	97 a	55 bc
9	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	A	0 e	8 efg	0 a	96 a	62 abc
10	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	PRE	A	1 e	15 cd	0 a	97 a	58 bc
11	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	PRE	A	5 d	15 cd	0 a	88 cd	33 ef
12	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	9 bc	19 bc	0 a	97 a	47 cde
13	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	12 a	21 b	0 a	97 a	70 ab
	VALOR SX	51	WG	0.016	lb ai/a	0.5	oz/a	PRE	A					
14	FIERCE XLT							PRE	A	10 ab	28 a	0 a	98 a	53 bcd
	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A					
	CLASSIC	25	WG	0.0213	lb ai/a	1.36	oz/a	PRE	A					
15	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	0 e	3 hi	0 a	90 bcd	35 def
16	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	9 bc	12 de	0 a	91 bcd	32 ef
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A					
17	LINEX	4	SC	1	lb ai/a	2	pt/a	PRE	A	0 e	5 ghi	0 a	88 d	45 cde
18	SENCOR	75	WG	0.375	lb ai/a	8	oz/a	PRE	A	0 e	5 ghi	0 a	75 e	22 f
LSD (P=.05)										2.8	5.1	0.0	5.2	19.0
Standard Deviation										1.7	3.1	0.0	3.1	11.4
CV										52.73	26.57	0.0	3.51	24.63
Replicate F										2.289	1.188	0.000	1.260	1.008
Replicate Prob(F)										0.1168	0.3170	1.0000	0.2965	0.3758
Treatment F										17.991	19.527	0.000	161.552	7.543
Treatment Prob(F)										0.0001	0.0001	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

General Evaluation of Soil Residual Herbicides in Soybean.

Trial ID: 13-DSO-Residual Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: SIU, Loveland, Cheminova, Valent.
2. Ratings: CI at 14 DAT; CI/WC at 28 and 56 DAT.
3. Blanket burndown application of glyphosate (1.5 lbae/A) plus Salvo (12 floz/A) was applied to all plots on 4-2-13.
   Blanket of Gramoxone to be applied to all plots prior to planting.
4. No yield.
5. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
6. Not harvested.

Southern Illinois University

General Evaluation of Soil Residual Herbicides in Soybean - Palmer.

Trial ID: 13-COL-Residual Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-5-13
Completion Date: 7-31-13

Trial Location

City: Collinsville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62234

Objectives:
Determine which herbicide for use in soybean has the greatest level of residual Palmer amaranth control.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832
Description: RR2Y
Planting Date: 6-5-13
Planting Rate, Unit: 145000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.25 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMAPA Amaranthus palmeri S.Wats.
Common Name: amaranth, Palmer
Description: glyphosate-resistant Palmer amaranth

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 5.26 **% OM:** 1.95 **Texture:** SIL silt loam
% Silt: 84.13 **pH:** 5.7 **Soil Name:** Worthen/Littleton
% Clay: 10.61 **CEC:** 11.77

Additional Measured Elements

Element	Quantity	Unit
P1	88	lb/A
K	338	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: On-site Watch Dog Station **Distance, Unit:** 0.25 MI

General Evaluation of Soil Residual Herbicides in Soybean - Palmer.

Trial ID: 13-COL-Residual Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-4-13	0.24	IN	RAIN	rain					
3.	6-5-13	0.04	IN	RAIN	rain					
4.	6-7-13	0.06	IN	RAIN	rain					
5.	6-9-13					7	DAY	59	94	F
6.	6-9-13	0.17	IN	RAIN	rain	2	DAY			
7.	6-16-13					7	DAY	61	90	F
8.	6-17-13	2.35	IN	RAIN	rain	3	DAY			
9.	6-23-13					7	DAY	64	92	F
10.	6-23-13	3.31	IN	RAIN	rain	2	DAY			
11.	6-26-13	0.67	IN	RAIN	rain	1	DAY			
12.	6-30-13	0.53	IN	RAIN	rain	2	DAY			
13.	6-30-13					7	DAY	61	86	F
14.	7-2-13	1.42	IN	RAIN	rain	2	DAY			
15.	7-6-13	0.92	IN	RAIN	rain	1	DAY			
16.	7-7-13					7	DAY	62	94	F
17.	7-10-13	0.14	IN	RAIN	rain	1	DAY			
18.	7-14-13					7	DAY	64	94	F
19.	7-19-13	0.03	IN	RAIN	rain	1	DAY			
20.	7-21-13	0.47	IN	RAIN	rain	2	DAY			
21.	7-21-13					7	DAY	56	91	F
22.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
23.	7-30-13	0.5	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	6-5-13
Appl. Start Time:	14:30
Appl. Stop Time:	15:30
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	BCS
Air Temperature, Unit:	85 F
% Relative Humidity:	43
Wind Velocity, Unit:	3 MPH
Wind Direction:	E
Dew Presence (Y/N):	N
Soil Temperature, Unit:	76 F
Soil Moisture:	NORMAL
% Cloud Cover:	60
Next Moisture Occurred On:	6-5-13
Time to Next Moisture, Unit:	5 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMAPA W
Stage Majority, Percent:	NA

Southern Illinois University

General Evaluation of Soil Residual Herbicides in Soybean - Palmer.

Trial ID: 13-COL-Residual Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

General Evaluation of Soil Residual Herbicides in Soybean - Palmer.

Trial ID: 13-COL-Residual Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-19-13 Injury Percent 14 DA-A	GLXMA 7-3-13 Injury Percent 28 DA-A	GLXMA 7-31-13 Injury Percent 56 DA-A	AMAPA-HR 6-19-13 Control Percent 14 DA-A	AMAPA-HR 7-3-13 Control Percent 28 DA-A	AMAPA-HR 7-31-13 Control Percent 56 DA-A
1	NONTREATED									0 f	0 c	0 a	0 e	0 h	0 g
2	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	13 d	10 a	0 a	99 a	97 a-e	95 a-d
3	ENVIVE	41.3	WG	0.129	lb ai/a	5	oz/a	PRE	A	22 c	10 a	0 a	99 a	99 ab	96 a-d
4	MATADOR S	100	SC	3	pt/a	3	pt/a	PRE	A	0 f	0 c	0 a	99 a	99 ab	98 ab
5	INTIMIDATOR	4.81	SL	1.8	lb ai/a	3	pt/a	PRE	A	0 f	0 c	0 a	99 a	98 abc	97 abc
6	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	PRE	A	0 f	2 bc	0 a	97 c	94 e	80 e
7	STATEMENT	5.25	EC	1.31	lb ai/a	32	fl oz/a	PRE	A	0 f	0 c	0 a	97 c	95 de	92 bcd
8	STATEMENT	5.25	EC	1.64	lb ai/a	40	fl oz/a	PRE	A	0 f	0 c	0 a	98 bc	97 a-e	94 a-d
9	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	A	0 f	0 c	0 a	98 bc	97 a-d	95 a-d
10	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	PRE	A	0 f	2 bc	0 a	99 a	99 ab	96 abc
11	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	PRE	A	19 c	3 b	0 a	99 a	97 a-e	92 a-d
12	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	30 a	8 a	0 a	99 a	99 ab	98 ab
13	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	30 a	8 a	0 a	99 a	99 a	99 a
	VALOR SX	51	WG	0.016	lb ai/a	0.5	oz/a	PRE	A						
14	FIERCE XLT							PRE	A	25 b	10 a	2 a	99 a	99 a	99 a
	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A						
	CLASSIC	25	WG	0.0213	lb ai/a	1.36	oz/a	PRE	A						
15	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	0 f	2 bc	0 a	98 b	91 f	89 d
16	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	10 e	10 a	0 a	99 a	96 cde	90 cd
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A						
17	LINEX	4	SC	1	lb ai/a	2	pt/a	PRE	A	0 f	0 c	0 a	99 a	96 b-e	89 d
18	SENCOR	75	WG	0.375	lb ai/a	8	oz/a	PRE	A	0 f	0 c	0 a	96 d	77 g	60 f
LSD (P=.05)										2.6	2.5	1.1	1.0	3.0	6.8
Standard Deviation										1.6	1.5	0.7	0.6	1.8	4.1
CV										18.84	41.13	734.85	0.63	1.97	4.74
Replicate F										0.599	5.667	1.000	0.486	0.123	1.545
Replicate Prob(F)										0.5552	0.0075	0.3784	0.6195	0.8850	0.2278
Treatment F										166.629	25.889	1.000	4706.972	506.904	98.184
Treatment Prob(F)										0.0001	0.0001	0.4813	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

General Evaluation of Soil Residual Herbicides in Soybean - Palmer.

Trial ID: 13-COL-Residual Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: SIU, Loveland, Cheminova, Valent.
2. Ratings: CI at 14 DAT; CI/WC at 28 and 56 DAT.
3. No yield.
4. AMAPA-HR = Herbicide-resistant Palmer amaranth (glyphosate).
5. Weeds that had emerged prior to planting were controlled with tillage and Gramoxone.
6. Rainfall following the PRE application was 0.27 inch within 4 days, then 2.35 inch 12 days after the PRE.
7. Not harvested.

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-5-13
Completion Date: 10-10-13

Trial Location

City: Collinsville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62234

Objectives:
Evalaute herbicide programs for Palmer amaranth control in soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 6-5-13
Planting Rate, Unit: 145000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.25 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMAPA Amaranthus palmeri S.Wats.
Common Name: amaranth, Palmer
Description: glyphosate-resistant Palmer amaranth

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 5.26 **% OM:** 1.95 **Texture:** SIL silt loam
% Silt: 84.13 **pH:** 5.7 **Soil Name:** Worthen/Littleton
% Clay: 10.61 **CEC:** 11.77

Additional Measured Elements

Element	Quantity	Unit
P1	88	lb/A
K	338	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: On-site Watch Dog Station **Distance, Unit:** 0.25 MI

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-4-13	0.24	IN	RAIN	rain					
3.	6-5-13	0.04	IN	RAIN	rain					
4.	6-7-13	0.06	IN	RAIN	rain					
5.	6-9-13					7	DAY	59	94	F
6.	6-9-13	0.17	IN	RAIN	rain	2	DAY			
7.	6-16-13					7	DAY	61	90	F
8.	6-17-13	2.35	IN	RAIN	rain	3	DAY			
9.	6-23-13					7	DAY	64	92	F
10.	6-23-13	3.31	IN	RAIN	rain	2	DAY			
11.	6-26-13	0.67	IN	RAIN	rain	1	DAY			
12.	6-30-13	0.53	IN	RAIN	rain	2	DAY			
13.	6-30-13					7	DAY	61	86	F
14.	7-2-13	1.42	IN	RAIN	rain	2	DAY			
15.	7-6-13	0.92	IN	RAIN	rain	1	DAY			
16.	7-7-13					7	DAY	62	94	F
17.	7-10-13	0.14	IN	RAIN	rain	1	DAY			
18.	7-14-13					7	DAY	64	94	F
19.	7-19-13	0.03	IN	RAIN	rain	1	DAY			
20.	7-21-13	0.47	IN	RAIN	rain	2	DAY			
21.	7-21-13					7	DAY	56	91	F
22.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
23.	7-30-13	0.5	IN	RAIN	rain	2	DAY			

Application Description

	A	B	C	D
Application Date:	6-5-13	6-25-13	7-4-13	7-20-13
Appl. Start Time:	17:00	7:05	17:00	11:00
Appl. Stop Time:	17:50	7:20	17:15	11:30
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	PRE	V2-V3	POST1	POST2
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL
Applied By:	EJM	LXF	RJW	RJW
Air Temperature, Unit:	84 F	80 F	80 F	90 F
% Relative Humidity:	43	80	81	59
Wind Velocity, Unit:	3 MPH	5 MPH	6 MPH	4 MPH
Wind Direction:	E	S	E	W
Dew Presence (Y/N):	N	N	N	N
Soil Temperature, Unit:	75 F	76 F	78 F	86 F
Soil Moisture:	NORMAL	ABONOR	NORMAL	BELNOR
% Cloud Cover:	60	10	25	40
Next Moisture Occurred On:	6-5-13	6-26-13	7-6-13	7-21-13
Time to Next Moisture, Unit:	3 HR	24 HR	2 DAY	30 HR

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	V2	V5	R2
Stage Minimum, Percent:		V2	V4	R2
Stage Maximum, Percent:		V3	V5	R2
Height, Unit:		10 IN	12 IN	28 IN
Height Minimum, Maximum:		8 12	10 12	24 28

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W	AMAPA W
Stage Majority, Percent:	NA	2	4	50+
Stage Minimum, Percent:		COTY	COTY	20
Stage Maximum, Percent:		8	6	50+
Height, Unit:		0.3 IN	2 IN	30 IN
Height Minimum, Maximum:		0.1 2	0.25 3	20 36
Density, Unit:		0.03 FT2	0.1 FT2	0.01 FT2

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
	Pest Code									
	Crop Code									GLXMA
	Rating Date									10-10-13
	Rating Type									Yield
	Rating Unit									bu/A
	Rating Timing									
	Trt-Eval Interval									Estimated
1	NONTREATED									33 c
2	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	55 ab
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	POST1	C	
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
3	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	59 ab
	SEQUENCE	5.25	SL	1.97	lb ae/a	3	pt/a	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
4	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	71 ab
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST1	C	
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	52 b
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST1	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
6	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	65 ab
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST1	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
7	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	65 ab
	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	V2-V3	B	
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	POST2	D	
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST2	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D	
8	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	73 a
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	D	
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	POST2	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D	
9	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	68 ab
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A	
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST2	D	
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	POST2	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D	
10	AUTHORITY ELITE	7	SC	1.75	lb ai/a	32	fl oz/a	PRE	A	67 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C	
	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
11	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	66 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C	
	WARRANT	3	CS	1.13	lb ai/a	48	fl oz/a	POST1	C	
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
12	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	66 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C	
	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	POST1	C	
	WARRANT	3	CS	1.13	lb ai/a	48	fl oz/a	POST1	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
	Pest Code									
	Crop Code									GLXMA
	Rating Date									10-10-13
	Rating Type									Yield
	Rating Unit									bu/A
	Rating Timing									
	Trt-Eval Interval									Estimated
13	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	67 ab
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	POST2	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D	
	LSD (P=.05)									19.0
	Standard Deviation									11.3
	CV									18.15
	Replicate F									11.302
	Replicate Prob(F)									0.0003
	Treatment F									2.660
	Treatment Prob(F)									0.0199

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-19-13 Injury Percent 14 DA-A	GLXMA 7-3-13 Injury Percent 28 DA-A	GLXMA 7-18-13 Injury Percent -2 DA-D 14 DA-C	GLXMA 8-1-13 Injury Percent 12 DA-D 28 DA-C	GLXMA 8-15-13 Injury Percent 26 DA-D 42 DA-C	GLXMA 8-31-13 Injury Percent 42 DA-D
1	NONTREATED									0 h	0 f	0 d	0 f	0 c	0 a
2	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	2 gh	0 f	5 bc	2 ef	0 c	0 a
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	POST1	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST1	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C						
3	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	0 h	0 f	5 bc	3 def	2 c	0 a
	SEQUENCE	5.25	SL	1.97	lb ae/a	3	pt/a	POST1	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C						
4	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	3 gh	2 ef	7 b	3 def	2 bc	0 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST1	C						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	POST1	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C						
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	12 ef	7 cde	3 cd	0 f	0 c	0 a
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST1	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C						
6	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	23 bc	15 a	7 b	6 cd	1 c	0 a
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST1	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C						
7	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	7 fg	3 def	0 d	9 bc	7 a	0 a
	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	V2-V3	B						
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	POST2	D						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST2	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D						
8	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	23 bc	8 bcd	0 d	10 b	9 a	0 a
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	D						
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	POST2	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D						
9	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	28 ab	14 a	2 d	10 b	8 a	0 a
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST2	D						
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	POST2	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D						
10	AUTHORITY ELITE	7	SC	1.75	lb ai/a	32	fl oz/a	PRE	A	13 de	6 de	6 bc	4 de	0 c	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C						
	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	POST1	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C						
11	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	18 cd	13 ab	6 b	4 de	1 c	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C						
	WARRANT	3	CS	1.13	lb ai/a	48	fl oz/a	POST1	C						
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	POST1	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C						
12	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	30 a	12 abc	22 a	18 a	6 ab	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C						
	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	POST1	C						
	WARRANT	3	CS	1.13	lb ai/a	48	fl oz/a	POST1	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST1	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C						

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-19-13 Injury Percent 14 DA-A	GLXMA 7-3-13 Injury Percent 28 DA-A	GLXMA 7-18-13 Injury Percent -2 DA-D 14 DA-C	GLXMA 8-1-13 Injury Percent 12 DA-D 28 DA-C	GLXMA 8-15-13 Injury Percent 26 DA-D 42 DA-C	GLXMA 8-31-13 Injury Percent 42 DA-D
13	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	22 c	12 abc	2 d	1 ef	0 c	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	POST2	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D						
LSD (P=.05)										5.0	5.4	3.1	3.6	3.8	0.0
Standard Deviation										3.0	3.2	1.9	2.1	2.3	0.0
CV										21.47	45.24	37.47	38.38	81.38	0.0
Replicate F										2.694	0.282	1.574	0.435	2.241	0.000
Replicate Prob(F)										0.0880	0.7566	0.2279	0.6521	0.1281	1.0000
Treatment F										39.495	9.678	28.615	18.028	6.994	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	1.0000

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMAPA-HR 6-19-13 Control Percent 14 DA-A	AMAPA-HR 7-3-13 Control Percent 28 DA-A	AMAPA-HR 7-18-13 Control Percent -2 DA-D 14 DA-C	AMAPA-HR 8-1-13 Control Percent 12 DA-D 28 DA-C	AMAPA-HR 8-15-13 Control Percent 26 DA-D 42 DA-C
1	NONTREATED									0 c	0 d	0 d	0 d	0 d
2	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	99 a	96 b	99 a	99 a	99 a
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	POST1	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST1	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C					
3	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	99 a	97 ab	97 ab	96 a	96 a
	SEQUENCE	5.25	SL	1.97	lb ae/a	3	pt/a	POST1	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C					
4	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	98 a	96 b	98 a	98 a	98 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST1	C					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	POST1	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C					
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	89 b	75 c	75 c	58 c	48 c
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST1	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C					
6	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	99 a	97 ab	97 ab	96 a	94 a
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST1	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C					
7	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	99 a	97 ab	97 ab	97 a	97 a
	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	V2-V3	B					
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	POST2	D					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST2	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D					
8	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	99 a	97 ab	97 ab	97 a	97 a
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	D					
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	POST2	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D					
9	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A					
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST2	D					
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	POST2	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D					
10	AUTHORITY ELITE	7	SC	1.75	lb ai/a	32	fl oz/a	PRE	A	99 a	97 ab	99 a	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C					
	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	POST1	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C					
11	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	99 a	96 b	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C					
	WARRANT	3	CS	1.13	lb ai/a	48	fl oz/a	POST1	C					
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	POST1	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C					
12	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	99 a	98 ab	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C					
	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	POST1	C					
	WARRANT	3	CS	1.13	lb ai/a	48	fl oz/a	POST1	C					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST1	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C					

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code								AMAPA-HR	AMAPA-HR	AMAPA-HR	AMAPA-HR	AMAPA-HR
Crop Code												
Rating Date								6-19-13	7-3-13	7-18-13	8-1-13	8-15-13
Rating Type								Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent
Rating Timing										-2 DA-D	12 DA-D	26 DA-D
Trt-Eval Interval								14 DA-A	28 DA-A	14 DA-C	28 DA-C	42 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
13	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	99 a	96 b	95 b	87 b	85 b
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	POST2	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D					
LSD (P=.05)										1.9	2.7	2.7	8.9	8.8
Standard Deviation										1.1	1.6	1.6	5.3	5.2
CV										1.25	1.81	1.79	6.11	6.11
Replicate F										1.520	0.163	1.144	1.746	2.074
Replicate Prob(F)										0.2390	0.8508	0.3354	0.1960	0.1477
Treatment F										1749.210	873.217	894.569	85.954	93.811
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMAPA-HR
	Pest Code									AMAPA-HR
	Crop Code									
	Rating Date									8-31-13
	Rating Type									Control
	Rating Unit									Percent
	Rating Timing									
	Trt-Eval Interval									42 DA-D
1	NONTREATED									0 d
2	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	99 a
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	POST1	C	
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
3	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	96 ab
	SEQUENCE	5.25	SL	1.97	lb ae/a	3	pt/a	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
4	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	PRE	A	98 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST1	C	
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	52 c
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST1	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
6	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	94 ab
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST1	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
7	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	97 a
	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	V2-V3	B	
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ae/a	4	pt/a	POST2	D	
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST2	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D	
8	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	97 a
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	D	
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	POST2	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D	
9	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	98 a
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A	
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	POST2	D	
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	POST2	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D	
10	AUTHORITY ELITE	7	SC	1.75	lb ai/a	32	fl oz/a	PRE	A	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C	
	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
11	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C	
	WARRANT	3	CS	1.13	lb ai/a	48	fl oz/a	POST1	C	
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	
12	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	C	
	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	POST1	C	
	WARRANT	3	CS	1.13	lb ai/a	48	fl oz/a	POST1	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST1	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	C	

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
	Pest Code									AMAPA-HR
	Crop Code									
	Rating Date									8-31-13
	Rating Type									Control
	Rating Unit									Percent
	Rating Timing									
	Trt-Eval Interval									42 DA-D
13	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	87 b
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	POST2	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	D	
	LSD (P=.05)									9.1
	Standard Deviation									5.4
	CV									6.31
	Replicate F									1.386
	Replicate Prob(F)									0.2695
	Treatment F									84.900
	Treatment Prob(F)									0.0001

Southern Illinois University

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Syngenta, SIU.
2. Ratings: CI\WC 14 DA-A; 28 DA-A or at C, 14, 28, and 42 DA-C.
3. Estimate yield using harvest index values.
4. Weed size at POST1 application varied by treatment with treatment 5 having larger weeds (up to 20 leaves and 10 inch tall).
   The POST2 application was delayed to allow for new weed emergence, with few new emerged weeds at application, the few weeds present at application were large.
5. Rainfall following the PRE application was 0.27 inch within 4 days, then 2.35 inch 12 days after the PRE.
   Following the V2-V3 application the first rainfall event, beginning 1 day later, was 0.67 inch over 1 day.
   Following the POST1 application the first rainfall event, beginning 2 days later, was 0.92 inch over 1 day.
6. AMAPA-HR = Herbicide-resistant Palmer amaranth (glyphosate).
7. Yield estimations, per plot, on 10-10-13 were based on plant counts in 2 meters of row, number of pods per 6 plants, 2.2 seeds per pod, and weight of 200 seeds.

Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 4-29-13
Completion Date: 10-18-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Evaluate herbicide programs for control of glyphosate-resistant marestail and waterhemp.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832
Description: RR2Y
Planting Date: 5-12-13
Planting Rate, Unit: 170000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** CAPBP Capsella bursa-pastoris(L.)M
Common Name: shepherdspurse

Pest 3 Type: W **Code:** VIORA Viola bicolor Pursh
Common Name: pansy, field

Pest 4 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	NON-CROP	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL silt loam
pH: 5.5 **Soil Name:** Alvin
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	lb/A
K	446	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-13					7	DAY	26	75	F
2.	4-8-13					7	DAY	32	81	F
3.	4-10-13	0.85	IN	RAIN	rain	2	DAY			
4.	4-15-13					7	DAY	32	83	F
5.	4-18-13	2.16	IN	RAIN	rain	1	DAY			
6.	4-22-13					7	DAY	32	72	F
7.	4-24-13	0.55	IN	RAIN	rain	2	DAY			
8.	4-27-13	0.37	IN	RAIN	rain	2	DAY			
9.	4-29-13					7	DAY	41	81	F
10.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
11.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
12.	5-6-13					7	DAY	41	80	F
13.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
14.	5-13-13					7	DAY	37	87	F
15.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
16.	5-20-13					7	DAY	43	85	F
17.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
18.	5-27-13					7	DAY	59	86	F
19.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
20.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
21.	6-3-13					7	DAY	50	82	F
22.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
23.	6-10-13					7	DAY	57	93	F
24.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
25.	6-17-13					7	DAY	61	92	F
26.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
27.	6-24-13					7	DAY	64	93	F
28.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
29.	6-30-13	0.3	IN	RAIN	rain	2	DAY			

Application Description

	A	B
Application Date:	4-29-13	5-31-13
Appl. Start Time:	10:15	20:00
Appl. Stop Time:	10:40	20:30
Application Method:	Spray	Spray
Application Timing:	4-6"MT	POST
Application Placement:	BROFOL	BROFOL
Applied By:	RJW	NTH
Air Temperature, Unit:	56 F	78 F
% Relative Humidity:	75	78
Wind Velocity, Unit:	5 MPH	8 MPH
Wind Direction:	E	S
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	52 F	78 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	0	80
Next Moisture Occurred On:	5-2-13	5-31-13
Time to Next Moisture, Unit:	84 HR	4 H

Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V2
Stage Minimum, Percent:		V1
Stage Maximum, Percent:		V2
Height, Unit:		4 IN
Height Minimum, Maximum:		3 4

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ERICA W	ERICA W
Stage Majority, Percent:	15	30
Stage Minimum, Percent:	20	20
Stage Maximum, Percent:	12	50
Height, Unit:	5 IN	6 IN
Height Minimum, Maximum:	2 8	4 8
Density, Unit:	10 FT2	1 FT2
Pest 2 Code, Type, Scale:	CAPBP W	CAPBP W
Stage Majority, Percent:	100	NA
Stage Minimum, Percent:	20	
Stage Maximum, Percent:	100	
Height, Unit:	16 IN	
Height Minimum, Maximum:	2 20	
Density, Unit:	10 FT2	
Pest 3 Code, Type, Scale:	VIORA W	VIORA W
Stage Majority, Percent:	25	NA
Stage Minimum, Percent:	15	
Stage Maximum, Percent:	30	
Height, Unit:	4 IN	
Height Minimum, Maximum:	3 6	
Density, Unit:	15 FT2	
Pest 4 Code, Type, Scale:	AMATA W	AMATA W
Stage Majority, Percent:	NA	8
Stage Minimum, Percent:		4
Stage Maximum, Percent:		14
Height, Unit:		3 IN
Height Minimum, Maximum:		1 6
Density, Unit:		30 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-18-13 Moisture Percent	GLXMA 10-18-13 Yield bu/A	GLXMA 5-26-13 Injury Percent 14 DAP	GLXMA 5-31-13 Injury Percent 32 DA-E 0 DA-B	GLXMA 6-9-13 Injury Percent 28 DAP	GLXMA 6-21-13 Injury Percent 21 DA-B
1	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	3	pt/a	4-6"MT	A	18.2 a	30 a	0 a	0 a	16 a	0 a
	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	4-6"MT	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"MT	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A						
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ai/a	4	pt/a	POST	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
2	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	3	pt/a	4-6"MT	A	18.0 a	26 a	0 a	0 a	4 b	0 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	4-6"MT	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"MT	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A						
	SEQUENCE	5.25	SL	1.97	lb ai/a	3	pt/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
3	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	3	pt/a	4-6"MT	A	17.0 a	31 a	0 a	0 a	18 a	0 a
	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	4-6"MT	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"MT	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A						
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	POST	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A	19.0 a	26 a	0 a	0 a	3 bc	0 a
	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	4-6"MT	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A						
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A	19.6 a	27 a	0 a	0 a	1 bc	0 a
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	4-6"MT	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A						
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
6	SHARPEN	2.85	SC	0.0174	lb ai/a	0.78	fl oz/a	4-6"MT	A	18.7 a	22 a	0 a	0 a	1 bc	0 a
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A						
	DRX 101	100	SL	1	pt/a	1	pt/a	4-6"MT	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
7	SHARPEN	2.85	SC	0.0174	lb ai/a	0.78	fl oz/a	4-6"MT	A	17.4 a	28 a	0 a	0 a	0 c	0 a
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A						
	DRX 102	100	SL	0.5	pt/a	0.5	pt/a	4-6"MT	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
8	SHARPEN	2.85	SC	0.0174	lb ai/a	0.78	fl oz/a	4-6"MT	A	18.5 a	25 a	0 a	0 a	2 bc	0 a
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
9	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	4-6"MT	A	18.5 a	24 a	0 a	0 a	0 c	0 a
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval												
								GLXMA 10-18-13 Moisture Percent	GLXMA 10-18-13 Yield bu/A	GLXMA 5-26-13 Injury Percent 14 DAP	GLXMA 5-31-13 Injury Percent 32 DA-E 0 DA-B	GLXMA 6-9-13 Injury Percent 28 DAP	GLXMA 6-21-13 Injury Percent 21 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
10	NONTREATED									17.1 a	5 b	0 a	0 a	0 c	0 a
LSD (P=.05)										4.24	9.6	0.0	0.0	2.9	0.0
Standard Deviation										2.47	5.6	0.0	0.0	1.7	0.0
CV										13.57	22.85	0.0	0.0	38.33	0.0
Replicate F										0.481	2.422	0.000	0.000	0.141	0.000
Replicate Prob(F)										0.6262	0.1171	1.0000	1.0000	0.8698	1.0000
Treatment F										0.338	5.324	0.000	0.000	47.000	0.000
Treatment Prob(F)										0.9500	0.0013	1.0000	1.0000	0.0001	1.0000

Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 5-2-13 Control Percent 3 DA-A	ERICA-HR 5-6-13 Control Percent 7 DA-A	ERICA-HR 5-13-13 Control Percent 14 DA-A	ERICA-HR 5-31-13 Control Percent 32 DA-E 0 DA-B	ERICA-HR 6-21-13 Control Percent 21 DA-B
1	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	3	pt/a	4-6"MT	A	88 a	92 a	93 a	87 a	79 ab
	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	4-6"MT	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"MT	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A					
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ai/a	4	pt/a	POST	B					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B					
2	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	3	pt/a	4-6"MT	A	90 a	87 a	78 b	68 b	60 b
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	4-6"MT	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"MT	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A					
	SEQUENCE	5.25	SL	1.97	lb ai/a	3	pt/a	POST	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B					
3	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	3	pt/a	4-6"MT	A	90 a	93 a	95 a	88 a	83 a
	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	4-6"MT	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"MT	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A					
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST	B					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	POST	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B					
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A	75 b	79 b	97 a	95 a	83 a
	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	4-6"MT	A					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A					
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B					
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A	33 d	37 d	68 c	85 a	77 ab
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	4-6"MT	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A					
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B					
6	SHARPEN	2.85	SC	0.0174	lb ai/a	0.78	fl oz/a	4-6"MT	A	62 c	73 bc	97 a	90 a	75 ab
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A					
	DRX 101	100	SL	1	pt/a	1	pt/a	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B					
7	SHARPEN	2.85	SC	0.0174	lb ai/a	0.78	fl oz/a	4-6"MT	A	62 c	74 bc	96 a	91 a	83 a
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A					
	DRX 102	100	SL	0.5	pt/a	0.5	pt/a	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B					
8	SHARPEN	2.85	SC	0.0174	lb ai/a	0.78	fl oz/a	4-6"MT	A	65 c	75 bc	97 a	94 a	87 a
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B					
9	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	4-6"MT	A	64 c	71 c	97 a	91 a	80 a
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B					

Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code									ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
Crop Code													
Rating Date									5-2-13	5-6-13	5-13-13	5-31-13	6-21-13
Rating Type									Control	Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent	Percent
Rating Timing												32 DA-E	
Trt-Eval Interval									3 DA-A	7 DA-A	14 DA-A	0 DA-B	21 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
10	NONTREATED									0 e	0 e	0 d	0 c	0 c
LSD (P=.05)										5.0	7.3	7.6	13.3	19.4
Standard Deviation										2.9	4.2	4.4	7.7	11.3
CV										4.61	6.24	5.4	9.83	15.97
Replicate F										6.509	0.737	1.540	2.066	0.658
Replicate Prob(F)										0.0075	0.4923	0.2413	0.1558	0.5298
Treatment F										281.675	136.748	142.279	41.276	15.845
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CAPBP 5-2-13 Control Percent 3 DA-A	CAPBP 5-6-13 Control Percent 7 DA-A	CAPBP 5-13-13 Control Percent 14 DA-A	VIORA 5-2-13 Control Percent 3 DA-A	VIORA 5-6-13 Control Percent 7 DA-A	VIORA 5-13-13 Control Percent 14 DA-A
1	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	3	pt/a	4-6"MT	A	98 a	99 a	99 a	99 a	99 a	99 a
	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	4-6"MT	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"MT	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A						
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ai/a	4	pt/a	POST	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
2	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	3	pt/a	4-6"MT	A	99 a	99 a	99 a	99 a	99 a	99 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	4-6"MT	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"MT	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A						
	SEQUENCE	5.25	SL	1.97	lb ai/a	3	pt/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
3	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	3	pt/a	4-6"MT	A	99 a	99 a	99 a	99 a	99 a	99 a
	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	4-6"MT	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"MT	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A						
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	POST	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A	30 b	53 b	99 a	38 b	77 b	99 a
	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	4-6"MT	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A						
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A	30 b	50 b	99 a	33 b	67 c	99 a
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	4-6"MT	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A						
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
6	SHARPEN	2.85	SC	0.0174	lb ai/a	0.78	fl oz/a	4-6"MT	A	30 b	50 b	99 a	40 b	77 b	99 a
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A						
	DRX 101	100	SL	1	pt/a	1	pt/a	4-6"MT	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
7	SHARPEN	2.85	SC	0.0174	lb ai/a	0.78	fl oz/a	4-6"MT	A	30 b	58 b	99 a	37 b	78 b	99 a
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A						
	DRX 102	100	SL	0.5	pt/a	0.5	pt/a	4-6"MT	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
8	SHARPEN	2.85	SC	0.0174	lb ai/a	0.78	fl oz/a	4-6"MT	A	33 b	57 b	99 a	38 b	78 b	99 a
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						
9	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	4-6"MT	A	30 b	50 b	99 a	35 b	73 b	99 a
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B						

Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code									CAPBP	CAPBP	CAPBP	VIORA	VIORA	VIORA
Crop Code														
Rating Date									5-2-13	5-6-13	5-13-13	5-2-13	5-6-13	5-13-13
Rating Type									Control	Control	Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing														
Trt-Eval Interval									3 DA-A	7 DA-A	14 DA-A	3 DA-A	7 DA-A	14 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
10	NONTREATED									0 c	0 c	0 a	0 c	0 d	0 a
LSD (P=.05)										6.0	9.5	0.0	7.4	6.6	0.0
Standard Deviation										3.5	5.5	0.0	4.3	3.8	0.0
CV										7.31	8.97	0.0	8.32	5.14	0.0
Replicate F										1.965	3.310	0.000	4.881	1.189	0.000
Replicate Prob(F)										0.1691	0.0597	1.0000	0.0203	0.3274	1.0000
Treatment F										322.289	92.985	0.000	192.017	168.727	0.000
Treatment Prob(F)										0.0001	0.0001	1.0000	0.0001	0.0001	1.0000

Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 5-31-13 Control Percent 32 DA-E 0 DA-B	AMATA-HR 6-21-13 Control Percent 21 DA-B
1	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	3	pt/a	4-6"MT	A	13 bc	89 a
	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	4-6"MT	A		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"MT	A		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A		
	FLEXSTAR GT 3.5	2.82	SL	1.41	lb ai/a	4	pt/a	POST	B		
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B		
2	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	3	pt/a	4-6"MT	A	63 a	63 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	4-6"MT	A		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"MT	A		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A		
	SEQUENCE	5.25	SL	1.97	lb ai/a	3	pt/a	POST	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B		
3	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	3	pt/a	4-6"MT	A	17 b	58 ab
	BOUNDARY	6.5	EC	1.42	lb ai/a	1.75	pt/a	4-6"MT	A		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	4-6"MT	A		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A		
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	POST	B		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B		
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A	13 bc	13 c
	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	4-6"MT	A		
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A		
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST	B		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B		
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"MT	A	59 a	30 bc
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	4-6"MT	A		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"MT	A		
	WARRANT	3	CS	0.94	lb ai/a	1.25	qt/a	POST	B		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B		
6	SHARPEN	2.85	SC	0.0174	lb ai/a	0.78	fl oz/a	4-6"MT	A	10 bc	17 c
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A		
	DRX 101	100	SL	1	pt/a	1	pt/a	4-6"MT	A		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B		
7	SHARPEN	2.85	SC	0.0174	lb ai/a	0.78	fl oz/a	4-6"MT	A	13 bc	13 c
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A		
	DRX 102	100	SL	0.5	pt/a	0.5	pt/a	4-6"MT	A		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B		
8	SHARPEN	2.85	SC	0.0174	lb ai/a	0.78	fl oz/a	4-6"MT	A	13 bc	10 c
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A		
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B		
9	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	4-6"MT	A	10 bc	17 c
	IMITATOR PLUS	4	SL	1	lb ae/a	32	fl oz/a	4-6"MT	A		
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"MT	A		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	B		

Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 5-31-13 Control Percent 32 DA-E 0 DA-B	AMATA-HR 6-21-13 Control Percent 21 DA-B
	Pest Code									AMATA-HR	AMATA-HR
	Crop Code										
	Rating Date									5-31-13	6-21-13
	Rating Type									Control	Control
	Rating Unit									Percent	Percent
	Rating Timing									32 DA-E	
	Trt-Eval Interval									0 DA-B	21 DA-B
10	NONTREATED									0 c	0 c
	LSD (P=.05)									14.6	32.7
	Standard Deviation									8.5	19.1
	CV									39.97	61.29
	Replicate F									0.342	1.283
	Replicate Prob(F)									0.7149	0.3013
	Treatment F									19.306	7.003
	Treatment Prob(F)									0.0001	0.0002

Southern Illinois University

Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Syngenta, NDSU/Drexel.
2. Ratings: CI 14 and 28 DAP; WC 3, 7, and 14 DA-A, 0 and 21 DA-B.
3. Application A should be 7 days prior to planting.
4. Yield.
5. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
   DAP = Days after soybean planting.
6. Following the 4-6"MT application the first rainfall event, beginning 3 days later, was 2.08 inch over 4 days.
   Following the POST application the first rainfall event, beginning 4 hours later, was 1.92 inch over 2 days.
7. By 5-31-13, CAPBP and VIORA in the nontreated plots were senescing naturally
   and could no longer be evaluated.
8. Harvested 10-18-13, (2) 30 inch rows by 27 ft.

Authority Product Understanding.

Trial ID: 13-DSO-Authority Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-24-13
Completion Date: 10-19-13

Trial Location

City: De Soto **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62924

Objectives:
Evaluate glyphosate-resistant waterhemp control from Authority products versus competitive programs.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832
Description: RR2Y
Planting Date: 5-24-13
Planting Rate, Unit: 145000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.25 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 15.4 **% OM:** 2.15 **Texture:** SIL silt loam
% Silt: 64.7 **pH:** 6.9 **Soil Name:** Okaw
% Clay: 19.9 **CEC:** 12.4

Additional Measured Elements

Element	Quantity	Unit
P1	94	lb/A
K	468	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Authority Product Understanding.

Trial ID: 13-DSO-Authority Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
2.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
3.	5-6-13					7	DAY	41	80	F
4.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
5.	5-13-13					7	DAY	37	87	F
6.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
7.	5-20-13					7	DAY	43	85	F
8.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
9.	5-27-13					7	DAY	59	86	F
10.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
11.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
12.	6-3-13					7	DAY	50	82	F
13.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
14.	6-10-13					7	DAY	57	93	F
15.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
16.	6-17-13					7	DAY	61	92	F
17.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
18.	6-24-13					7	DAY	64	93	F
19.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
20.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
21.	7-1-13					7	DAY	57	88	F
22.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
23.	7-8-13					7	DAY	59	92	F
24.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
25.	7-15-13					7	DAY	68	93	F
26.	7-20-13	1.24	IN	RAIN	rain	2	DAY			
27.	7-22-13					7	DAY	51	90	F
28.	7-27-13	0.13	IN	RAIN	rain	2	DAY			
29.	7-29-13					7	DAY	58	86	F
30.	7-30-13	0.98	IN	RAIN	rain	1	DAY			
31.	8-3-13	0.24	IN	RAIN	rain	3	DAY			
32.	8-5-13	0.53	IN	RAIN	rain	2	DAY			
33.	8-5-13					7	DAY	61	98	F
34.	8-8-13	1.78	IN	RAIN	rain	4	DAY			
35.	8-12-13	0.12	IN	RAIN	rain	2	DAY			
36.	8-12-13					7	DAY	51	84	F
37.	8-17-13	0.21	IN	RAIN	rain	2	DAY			
38.	8-19-13	0.01	IN	RAIN	rain	1	DAY			
39.	8-19-13					7	DAY	60	90	F

Authority Product Understanding.

Trial ID: 13-DSO-Authority Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Application Description

	A	B	C	D
Application Date:	5-24-13	6-27-13	6-16-13	7-3-13
Appl. Start Time:	13:50	7:45	9:00	10:30
Appl. Stop Time:	14:30	8:30	9:15	10:35
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	PRE	1-2"W	1-2T	4-6"W
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL
Applied By:	LXF	NTH	LXF	NTH
Air Temperature, Unit:	83 F	90 F	92 F	90 F
% Relative Humidity:	31	65	45	50
Wind Velocity, Unit:	2 MPH	3 MPH	0 MPH	2 MPH
Wind Direction:	N	NE		S
Dew Presence (Y/N):	N	N	N	N
Soil Temperature, Unit:	77 F	79 F	79 F	74 F
Soil Moisture:	NORMAL	ABONOR	NORMAL	ABONOR
% Cloud Cover:	0	5	10	25
Next Moisture Occurred On:	5-30-13	6-29-13	6-17-13	7-4-13
Time to Next Moisture, Unit:	5 DAY	2 DAY	29 HR	17 HR

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	V5	V2	V7
Stage Minimum, Percent:		V4	V1	V6
Stage Maximum, Percent:		V5	V2	V7
Height, Unit:		12 IN	8 IN	18 IN
Height Minimum, Maximum:		10 12	6 8	15 18

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	AMATA W	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	10	4	16
Stage Minimum, Percent:		2	COTY	4
Stage Maximum, Percent:		25	8	40
Height, Unit:		3 IN	1 IN	5 IN
Height Minimum, Maximum:		1 12	0.5 1	1 12
Density, Unit:		1 FT2	0.01 FT2	0.8 FT2

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

Authority Product Understanding.

Trial ID: 13-DSO-Authority Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-19-13 Moisture Percent	GLXMA 10-19-13 Yield bu/A
	Pest Code										
	Crop Code										
	Rating Date										
	Rating Type										
	Rating Unit										
	Rating Timing										
	Trt-Eval Interval										
1	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	16.6 a	71 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B		
2	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	16.0 a	74 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B		
3	AUTHORITY MAXX	66	WG	0.396	lb ai/a	9.6	oz/a	PRE	A	15.4 a	74 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B		
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	15.5 a	70 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B		
5	OPTILL PRO (CO-PACK)							PRE	A	15.7 a	70 b
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A		
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B		
6	AUTHORITY ELITE	7	SC	1.75	lb ai/a	32	fl oz/a	PRE	A	15.3 a	72 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B		
7	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	15.8 a	76 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B		
8	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	15.5 a	71 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B		
9	FIERCE XLT	55.68	WG	0.13	lb ai/a	3.75	oz/a	PRE	A	16.4 a	74 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B		
10	INTIMIDATOR	4.81	SL	1.68	lb ai/a	2.8	pt/a	PRE	A	15.1 a	73 ab
	AUTHORITY XL	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	A		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B		
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	16.3 a	69 bc
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	1-2T	C		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2T	C		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2T	C		
12	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	15.2 a	70 ab
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	1-2T	C		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2T	C		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2T	C		
13	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	15.3 a	64 c
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	D		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4-6"W	D		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	D		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	D		

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Authority Product Understanding.

Trial ID: 13-DSO-Authority Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-19-13 Moisture Percent	GLXMA 10-19-13 Yield bu/A
	Pest Code										
	Crop Code									GLXMA	GLXMA
	Rating Date									10-19-13	10-19-13
	Rating Type									Moisture	Yield
	Rating Unit									Percent	bu/A
	Rating Timing										
	Trt-Eval Interval										
14	NONTREATED									18.3 a	28 d
	LSD (P=.05)									1.73	5.6
	Standard Deviation									1.21	3.9
	CV									7.63	5.71
	Replicate F									1.909	1.988
	Replicate Prob(F)									0.1441	0.1317
	Treatment F									1.912	38.257
	Treatment Prob(F)									0.0593	0.0001

Authority Product Understanding.

Trial ID: 13-DSO-Authority Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-8-13 Injury Percent 15 DA-A	GLXMA 6-23-13 Injury Percent 30 DA-A	GLXMA 7-2-13 Injury Percent 16 DA-C	GLXMA 7-12-13 Injury Percent 15 DA-B	GLXMA 7-17-13 Injury Percent 14 DA-D 31 DA-C	GLXMA 7-24-13 Injury Percent 27 DA-B 61 DA-A	GLXMA 8-3-13 Injury Percent 31 DA-D
1	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	18 a	12 ab	11 ab	6 cde	1 bc	1 cd	0 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B							
2	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	11 b	4 efg	3 ef	2 fg	0 c	0 d	0 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B							
3	AUTHORITY MAXX	66	WG	0.396	lb ai/a	9.6	oz/a	PRE	A	17 a	8 bcd	8 bcd	5 c-f	1 bc	1 cd	0 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B							
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	5 cd	11 abc	11 abc	6 bcd	0 c	0 d	0 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B							
5	OPTILL PRO (CO-PACK)							PRE	A	10 bc	5 def	8 bcd	3 d-g	1 bc	0 d	0 b
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A							
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B							
6	AUTHORITY ELITE	7	SC	1.75	lb ai/a	32	fl oz/a	PRE	A	8 bc	3 fg	1 f	0 g	0 c	0 d	0 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B							
7	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	0 e	0 g	0 f	0 g	0 c	0 d	0 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B							
8	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	3 de	1 fg	1 ef	0 g	0 c	0 d	0 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B							
9	FIERCE XLT	55.68	WG	0.13	lb ai/a	3.75	oz/a	PRE	A	8 bc	7 cde	7 cd	5 c-f	1 bc	0 d	0 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B							
10	INTIMIDATOR	4.81	SL	1.68	lb ai/a	2.8	pt/a	PRE	A	6 cd	4 def	5 de	3 efg	0 c	0 d	0 b
	AUTHORITY XL	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	A							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B							
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	11 b	12 ab	13 a	9 b	2 b	2 ab	2 a
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	1-2T	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2T	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2T	C							
12	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	17 a	12 ab	14 a	8 bc	2 b	2 bc	0 b
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	1-2T	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2T	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2T	C							
13	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	20 a	13 a	11 ab	28 a	5 a	4 a	1 ab
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	D							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4-6"W	D							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	D							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	D							

Authority Product Understanding.

Trial ID: 13-DSO-Authority Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-8-13 Injury Percent 15 DA-A	GLXMA 6-23-13 Injury Percent 30 DA-A	GLXMA 7-2-13 Injury Percent 16 DA-C	GLXMA 7-12-13 Injury Percent 15 DA-B	GLXMA 7-17-13 Injury Percent 14 DA-D 31 DA-C	GLXMA 7-24-13 Injury Percent 27 DA-B 61 DA-A	GLXMA 8-3-13 Injury Percent 31 DA-D
14	NONTREATED									0 e	0 g	0 f	0 g	0 c	0 d	0 b
LSD (P=.05)										4.4	4.2	4.1	3.3	1.6	1.3	0.9
Standard Deviation										3.1	2.9	2.9	2.3	1.1	0.9	0.6
CV										32.39	45.44	43.88	44.18	136.42	142.44	372.56
Replicate F										4.426	1.229	1.200	0.473	0.922	0.563	1.644
Replicate Prob(F)										0.0090	0.3123	0.3224	0.7026	0.4393	0.6425	0.1950
Treatment F										17.653	10.055	12.138	39.327	5.094	5.908	2.103
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0368

Authority Product Understanding.

Trial ID: 13-DSO-Authority Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 6-8-13 Control Percent 15 DA-A	AMATA-HR 6-23-13 Control Percent 30 DA-A	AMATA-HR 7-12-13 Control Percent 49 DA-A 15 DA-B	AMATA-HR 7-17-13 Control Percent 14 DA-D 31 DA-C	AMATA-HR 7-24-13 Control Percent 27 DA-B 61 DA-A	AMATA-HR 8-3-13 Control Percent 31 DA-D
1	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	99 a	95 ab	97 ab	97 abc	97 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B						
2	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	99 a	93 abc	97 ab	97 abc	97 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B						
3	AUTHORITY MAXX	66	WG	0.396	lb ai/a	9.6	oz/a	PRE	A	99 a	96 ab	98 ab	98 a	98 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B						
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	99 a	81 ef	93 c	95 cd	94 b	93 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B						
5	OPTILL PRO (CO-PACK)							PRE	A	99 a	76 f	92 c	94 d	94 b	95 ab
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A						
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B						
6	AUTHORITY ELITE	7	SC	1.75	lb ai/a	32	fl oz/a	PRE	A	99 a	96 ab	97 ab	98 ab	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B						
7	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	99 a	85 de	96 b	97 abc	97 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B						
8	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	99 a	90 cd	96 ab	97 ab	97 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B						
9	FIERCE XLT	55.68	WG	0.13	lb ai/a	3.75	oz/a	PRE	A	99 a	91 bc	97 ab	97 ab	97 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B						
10	INTIMIDATOR	4.81	SL	1.68	lb ai/a	2.8	pt/a	PRE	A	99 a	97 a	98 ab	98 ab	98 a	98 a
	AUTHORITY XL	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B						
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	99 a	98 a	96 b	96 bc	94 b	92 c
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	1-2T	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2T	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2T	C						
12	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 a	98 a	96 ab	95 cd	94 b	93 bc
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	1-2T	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2T	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2T	C						
13	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	99 a	96 ab	99 a	98 a	98 a	98 a
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4-6"W	D						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	D						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	D						

Authority Product Understanding.

Trial ID: 13-DSO-Authority Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code								AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Crop Code													
Rating Date								6-8-13	6-23-13	7-12-13	7-17-13	7-24-13	8-3-13
Rating Type								Control	Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing										49 DA-A	14 DA-D	27 DA-B	
Trt-Eval Interval								15 DA-A	30 DA-A	15 DA-B	31 DA-C	61 DA-A	31 DA-D
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
14	NONTREATED									0 b	0 g	0 d	0 e	0 c	0 d
LSD (P=.05)										0.3	5.2	2.9	2.1	2.2	2.5
Standard Deviation										0.2	3.7	2.0	1.4	1.6	1.8
CV										0.2	4.29	2.28	1.61	1.76	1.97
Replicate F										2.167	0.915	1.256	0.146	0.058	0.255
Replicate Prob(F)										0.1074	0.4428	0.3026	0.9313	0.9814	0.8573
Treatment F										84877.008	193.284	638.576	1289.525	1076.541	860.019
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Authority Product Understanding.

Trial ID: 13-DSO-Authority Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR
	Pest Code									AMATA-HR
	Crop Code									
	Rating Date									8-22-13
	Rating Type									Control
	Rating Unit									Percent
	Rating Timing									
	Trt-Eval Interval									90 DA-A
1	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	97 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B	
2	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B	
3	AUTHORITY MAXX	66	WG	0.396	lb ai/a	9.6	oz/a	PRE	A	97 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B	
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	93 cd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B	
5	OPTILL PRO (CO-PACK)							PRE	A	95 bc
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B	
6	AUTHORITY ELITE	7	SC	1.75	lb ai/a	32	fl oz/a	PRE	A	98 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B	
7	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	97 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B	
8	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B	
9	FIERCE XLT	55.68	WG	0.13	lb ai/a	3.75	oz/a	PRE	A	96 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B	
10	INTIMIDATOR	4.81	SL	1.68	lb ai/a	2.8	pt/a	PRE	A	98 ab
	AUTHORITY XL	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	A	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2"W	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2"W	B	
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	91 d
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	1-2T	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2T	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2T	C	
12	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	91 d
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	1-2T	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-2T	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	1-2T	C	
13	AUTHORITY MAXX	66	WG	0.29	lb ai/a	7	oz/a	PRE	A	98 ab
	MARVEL	3	SL	0.17	lb ai/a	7.25	fl oz/a	4-6"W	D	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4-6"W	D	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	D	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	D	

Authority Product Understanding.

Trial ID: 13-DSO-Authority Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code										AMATA-HR
Crop Code										
Rating Date										8-22-13
Rating Type										Control
Rating Unit										Percent
Rating Timing										
Trt-Eval Interval										90 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
14	NONTREATED									0 e
LSD (P=.05)										3.2
Standard Deviation										2.2
CV										2.5
Replicate F										0.130
Replicate Prob(F)										0.9418
Treatment F										534.936
Treatment Prob(F)										0.0001

Authority Product Understanding.

Trial ID: 13-DSO-Authority Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol:FMC (Authority Understanding).
2. CI 15 and 30 DA-A, 15 and 30 DA-B, 15 and 30 DA-C;
   WC 15, 30, 60, and 90 DA-A, and 15, and 30 DA-D.
3. Blanket burndown application of glyphosate (1.5 lbae/A) plus Salvo (12 floz/A)
   was applied to all plots on 4-2-13.
   Blanket application prior to planting of Gramoxone (2.5 pt/A) was applied to all plots on 5-24-13.
   Following the PRE application the first rainfall event, beginning 6 days later, was 2.37 inch over 3 days.
   Following the 1-2T application the first rainfall event, beginning 1 day later, was 0.36 inch over 2 days.
4. Yield if possible.
5. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
6. Harvested 10-19-13, (2) 30 inch rows by 26.5 ft.

BASF Soybean Residual Programs.

Trial ID: 13-FagerS-BASF-programs Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-1-13
Completion Date: 7-1-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Evaluate glyphosate-resistant waterhemp control from preemergence and postemergence herbicide programs.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 5-1-13
Planting Rate, Unit: 140000 S/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL silt loam
pH: 5.5 **Soil Name:** Alvin
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	lb/A
K	446	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

BASF Soybean Residual Programs.

Trial ID: 13-FagerS-BASF-programs Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-13					7	DAY	26	75	F
2.	4-8-13					7	DAY	32	81	F
3.	4-10-13	0.85	IN	RAIN	rain	2	DAY			
4.	4-15-13					7	DAY	32	83	F
5.	4-18-13	2.16	IN	RAIN	rain	1	DAY			
6.	4-22-13					7	DAY	32	72	F
7.	4-24-13	0.55	IN	RAIN	rain	2	DAY			
8.	4-27-13	0.37	IN	RAIN	rain	2	DAY			
9.	4-29-13					7	DAY	41	81	F
10.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
11.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
12.	5-6-13					7	DAY	41	80	F
13.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
14.	5-13-13					7	DAY	37	87	F
15.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
16.	5-20-13					7	DAY	43	85	F
17.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
18.	5-27-13					7	DAY	59	86	F
19.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
20.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
21.	6-3-13					7	DAY	50	82	F
22.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
23.	6-10-13					7	DAY	57	93	F
24.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
25.	6-17-13					7	DAY	61	92	F
26.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
27.	6-24-13					7	DAY	64	93	F
28.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
29.	6-30-13	0.3	IN	RAIN	rain	2	DAY			

Application Description

	A	B	C
Application Date:	5-2-13	5-28-13	6-3-13
Appl. Start Time:	6:45	5:30	16:30
Appl. Stop Time:	7:15	5:45	17:15
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	2-4"WH	V3
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	LXF	RJW	BCS
Air Temperature, Unit:	60 F	74 F	77 F
% Relative Humidity:	82	75	57
Wind Velocity, Unit:	1 MPH	8 MPH	3 MPH
Wind Direction:	SW	S	SE
Dew Presence (Y/N):	Y	N	N
Soil Temperature, Unit:	52 F	70 F	74 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	20	60	15
Next Moisture Occurred On:	5-2-13	5-30-13	6-9-13
Time to Next Moisture, Unit:	11 HR	62 HR	6 DAY

BASF Soybean Residual Programs.

Trial ID: 13-FagerS-BASF-programs Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V2	V3
Stage Minimum, Percent:		VC	V1
Stage Maximum, Percent:		V2	V3
Height, Unit:		4 IN	5 IN
Height Minimum, Maximum:		3 4	3 5

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	8	18
Stage Minimum, Percent:		COTY	COTY
Stage Maximum, Percent:		12	25
Height, Unit:		3 IN	5 IN
Height Minimum, Maximum:		0.5 5	0.5 8
Density, Unit:		15 FT2	20 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

BASF Soybean Residual Programs.

Trial ID: 13-FagerS-BASF-programs Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-16-13 Injury Percent 14 DA-A	GLXMA 6-3-13 Injury Percent 6 DA-B 0 DA-C	GLXMA 6-17-13 Injury Percent 14 DA-C	GLXMA 7-1-13 Injury Percent 28 DA-C
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH	B		0 b	3 c	1 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH	B		0 b	13 ab	4 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
3	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH	B		26 a	10 b	2 a
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"WH	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
4	OPTILL PRO (CO-PACK)							PRE	A	0 a	0 b	10 b	3 a
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A				
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	0 a	0 b	13 ab	3 a
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
6	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	0 a	0 b	12 ab	4 a
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
7	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	0 a	0 b	13 ab	6 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
8	FIERCE XLT	55.68	WG	0.104	lb ai/a	3	oz/a	PRE	A	0 a	0 b	12 ab	3 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
9	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	0 a	0 b	10 b	3 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=5

BASF Soybean Residual Programs.

Trial ID: 13-FagerS-BASF-programs Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-16-13 Injury Percent 14 DA-A	GLXMA 6-3-13 Injury Percent 6 DA-B 0 DA-C	GLXMA 6-17-13 Injury Percent 14 DA-C	GLXMA 7-1-13 Injury Percent 28 DA-C
10	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	0 a	0 b	15 a	4 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
11	OPTILL PRO (CO-PACK)							PRE	A	0	0 b	13 ab	3 a
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A				
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A				
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	V3	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
12	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	0	0 b	15 a	3 a
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	V3	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
13	NONTREATED									0	0 b	0 c	0 a
LSD (P=.05)										0.0	0.5	4.1	3.6
Standard Deviation										0.0	0.3	2.4	2.1
CV										0.0	15.81	22.71	71.89
Replicate F										0.000	1.000	6.107	0.091
Replicate Prob(F)										1.0000	0.3827	0.0072	0.9131
Treatment F										0.000	1560.250	9.893	1.692
Treatment Prob(F)										1.0000	0.0001	0.0001	0.1319

BASF Soybean Residual Programs.

Trial ID: 13-FagerS-BASF-programs Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Pest Code									AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Crop Code												
	Rating Date									5-16-13	6-3-13	6-17-13	7-1-13
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing										6 DA-B		
	Trt-Eval Interval									14 DA-A	0 DA-C	14 DA-C	28 DA-C
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH	B		57 de	75 cde	47 ef
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH	B		53 e	81 bcd	58 cde
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
3	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH	B		67 cd	68 e	38 f
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"WH	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
4	OPTILL PRO (CO-PACK)							PRE	A	98 ab	37 f	67 e	51 ef
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A				
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	98 ab	58 de	80 bcd	72 bc
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
6	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	99 a	95 a	95 a	77 ab
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
7	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	99 a	91 a	96 a	84 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
8	FIERCE XLT	55.68	WG	0.104	lb ai/a	3	oz/a	PRE	A	99 a	75 bc	87 abc	70 bcd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
9	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	99 a	74 bc	88 ab	72 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				

BASF Soybean Residual Programs.

Trial ID: 13-FagerS-BASF-programs Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Pest Code									AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Crop Code												
	Rating Date									5-16-13	6-3-13	6-17-13	7-1-13
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing										6 DA-B		
	Trt-Eval Interval									14 DA-A	0 DA-C	14 DA-C	28 DA-C
10	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	99 a	94 a	97 a	92 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
11	OPTILL PRO (CO-PACK)							PRE	A	93 b	50 e	73 de	53 def
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A				
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A				
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	V3	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
12	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	99 a	85 ab	90 ab	83 ab
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	V3	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	C				
	ULTRA BLAZER 2 EC	2	EC	0.375	lb ai/a	24	fl oz/a	V3	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3	C				
13	NONTREATED									0 c	0 g	0 f	0 g
	LSD (P=.05)									6.0	12.2	12.3	16.8
	Standard Deviation									3.5	7.3	7.3	10.0
	CV									3.97	11.29	9.52	16.24
	Replicate F									1.012	0.898	1.582	0.123
	Replicate Prob(F)									0.3832	0.4205	0.2263	0.8851
	Treatment F									235.820	40.457	35.856	18.107
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Southern Illinois University

BASF Soybean Residual Programs.

Trial ID: 13-FagerS-BASF-programs Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: BASF (AJ-3).
2. Ratings: CI/WC 14-21 DA-A, and 0, 14, and 28 DA-C.
3. Blanket burndown application of glyphosate (1.5 lbae/A) was applied to all plots on 4-13-13.
   Blanket prior to planting of Gramoxone (4 pt/A) was applied to all plots on 5-1-13.
4. Yield not requested.
5. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
6. Following the PRE application the first rainfall event, beginning the same day, was 2.08 inch over 4 days.
7. Not harvested.

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-24-13
Completion Date: 8-13-13

Trial Location

City: De Soto **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62924

Objectives:
Evaluate soybean response and glyphosate-resistant waterhemp control from glyphosate tank-mixtures.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG 4005 **BBCH Scale:** BSOY
Description: RR1
Planting Date: 5-24-13
Planting Rate, Unit: 145000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.75 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMX	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 15.4 **% OM:** 2.15 **Texture:** SIL silt loam
% Silt: 64.7 **pH:** 6.9 **Soil Name:** Okaw
% Clay: 19.9 **CEC:** 12.4

Additional Measured Elements

Element	Quantity	Unit
P1	94	lb/A
K	468	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
2.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
3.	5-6-13					7	DAY	41	80	F
4.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
5.	5-13-13					7	DAY	37	87	F
6.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
7.	5-20-13					7	DAY	43	85	F
8.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
9.	5-27-13					7	DAY	59	86	F
10.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
11.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
12.	6-3-13					7	DAY	50	82	F
13.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
14.	6-10-13					7	DAY	57	93	F
15.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
16.	6-17-13					7	DAY	61	92	F
17.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
18.	6-24-13					7	DAY	64	93	F
19.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
20.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
21.	7-1-13					7	DAY	57	88	F
22.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
23.	7-8-13					7	DAY	59	92	F
24.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
25.	7-15-13					7	DAY	68	93	F
26.	7-20-13	1.24	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	6-18-13
Appl. Start Time:	9:45
Appl. Stop Time:	10:15
Application Method:	Spray
Application Timing:	V2-V3
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	83 F
% Relative Humidity:	62
Wind Velocity, Unit:	2 MPH
Wind Direction:	W
Dew Presence (Y/N):	N
Soil Temperature, Unit:	74 F
Soil Moisture:	NORMAL
% Cloud Cover:	10
Next Moisture Occurred On:	6-22-13
Time to Next Moisture, Unit:	4 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	V3
Stage Minimum, Percent:	V2
Stage Maximum, Percent:	V3
Height, Unit:	7 IN
Height Minimum, Maximum:	5 7

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	12
Stage Minimum, Percent:	4
Stage Maximum, Percent:	20
Height, Unit:	4 IN
Height Minimum, Maximum:	1 7
Density, Unit:	10 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-22-13 Injury Percent 4 DA-A	GLXMA 6-25-13 Injury Percent 7 DA-A	GLXMA 7-2-13 Injury Percent 14 DA-A	GLXMA 7-16-13 Injury Percent 28 DA-A	GLXMA 8-13-13 Injury Percent 56 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A	0 h	0 h	0 g	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
2	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A	0 h	0 h	0 g	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-V3	A	23 c	19 c	11 bc	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-V3	A	23 cd	20 c	12 b	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-V3	A	28 b	25 b	16 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-V3	A	32 a	28 a	16 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-V3	A	16 e	12 e	6 ef	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-V3	A	20 d	14 de	9 cd	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-V3	A	23 cd	19 c	8 de	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-V3	A	27 b	15 d	9 cd	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-V3	A	6 g	5 g	5 f	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-V3	A	5 g	5 g	5 f	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-V3	A	7 g	7 fg	6 ef	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-V3	A	11 f	9 f	6 ef	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code													
Crop Code									GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Rating Date									6-22-13	6-25-13	7-2-13	7-16-13	8-13-13
Rating Type									Injury	Injury	Injury	Injury	Injury
Rating Unit									Percent	Percent	Percent	Percent	Percent
Rating Timing													
Trt-Eval Interval									4 DA-A	7 DA-A	14 DA-A	28 DA-A	56 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
15	NONTREATED									0 h	0 h	0 g	0 a	0 a
LSD (P=.05)										2.7	2.5	2.6	0.0	0.0
Standard Deviation										1.6	1.5	1.6	0.0	0.0
CV										11.15	12.67	21.39	0.0	0.0
Replicate F										0.157	0.069	0.548	0.000	0.000
Replicate Prob(F)										0.8552	0.9334	0.5843	1.0000	1.0000
Treatment F										139.328	111.281	32.337	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	1.0000	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-22-13 Chlorosis Percent 4 DA-A	GLXMA 6-25-13 Chlorosis Percent 7 DA-A	GLXMA 7-2-13 Chlorosis Percent 14 DA-A	GLXMA 7-16-13 Chlorosis Percent 28 DA-A	GLXMA 8-13-13 Chlorosis Percent 56 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
2	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-V3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code														
Crop Code											GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Rating Date											6-22-13	6-25-13	7-2-13	7-16-13	8-13-13
Rating Type											Chlorosis	Chlorosis	Chlorosis	Chlorosis	Chlorosis
Rating Unit											Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval											4 DA-A	7 DA-A	14 DA-A	28 DA-A	56 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
15	NONTREATED										0 a	0 a	0 a	0 a	0 a
LSD (P=.05)											0.0	0.0	0.0	0.0	0.0
Standard Deviation											0.0	0.0	0.0	0.0	0.0
CV											0.0	0.0	0.0	0.0	0.0
Replicate F											0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)											1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F											0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)											1.0000	1.0000	1.0000	1.0000	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-22-13 Necrosis Percent 4 DA-A	GLXMA 6-25-13 Necrosis Percent 7 DA-A	GLXMA 7-2-13 Necrosis Percent 14 DA-A	GLXMA 7-16-13 Necrosis Percent 28 DA-A	GLXMA 8-13-13 Necrosis Percent 56 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A	0 g	0 i	0 h	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
2	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A	0 g	0 i	0 h	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-V3	A	23 b	16 cd	9 bc	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-V3	A	23 bc	18 bc	9 ab	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-V3	A	28 a	19 ab	10 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-V3	A	28 a	20 a	10 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-V3	A	16 d	10 ef	6 fg	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-V3	A	20 c	12 e	8 cd	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-V3	A	23 bc	14 d	6 fg	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-V3	A	27 a	10 ef	7 de	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-V3	A	6 f	5 h	5 g	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-V3	A	5 f	5 h	5 g	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-V3	A	7 f	7 gh	6 ef	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-V3	A	11 e	9 fg	6 ef	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code														
Crop Code											GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Rating Date											6-22-13	6-25-13	7-2-13	7-16-13	8-13-13
Rating Type											Necrosis	Necrosis	Necrosis	Necrosis	Necrosis
Rating Unit											Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval											4 DA-A	7 DA-A	14 DA-A	28 DA-A	56 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
15	NONTREATED										0 g	0 i	0 h	0 a	0 a
LSD (P=.05)											2.7	2.2	1.3	0.0	0.0
Standard Deviation											1.6	1.3	0.8	0.0	0.0
CV											11.36	13.85	13.36	0.0	0.0
Replicate F											0.074	0.012	4.333	0.000	0.000
Replicate Prob(F)											0.9288	0.9876	0.0229	1.0000	1.0000
Treatment F											130.349	79.123	58.952	0.000	0.000
Treatment Prob(F)											0.0001	0.0001	0.0001	1.0000	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-22-13 Stunt Percent 4 DA-A	GLXMA 6-25-13 Stunt Percent 7 DA-A	GLXMA 7-2-13 Stunt Percent 14 DA-A	GLXMA 7-16-13 Stunt Percent 28 DA-A	GLXMA 8-13-13 Stunt Percent 56 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A	0 b	0 c	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
2	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A	0 b	0 c	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-V3	A	0 b	2 c	1 bc	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-V3	A	0 b	1 c	2 b	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-V3	A	0 b	7 b	5 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-V3	A	3 a	10 a	5 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-V3	A	0 b	0 c	0 c	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-V3	A	0 b	1 c	0 c	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-V3	A	0 b	2 c	0 c	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-V3	A	0 b	0 c	0 c	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-V3	A	0 b	0 c	0 c	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-V3	A	0 b	0 c	0 c	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-V3	A	0 b	0 c	0 c	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-V3	A	0 b	0 c	0 c	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A					

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code														
Crop Code											GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Rating Date											6-22-13	6-25-13	7-2-13	7-16-13	8-13-13
Rating Type											Stunt	Stunt	Stunt	Stunt	Stunt
Rating Unit											Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval											4 DA-A	7 DA-A	14 DA-A	28 DA-A	56 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
15	NONTREATED										0 b	0 c	0 c	0 a	0 a
LSD (P=.05)											1.2	3.3	1.3	0.0	0.0
Standard Deviation											0.7	2.0	0.8	0.0	0.0
CV											335.41	133.33	94.48	0.0	0.0
Replicate F											1.000	0.645	0.663	0.000	0.000
Replicate Prob(F)											0.3806	0.5322	0.5230	1.0000	1.0000
Treatment F											4.000	6.710	14.504	0.000	0.000
Treatment Prob(F)											0.0009	0.0001	0.0001	1.0000	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 6-25-13 Control Percent 7 DA-A	AMATA-HR 7-2-13 Control Percent 14 DA-A	AMATA-HR 7-16-13 Control Percent 28 DA-A	AMATA-HR 8-13-13 Control Percent 56 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A	67 d	66 b	48 def	20 efg
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				
2	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A	68 d	71 b	62 bcd	53 bcd
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-V3	A	95 a	92 a	64 bcd	42 cde
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-V3	A	93 a	92 a	62 bcd	53 bcd
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-V3	A	97 a	91 a	67 bcd	47 bcd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-V3	A	97 a	94 a	72 abc	63 abc
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-V3	A	97 a	93 a	67 bcd	55 bcd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-V3	A	96 a	96 a	73 ab	67 ab
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-V3	A	97 a	94 a	78 ab	65 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-V3	A	96 a	97 a	93 a	87 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-V3	A	78 bc	69 b	32 ef	7 g
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-V3	A	84 b	86 a	62 bcd	52 bcd
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-V3	A	74 cd	50 c	27 f	13 fg
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-V3	A	83 b	88 a	50 cde	37 def
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-V3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	A				

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code									AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Crop Code												
Rating Date									6-25-13	7-2-13	7-16-13	8-13-13
Rating Type									Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent
Rating Timing												
Trt-Eval Interval									7 DA-A	14 DA-A	28 DA-A	56 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
15	NONTREATED									0 e	0 d	0 g	0 g
LSD (P=.05)										8.2	12.5	22.3	25.6
Standard Deviation										4.9	7.4	13.3	15.3
CV										6.03	9.47	23.37	34.75
Replicate F										2.592	1.737	0.485	0.150
Replicate Prob(F)										0.0928	0.1946	0.6207	0.8616
Treatment F										77.995	35.894	9.041	7.726
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 13-DSO-ISApostTM Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: ISA.
2. Ratings: CI (overall, stunting, chlorosis, necrosis) at 4, 7, 14, 28, and 56 DAT.
   WC at 7, 14, 28, and 56 DAT.
3. Blanket burndown of glyphosate (1.5 lbae/A) plus Salvo (12 floz/A) was applied to all plots on 4-2-13.
   Blanket prior to planting of Gramoxone (3 pt/A) + Warrior (1.92 oz/A) was applied to all plots on 5-20-13.
4. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. Following the V2-V3 application the first rainfall event, beginning 4 days later, was 0.34 inch over 2 days.
6. Yield not required.

Bayer Waterhemp Control Systems.

Trial ID: 13-DSO-Bayer-BL9 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-20-13
Completion Date: 8-7-13

Trial Location

City: De Soto **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62924

Objectives:
Evaluate glyphosate-resistant waterhemp control from new herbicide systems.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: NONE - Non-crop
Variety: NON-CROP
Planting Method: NA

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 14 **% OM:** 2.12 **Texture:** SIL silt loam
% Silt: 67 **pH:** 6.9 **Soil Name:** Okaw
% Clay: 19 **CEC:** 12.7

Additional Measured Elements

Element	Quantity	Unit
P1	112	lb/A
K	386	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Bayer Waterhemp Control Systems.

Trial ID: 13-DSO-Bayer-BL9 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
2.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
3.	5-6-13					7	DAY	41	80	F
4.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
5.	5-13-13					7	DAY	37	87	F
6.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
7.	5-20-13					7	DAY	43	85	F
8.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
9.	5-27-13					7	DAY	59	86	F
10.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
11.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
12.	6-3-13					7	DAY	50	82	F
13.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
14.	6-10-13					7	DAY	57	93	F
15.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
16.	6-17-13					7	DAY	61	92	F
17.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
18.	6-24-13					7	DAY	64	93	F
19.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
20.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
21.	7-1-13					7	DAY	57	88	F
22.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
23.	7-8-13					7	DAY	59	92	F
24.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
25.	7-15-13					7	DAY	68	93	F
26.	7-20-13	1.24	IN	RAIN	rain	2	DAY			
27.	7-22-13					7	DAY	51	90	F
28.	7-27-13	0.13	IN	RAIN	rain	2	DAY			
29.	7-29-13					7	DAY	58	86	F
30.	7-30-13	0.98	IN	RAIN	rain	1	DAY			

Application Description

	A	B
Application Date:	5-20-13	7-3-13
Appl. Start Time:	19:15	10:30
Appl. Stop Time:	20:15	11:15
Application Method:	Spray	Spray
Application Timing:	PRE	3-5"W
Application Placement:	BROSOI	BROFOL
Applied By:	LXF	BCS
Air Temperature, Unit:	84 F	91 F
% Relative Humidity:	58	51
Wind Velocity, Unit:	6 MPH	2 MPH
Wind Direction:	SE	S
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	79 F	74 F
Soil Moisture:	NORMAL	ABONOR
% Cloud Cover:	5	25
Next Moisture Occurred On:	5-21-13	7-4-13
Time to Next Moisture, Unit:	7 HR	16 HR

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	NONE	NONE
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	NA

Bayer Waterhemp Control Systems.

Trial ID: 13-DSO-Bayer-BL9 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMATA W	AMATA W
Stage Majority, Percent:	NA	18
Stage Minimum, Percent:		2
Stage Maximum, Percent:		50+
Height, Unit:		5 IN
Height Minimum, Maximum:		1 15
Density, Unit:		5 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

Bayer Waterhemp Control Systems.

Trial ID: 13-DSO-Bayer-BL9 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 6-24-13 Control Percent 35 DA-A	AMATA-HR 7-1-13 Control Percent -2 DA-B	AMATA-HR 8-7-13 Control Percent 35 DA-B
1	NONTREATED									0 e	0 e	0 f
2	SONIC	70	WG	0.35	lb ai/a	8	oz/a	PRE	A	95 ab	91 a	95 a
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	3-5"W	B			
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	3-5"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-5"W	B			
3	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	PRE	A	79 c	60 c	85 b
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	3-5"W	B			
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	3-5"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-5"W	B			
4	VALOR XLT	40.3	WG	0.126	lb ai/a	5.0	oz/a	PRE	A	96 a	89 a	98 a
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	3-5"W	B			
	WARRANT	3	CS	0.75	lb ai/a	2	pt/a	3-5"W	B			
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	3-5"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-5"W	B			
5	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	PRE	A	47 d	25 d	81 bc
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	PRE	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	PRE	A			
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	3-5"W	B			
	WARRANT	3	CS	0.75	lb ai/a	2	pt/a	3-5"W	B			
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	3-5"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-5"W	B			
6	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A	96 a	89 a	88 b
	HALEX GT	4.389	CS	1.1	lb ai/a	2	pt/a	3-5"W	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	3-5"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-5"W	B			
7	ZEMAX	3.67	SC	1.84	lb ai/a	2	qt/a	PRE	A	97 a	95 a	87 b
	FLEXSTAR	1.88	EC	0.352	lb ai/a	1.5	pt/a	3-5"W	B			
	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	3-5"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-5"W	B			
8	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	PRE	A	87 bc	71 b	35 e
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A			
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	3-5"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-5"W	B			
9	BALANCE PRO	4	SC	0.094	lb ai/a	3	fl oz/a	PRE	A	96 a	95 a	67 d
	SENCOR	75	WG	0.375	lb ai/a	8	oz/a	PRE	A			
	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	3-5"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-5"W	B			
10	BALANCE PRO	4	SC	0.094	lb ai/a	3	fl oz/a	PRE	A	96 a	91 a	67 d
	SENCOR	75	WG	0.375	lb ai/a	8	oz/a	PRE	A			
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	3-5"W	B			
	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	3-5"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-5"W	B			
11	BALANCE PRO	4	SC	0.094	lb ai/a	3	fl oz/a	PRE	A	96 a	94 a	74 c
	SENCOR	75	WG	0.375	lb ai/a	8	oz/a	PRE	A			
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	3-5"W	B			
	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	3-5"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-5"W	B			
12	BALANCE PRO	4	SC	0.094	lb ai/a	3	fl oz/a	PRE	A	96 a	93 a	61 d
	SENCOR	75	WG	0.375	lb ai/a	8	oz/a	PRE	A			
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	3-5"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-5"W	B			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Bayer Waterhemp Control Systems.

Trial ID: 13-DSO-Bayer-BL9 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR
	Pest Code									AMATA-HR	AMATA-HR	AMATA-HR
	Crop Code											
	Rating Date									6-24-13	7-1-13	8-7-13
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing											
	Trt-Eval Interval									35 DA-A	-2 DA-B	35 DA-B
13	BALANCE PRO	4	SC	0.094	lb ai/a	3	fl oz/a	PRE	A	96 a	90 a	75 c
	SENCOR	75	WG	0.375	lb ai/a	8	oz/a	PRE	A			
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	3-5"W	B			
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	3-5"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-5"W	B			
	LSD (P=.05)									8.1	10.8	6.9
	Standard Deviation									4.8	6.4	4.1
	CV									5.79	8.45	5.81
	Replicate F									3.001	1.936	1.808
	Replicate Prob(F)									0.0686	0.1661	0.1856
	Treatment F									106.156	67.311	129.172
	Treatment Prob(F)									0.0001	0.0001	0.0001

Bayer Waterhemp Control Systems.

Trial ID: 13-DSO-Bayer-BL9 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Bayer (BL9).
2. Ratings: WC 0 and 35 DA-B.
   An additional rating at 35 DA-A was made due to the extended time before the 3-5"W application.
3. Blanket burndown application of glyphosate (1.5 lbae/A) plus Salvo (12 floz/A)
   was applied to all plots on 4-2-13.
   Blanket prior to planting of Gramoxone (3 pt/A) + Warrior (1.92 oz/A) was applied to all plots on 5-20-13.
4. No yield (non-crop).
5. At the 3-5"W application, weed size and density was highly variable depending on the
   PRE herbicide that was used, treatments 3, 5, and 8 had densities of 80 plants per square ft.
6. Following the PRE application the first rainfall event, the next day, was 0.91 inch,
   then 2.36 inch, over 3 days, beginning 10 days after the PRE application.
   Following the 3-5"W application on 7-3-13, total rainfall over the next 16 days was only 0.05 inch,
   then 1.24 inch beginning 17 days after application over 2 days.
7. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
8. Not harvested (non-crop).

Surestart Combinations Applied Early Postemergence in Corn.

Trial ID: 13-DSO-H001 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-20-13
Completion Date: 7-12-13

Trial Location

City: De Soto **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62924

Objectives:
Evaluate crop tolerance and efficacy of Surstart plus Durango DMA tank-mixed with Callisto and applied postemergence.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33
Description: SS RIB
Planting Date: 5-20-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 14 **% OM:** 2.12 **Texture:** SIL silt loam
% Silt: 67 **pH:** 6.9 **Soil Name:** Okaw
% Clay: 19 **CEC:** 12.7

Additional Measured Elements

Element	Quantity	Unit
P1	112	lb/A
K	386	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Surestart Combinations Applied Early Postemergence in Corn.

Trial ID: 13-DSO-H001 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
2.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
3.	5-6-13					7	DAY	41	80	F
4.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
5.	5-13-13					7	DAY	37	87	F
6.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
7.	5-20-13					7	DAY	43	85	F
8.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
9.	5-27-13					7	DAY	59	86	F
10.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
11.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
12.	6-3-13					7	DAY	50	82	F
13.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
14.	6-10-13					7	DAY	57	93	F
15.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
16.	6-17-13					7	DAY	61	92	F
17.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
18.	6-24-13					7	DAY	64	93	F
19.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
20.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
21.	7-1-13					7	DAY	57	88	F
22.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
23.	7-8-13					7	DAY	59	92	F
24.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
25.	7-15-13					7	DAY	68	93	F
26.	7-20-13	1.24	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	6-14-13
Appl. Start Time:	10:15
Appl. Stop Time:	11:00
Application Method:	Spray
Application Timing:	2-4"W
Application Placement:	BROFOL
Applied By:	NTH
Air Temperature, Unit:	88 F
% Relative Humidity:	50
Wind Velocity, Unit:	3 MPH
Wind Direction:	NE
Dew Presence (Y/N):	N
Soil Temperature, Unit:	77 F
Soil Moisture:	NORMAL
% Cloud Cover:	0
Next Moisture Occurred On:	6-17-13
Time to Next Moisture, Unit:	3 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD
Stage Scale Used:	DESC
Stage Majority, Percent:	V4
Stage Minimum, Percent:	V3
Stage Maximum, Percent:	V4
Height, Unit:	20 IN
Height Minimum, Maximum:	15 20

Southern Illinois University

Surestart Combinations Applied Early Postemergence in Corn.

Trial ID: 13-DSO-H001 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	8
Stage Minimum, Percent:	2
Stage Maximum, Percent:	20
Height, Unit:	4 IN
Height Minimum, Maximum:	1 8
Density, Unit:	8 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Surestart Combinations Applied Early Postemergence in Corn.

Trial ID: 13-DSO-H001 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-17-13 Injury Percent 3 DA-A	ZEAMD 6-21-13 Injury Percent 7 DA-A	ZEAMD 6-28-13 Injury Percent 14 DA-A	ZEAMD 6-17-13 GROINH Percent 3 DA-A	ZEAMD 6-21-13 GROINH Percent 7 DA-A	ZEAMD 6-28-13 GROINH Percent 14 DA-A
1	NONTREATED									0 e	0 d	0 f	0 c	0 d	0 e
2	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	7 cd	7 bc	4 cde	5 bc	6 bc	4 bcd
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
3	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	6 d	6 c	3 def	6 b	6 b	3 cd
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	CALLISTO	4	SC	0.0313	lb ai/a	1	fl oz/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
4	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	7 cd	7 bc	2 def	6 b	6 bc	2 de
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	9 bcd	8 bc	4 cde	0 c	3 bcd	3 cd
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	AATREX 4L	4	SC	0.25	lb ai/a	0.5	pt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
6	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	12 b	10 bc	7 bc	3 bc	6 bc	4 bcd
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
7	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	12 b	10 bc	6 bc	6 b	5 bc	4 bcd
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	CALLISTO	4	SC	0.0313	lb ai/a	1	fl oz/a	2-4"W	A						
	AATREX 4L	4	SC	0.25	lb ai/a	0.5	pt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
8	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	11 bc	9 bc	1 ef	1 bc	3 bcd	0 e
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	2-4"W	A						
	AATREX 4L	4	SC	0.25	lb ai/a	0.5	pt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
9	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	12 b	10 b	9 b	5 bc	6 b	6 b
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	CALLISTO	4	SC	0.0313	lb ai/a	1	fl oz/a	2-4"W	A						
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
10	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	11 bc	11 b	5 cd	3 bc	6 b	5 bc
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	2-4"W	A						
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Surestart Combinations Applied Early Postemergence in Corn.

Trial ID: 13-DSO-H001 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-17-13 Injury Percent 3 DA-A	ZEAMD 6-21-13 Injury Percent 7 DA-A	ZEAMD 6-28-13 Injury Percent 14 DA-A	ZEAMD 6-17-13 GROINH Percent 3 DA-A	ZEAMD 6-21-13 GROINH Percent 7 DA-A	ZEAMD 6-28-13 GROINH Percent 14 DA-A
11	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A	31 a	34 a	23 a	30 a	30 a	19 a
	CORVUS	2.63	SC	0.115	lb ai/a	5.6	fl oz/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
12	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A	0 e	0 d	0 f	0 c	0 d	0 e
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
13	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W	A	1 e	1 d	0 f	1 bc	1 cd	0 e
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
LSD (P=.05)										4.2	4.0	3.2	5.1	4.9	2.5
Standard Deviation										3.0	2.8	2.2	3.5	3.4	1.7
CV										32.83	31.88	46.46	69.94	57.07	47.45
Replicate F										0.791	1.921	0.809	1.366	1.758	3.301
Replicate Prob(F)										0.5069	0.1436	0.4970	0.2686	0.1726	0.0311
Treatment F										28.821	37.351	29.168	19.827	19.656	33.034
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Surestart Combinations Applied Early Postemergence in Corn.

Trial ID: 13-DSO-H001 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-17-13 Chlorosis Percent 3 DA-A	ZEAMD 6-21-13 Chlorosis Percent 7 DA-A	ZEAMD 6-28-13 Chlorosis Percent 14 DA-A	ZEAMD 6-17-13 Necrosis Percent 3 DA-A	ZEAMD 6-21-13 Necrosis Percent 7 DA-A	ZEAMD 6-28-13 Necrosis Percent 14 DA-A
1	NONTREATED									0 d	0 e	0 d	0 c	0 a	0 a
2	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	2 c	2 cd	0 d	0 c	0 a	0 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
3	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	0 d	0 e	0 d	0 c	0 a	0 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	CALLISTO	4	SC	0.0313	lb ai/a	1	fl oz/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
4	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	2 c	2 de	0 d	0 c	0 a	0 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	5 b	4 bc	2 bcd	6 ab	2 a	1 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	AATREX 4L	4	SC	0.25	lb ai/a	0.5	pt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
6	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	6 b	5 b	3 ab	9 a	0 a	1 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
7	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	5 b	4 bc	2 bc	3 bc	1 a	1 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	CALLISTO	4	SC	0.0313	lb ai/a	1	fl oz/a	2-4"W	A						
	AATREX 4L	4	SC	0.25	lb ai/a	0.5	pt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
8	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	6 b	4 b	1 cd	6 ab	2 a	1 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	2-4"W	A						
	AATREX 4L	4	SC	0.25	lb ai/a	0.5	pt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
9	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	5 b	4 b	2 abc	6 ab	2 a	2 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	CALLISTO	4	SC	0.0313	lb ai/a	1	fl oz/a	2-4"W	A						
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
10	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	6 b	4 bc	0 d	5 ab	2 a	0 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A						
	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	2-4"W	A						
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						

Surestart Combinations Applied Early Postemergence in Corn.

Trial ID: 13-DSO-H001 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-17-13 Chlorosis Percent 3 DA-A	ZEAMD 6-21-13 Chlorosis Percent 7 DA-A	ZEAMD 6-28-13 Chlorosis Percent 14 DA-A	ZEAMD 6-17-13 Necrosis Percent 3 DA-A	ZEAMD 6-21-13 Necrosis Percent 7 DA-A	ZEAMD 6-28-13 Necrosis Percent 14 DA-A
11	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A	21 a	9 a	4 a	3 bc	1 a	0 a
	CORVUS	2.63	SC	0.115	lb ai/a	5.6	fl oz/a	2-4"W	A						
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
12	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A	0 d	0 e	0 d	0 c	0 a	0 a
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
13	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W	A	0 d	0 e	0 d	0 c	0 a	0 a
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
LSD (P=.05)										1.9	1.9	1.6	4.2	2.0	1.2
Standard Deviation										1.3	1.3	1.1	2.9	1.4	0.9
CV										30.21	47.92	111.63	101.89	174.85	222.26
Replicate F										8.006	0.984	1.000	1.273	1.548	0.772
Replicate Prob(F)										0.0003	0.4114	0.4040	0.2982	0.2189	0.5173
Treatment F										71.564	15.053	5.578	4.546	1.816	1.860
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0002	0.0827	0.0748

Surestart Combinations Applied Early Postemergence in Corn.

Trial ID: 13-DSO-H001 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 6-28-13 Control Percent 14 DA-A	AMATA-HR 7-12-13 Control Percent 28 DA-A
1	NONTREATED									0 e	0 c
2	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	90 c	96 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A		
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A		
3	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	92 bc	97 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A		
	CALLISTO	4	SC	0.0313	lb ai/a	1	fl oz/a	2-4"W	A		
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A		
4	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	96 ab	98 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A		
	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	2-4"W	A		
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A		
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	97 ab	99 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A		
	AATREX 4L	4	SC	0.25	lb ai/a	0.5	pt/a	2-4"W	A		
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A		
6	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	99 a	99 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A		
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A		
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A		
7	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	99 a	99 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A		
	CALLISTO	4	SC	0.0313	lb ai/a	1	fl oz/a	2-4"W	A		
	AATREX 4L	4	SC	0.25	lb ai/a	0.5	pt/a	2-4"W	A		
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A		
8	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	99 a	99 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A		
	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	2-4"W	A		
	AATREX 4L	4	SC	0.25	lb ai/a	0.5	pt/a	2-4"W	A		
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A		
9	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	99 a	99 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A		
	CALLISTO	4	SC	0.0313	lb ai/a	1	fl oz/a	2-4"W	A		
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A		
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A		
10	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	A	99 a	99 a
	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A		
	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	2-4"W	A		
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A		
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A		

Surestart Combinations Applied Early Postemergence in Corn.

Trial ID: 13-DSO-H001 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 6-28-13 Control Percent 14 DA-A	AMATA-HR 7-12-13 Control Percent 28 DA-A
11	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A	98 a	99 a
	CORVUS	2.63	SC	0.115	lb ai/a	5.6	fl oz/a	2-4"W	A		
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A		
12	DURANGO DMA	4	SL	1	lb ae/a	1	qt/a	2-4"W	A	79 d	88 b
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A		
13	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W	A	98 a	97 a
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A		
LSD (P=.05)										5.1	6.2
Standard Deviation										3.6	4.4
CV										4.1	4.85
Replicate F										4.823	2.191
Replicate Prob(F)										0.0064	0.1059
Treatment F										225.582	155.500
Treatment Prob(F)										0.0001	0.0001

Southern Illinois University

Surestart Combinations Applied Early Postemergence in Corn.

Trial ID: 13-DSO-H001 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Dow (NA13P6H001).
2. Ratings: CI/growth inhibition/chlorosis/necrosis at 3, 7, and 14 DA-A; WC 14 and 28 DA-A.
3. Record corn height, leaf stage (V stage) in nontreated plots at each evaluation.
   Record for each weed species evaluated; weed height, leaf stage, and density in nontreated plots at each evaluation.
   Report crop and weed information from the nontreated plots in both data header and comments.
4. Blanket burndown of glyphosate (1.5 lbae/A) plus Salvo (12 floz/A) was applied to all plots on 4-2-13.
   Blanket prior to planting of Gramoxone (3 pt/A) + Warrior (1.92 oz/A) was applied to all plots on 5-20-13.
5. Yield not requested.
6. Following the 2-4"W application the first rainfall event, beginning 3 days later, was 0.36 inch over 2 days.
7. GROINH = Corn growth inhibition.
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
8. Crop stage and height, and weed stage, height, and density in nontreated plots;

Eval date	Trt-Eval-Interval	Corn Stage	Corn Ht (inch)	AMATA-HR Leaves	AMATA-HR Ht (inch)	AMATA-HR no./sqft
06-17-13	3 DA-A	V5	18	16	10-12	10
06-21-13	7 DA-A	V6	24	16	10-12	10
06-28-13	14 DA-A	V5-V6	30	6-28, 16	4-15, 12	7
07-12-13	28 DA-A	R1	72	20+	12-40	5

9. Not harvested.

Anthem Tank Mixtures in Corn.

Trial ID: 13-DSO-AnthemCN Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-20-13
Completion Date: 10-21-13

Trial Location

City: De Soto **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62924

Objectives:
Evaluate glyphosate-resistant waterhemp control from Anthem and Anthem ATZ in corn.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33 **BBCH Scale:** BCOR
Description: SS RIB
Planting Date: 5-20-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Pest 2 Type: W **Code:** PANDI Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 180 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 14 **% OM:** 2.12 **Texture:** SIL silt loam
% Silt: 67 **pH:** 6.9 **Soil Name:** Okaw
% Clay: 19 **CEC:** 12.7

Additional Measured Elements

Element	Quantity	Unit
P1	112	lb/A
K	386	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Anthem Tank Mixtures in Corn.

Trial ID: 13-DSO-AnthemCN Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
2.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
3.	5-6-13					7	DAY	41	80	F
4.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
5.	5-13-13					7	DAY	37	87	F
6.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
7.	5-20-13					7	DAY	43	85	F
8.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
9.	5-27-13					7	DAY	59	86	F
10.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
11.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
12.	6-3-13					7	DAY	50	82	F
13.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
14.	6-10-13					7	DAY	57	93	F
15.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
16.	6-17-13					7	DAY	61	92	F
17.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
18.	6-24-13					7	DAY	64	93	F
19.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
20.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
21.	7-1-13					7	DAY	57	88	F
22.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
23.	7-8-13					7	DAY	59	92	F
24.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
25.	7-15-13					7	DAY	68	93	F
26.	7-20-13	1.24	IN	RAIN	rain	2	DAY			
27.	7-22-13					7	DAY	51	90	F
28.	7-27-13	0.13	IN	RAIN	rain	2	DAY			
29.	7-29-13					7	DAY	58	86	F
30.	7-30-13	0.98	IN	RAIN	rain	1	DAY			
31.	8-3-13	0.24	IN	RAIN	rain	3	DAY			
32.	8-5-13	0.53	IN	RAIN	rain	2	DAY			
33.	8-5-13					7	DAY	61	98	F
34.	8-8-13	1.78	IN	RAIN	rain	4	DAY			
35.	8-12-13	0.12	IN	RAIN	rain	2	DAY			
36.	8-12-13					7	DAY	51	84	F
37.	8-17-13	0.21	IN	RAIN	rain	2	DAY			
38.	8-19-13	0.01	IN	RAIN	rain	1	DAY			
39.	8-19-13					7	DAY	60	90	F

Anthem Tank Mixtures in Corn.

Trial ID: 13-DSO-AnthemCN Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Application Description

	A	B	C
Application Date:	5-20-13	6-2-13	6-20-13
Appl. Start Time:	19:00	19:00	9:30
Appl. Stop Time:	19:45	19:15	10:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	SPIKE	EPOST
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	LXF	RJW	LXF
Air Temperature, Unit:	85 F	70 F	91 F
% Relative Humidity:	58	70	59
Wind Velocity, Unit:	5 MPH	4 MPH	3 MPH
Wind Direction:	S	N	S
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	80 F	74 F	78 F
Soil Moisture:	NORMAL	ABONOR	NORMAL
% Cloud Cover:	5	90	30
Next Moisture Occurred On:	5-21-13	6-4-13	6-22-13
Time to Next Moisture, Unit:	7 HR	32 HR	2 DAY

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMD	ZEAMD	ZEAMD
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V1	V4
Stage Minimum, Percent:		VE	V4
Stage Maximum, Percent:		V1	V5
Height, Unit:		4 IN	25 IN
Height Minimum, Maximum:		3 4	18 25

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	2	See
Stage Minimum, Percent:		COTY	commnt
Stage Maximum, Percent:		4	
Height, Unit:		0.5 IN	
Height Minimum, Maximum:		0.25 0.5	
Density, Unit:		0.1 FT2	
Pest 2 Code, Type, Scale:	PANDI W	PANDI W	PANDI W
Stage Majority, Percent:	NA	2	See
Stage Minimum, Percent:		2	commnt
Stage Maximum, Percent:		3	
Height, Unit:		1 IN	
Height Minimum, Maximum:		0.5 1	
Density, Unit:		0.01 FT2	

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Anthem Tank Mixtures in Corn.

Trial ID: 13-DSO-AnthemCN Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-21-13 Moisture Percent	ZEAMD 10-21-13 Yield bu/A
	Pest Code										
	Crop Code										
	Rating Date										
	Rating Type										
	Rating Unit										
	Rating Timing										
	Trt-Eval Interval										
1	ANTHEM	2.15	SE	0.16	lb ai/a	9.5	fl oz/a	PRE	A	17.0 a	207 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C		
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C		
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	17.1 a	206 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	EPOST	C		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPOST	C		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C		
3	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	17.5 a	213 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C		
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C		
4	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	SPIKE	B	17.3 a	211 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	SPIKE	B		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPIKE	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPIKE	B		
5	CORVUS	2.63	SC	0.103	lb ai/a	5	fl oz/a	PRE	A	16.7 a	206 a
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	EPOST	C		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C		
6	LUMAX EZ	3.764	SE	2.82	lb ai/a	3	qt/a	PRE	A	17.6 a	215 a
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	EPOST	C		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C		
7	BICEP II MAGNUM	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A	16.9 a	206 a
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	EPOST	C		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C		
8	DEGREE XTRA	4.04	CS	3.03	lb ai/a	3	qt/a	PRE	A	17.4 a	215 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C		
9	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	17.9 a	200 a
	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	EPOST	C		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C		
10	NONTREATED									16.4 a	179 a
	LSD (P=.05)									1.90	20.2
	Standard Deviation									1.11	11.8
	CV									6.44	5.72
	Replicate F									0.964	1.961
	Replicate Prob(F)									0.4003	0.1696
	Treatment F									0.540	2.413
	Treatment Prob(F)									0.8268	0.0534

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Anthem Tank Mixtures in Corn.

Trial ID: 13-DSO-AnthemCN Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval									ZEAMD 6-4-13 Injury Percent 15 DA-A	ZEAMD 6-7-13 Injury Percent 5 DA-B	ZEAMD 6-17-13 Injury Percent 15 DA-B	ZEAMD 6-19-13 Injury Percent 30 DA-A	ZEAMD 6-25-13 Injury Percent 5 DA-C	ZEAMD 7-2-13 Injury Percent 30 DA-B	ZEAMD 7-5-13 Injury Percent 15 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
1	ANTHEM	2.15	SE	0.16	lb ai/a	9.5	fl oz/a	PRE	A	0 a	0 b	0 a	0 a	3 a	0 a	0 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C							
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	0 a	0 b	0 a	0 a	1 a	0 a	0 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	EPOST	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
3	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	0 a	0 b	0 a	0 a	1 a	1 a	1 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C							
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
4	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	SPIKE	B	3 a	9 a	3 a	3 a	1 a	0 a	0 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	SPIKE	B							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPIKE	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPIKE	B							
5	CORVUS	2.63	SC	0.103	lb ai/a	5	fl oz/a	PRE	A	0 a	0 b	0 a	0 a	1 a	1 a	1 a
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
6	LUMAX EZ	3.764	SE	2.82	lb ai/a	3	qt/a	PRE	A	0 a	0 b	0 a	0 a	0 a	0 a	0 a
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
7	BICEP II MAGNUM	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A	0 a	0 b	0 a	0 a	2 a	0 a	0 a
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
8	DEGREE XTRA	4.04	CS	3.03	lb ai/a	3	qt/a	PRE	A	0 a	0 b	0 a	0 a	2 a	0 a	0 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
9	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	0 a	0 b	0 a	0 a	3 a	0 a	0 a
	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
10	NONTREATED									0 a	0 b	0 a	0 a	0 a	0 a	0 a
LSD (P=.05)										0.0	0.9	0.0	0.0	2.8	1.4	1.4
Standard Deviation										0.0	0.5	0.0	0.0	1.6	0.8	0.8
CV										0.0	60.86	0.0	0.0	118.24	397.91	397.91
Replicate F										0.000	1.000	0.000	0.000	0.319	0.474	0.474
Replicate Prob(F)										1.0000	0.3874	1.0000	1.0000	0.7308	0.6302	0.6302
Treatment F										0.000	81.000	0.000	0.000	1.204	0.842	0.842
Treatment Prob(F)										1.0000	0.0001	1.0000	1.0000	0.3506	0.5887	0.5887

Anthem Tank Mixtures in Corn.

Trial ID: 13-DSO-AnthemCN Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
	Pest Code									
	Crop Code									ZEAMD
	Rating Date									7-20-13
	Rating Type									Injury
	Rating Unit									Percent
	Rating Timing									61 DA-A
	Trt-Eval Interval									30 DA-C
1	ANTHEM	2.15	SE	0.16	lb ai/a	9.5	fl oz/a	PRE	A	0 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C	
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	0 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	EPOST	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
3	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	0 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C	
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
4	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	SPIKE	B	0 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	SPIKE	B	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPIKE	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPIKE	B	
5	CORVUS	2.63	SC	0.103	lb ai/a	5	fl oz/a	PRE	A	0 a
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
6	LUMAX EZ	3.764	SE	2.82	lb ai/a	3	qt/a	PRE	A	0 a
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
7	BICEP II MAGNUM	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A	0 a
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
8	DEGREE XTRA	4.04	CS	3.03	lb ai/a	3	qt/a	PRE	A	0 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
9	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	0 a
	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
10	NONTREATED									0 a
	LSD (P=.05)									0.0
	Standard Deviation									0.0
	CV									0.0
	Replicate F									0.000
	Replicate Prob(F)									1.0000
	Treatment F									0.000
	Treatment Prob(F)									1.0000

Anthem Tank Mixtures in Corn.

Trial ID: 13-DSO-AnthemCN Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 6-4-13 Control Percent 15 DA-A	AMATA-HR 6-7-13 Control Percent 5 DA-B	AMATA-HR 6-17-13 Control Percent 15 DA-B	AMATA-HR 6-19-13 Control Percent 30 DA-A	AMATA-HR 6-25-13 Control Percent 5 DA-C
1	ANTHEM	2.15	SE	0.16	lb ai/a	9.5	fl oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C					
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C					
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	EPOST	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPOST	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C					
3	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C					
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C					
4	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	SPIKE	B	0 a	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	SPIKE	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPIKE	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPIKE	B					
5	CORVUS	2.63	SC	0.103	lb ai/a	5	fl oz/a	PRE	A	99 a	99 a	98 b	98 b	98 b
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	EPOST	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C					
6	LUMAX EZ	3.764	SE	2.82	lb ai/a	3	qt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	EPOST	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C					
7	BICEP II MAGNUM	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	EPOST	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C					
8	DEGREE XTRA	4.04	CS	3.03	lb ai/a	3	qt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C					
9	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	EPOST	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C					
10	NONTREATED									0 a	0 a	0 c	0 c	0 c
LSD (P=.05)										0.0	0.0	0.6	0.6	0.6
Standard Deviation										0.0	0.0	0.4	0.4	0.4
CV										0.0	0.0	0.41	0.41	0.41
Replicate F										0.000	0.000	1.000	1.000	1.000
Replicate Prob(F)										1.0000	1.0000	0.3874	0.3874	0.3874
Treatment F										0.000	0.000	22020.252	22020.252	22020.252
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0001	0.0001

Anthem Tank Mixtures in Corn.

Trial ID: 13-DSO-AnthemCN Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 7-2-13 Control Percent 30 DA-B	AMATA-HR 7-5-13 Control Percent 15 DA-C	AMATA-HR 7-20-13 Control Percent 61 DA-A 30 DA-C
1	ANTHEM	2.15	SE	0.16	lb ai/a	9.5	fl oz/a	PRE	A	99 a	99 a	99 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C			
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C			
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	99 a	99 a	99 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	EPOST	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPOST	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C			
3	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	99 a	99 a	99 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C			
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C			
4	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	SPIKE	B	99 a	99 a	99 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	SPIKE	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPIKE	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPIKE	B			
5	CORVUS	2.63	SC	0.103	lb ai/a	5	fl oz/a	PRE	A	98 b	98 b	99 a
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	EPOST	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C			
6	LUMAX EZ	3.764	SE	2.82	lb ai/a	3	qt/a	PRE	A	99 a	99 a	98 a
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	EPOST	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C			
7	BICEP II MAGNUM	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A	99 a	99 a	99 a
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	EPOST	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C			
8	DEGREE XTRA	4.04	CS	3.03	lb ai/a	3	qt/a	PRE	A	99 a	99 a	99 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C			
9	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	99 a	99 a	99 a
	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	EPOST	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C			
10	NONTREATED									0 c	0 c	0 b
LSD (P=.05)										0.6	0.6	0.8
Standard Deviation										0.4	0.4	0.5
CV										0.41	0.41	0.51
Replicate F										1.000	1.000	0.643
Replicate Prob(F)										0.3874	0.3874	0.5374
Treatment F										22020.252	22020.252	14134.805
Treatment Prob(F)										0.0001	0.0001	0.0001

Anthem Tank Mixtures in Corn.

Trial ID: 13-DSO-AnthemCN Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	PANDI 6-4-13 Control Percent 15 DA-A	PANDI 6-7-13 Control Percent 5 DA-B	PANDI 6-17-13 Control Percent 15 DA-B	PANDI 6-19-13 Control Percent 30 DA-A	PANDI 6-25-13 Control Percent 5 DA-C	PANDI 7-2-13 Control Percent 30 DA-B	PANDI 7-5-13 Control Percent 15 DA-C
1	ANTHEM	2.15	SE	0.16	lb ai/a	9.5	fl oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a	99 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C							
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a	99 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	EPOST	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
3	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	99 a	99 a	98 a	98 a	99 a	99 a	99 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C							
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
4	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	SPIKE	B	0 a	99 a	99 a	99 a	98 b	96 c	96 c
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	SPIKE	B							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPIKE	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPIKE	B							
5	CORVUS	2.63	SC	0.103	lb ai/a	5	fl oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a	99 a
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
6	LUMAX EZ	3.764	SE	2.82	lb ai/a	3	qt/a	PRE	A	99 a	99 a	98 a	98 a	98 ab	98 ab	98 ab
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
7	BICEP II MAGNUM	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A	99 a	99 a	99 a	99 a	98 ab	98 b	98 b
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
8	DEGREE XTRA	4.04	CS	3.03	lb ai/a	3	qt/a	PRE	A	99 a	99 a	98 a	98 a	98 ab	98 ab	98 ab
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
9	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a	99 a
	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	EPOST	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C							
10	NONTREATED									0 a	0 a	0 b	0 b	0 c	0 d	0 d
LSD (P=.05)										0.0	0.0	1.1	1.1	0.9	1.1	1.1
Standard Deviation										0.0	0.0	0.6	0.6	0.5	0.6	0.6
CV										0.0	0.0	0.71	0.71	0.57	0.71	0.71
Replicate F										0.000	0.000	1.000	1.000	4.043	4.333	4.333
Replicate Prob(F)										1.0000	1.0000	0.3874	0.3874	0.0355	0.0291	0.0291
Treatment F										0.000	0.000	7318.529	7318.529	11422.045	7268.529	7268.529
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001

Anthem Tank Mixtures in Corn.

Trial ID: 13-DSO-AnthemCN Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
	Pest Code									PANDI
	Crop Code									
	Rating Date									7-20-13
	Rating Type									Control
	Rating Unit									Percent
	Rating Timing									61 DA-A
	Trt-Eval Interval									30 DA-C
1	ANTHEM	2.15	SE	0.16	lb ai/a	9.5	fl oz/a	PRE	A	99 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C	
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	98 a
	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	EPOST	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
3	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	99 a
	F9387	100	SC	2.5	fl oz/a	2.5	fl oz/a	EPOST	C	
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
4	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	SPIKE	B	96 b
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	SPIKE	B	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPIKE	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPIKE	B	
5	CORVUS	2.63	SC	0.103	lb ai/a	5	fl oz/a	PRE	A	99 a
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
6	LUMAX EZ	3.764	SE	2.82	lb ai/a	3	qt/a	PRE	A	98 a
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
7	BICEP II MAGNUM	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A	99 a
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
8	DEGREE XTRA	4.04	CS	3.03	lb ai/a	3	qt/a	PRE	A	98 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
9	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	99 a
	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	EPOST	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	C	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	C	
10	NONTREATED									0 c
	LSD (P=.05)									1.5
	Standard Deviation									0.9
	CV									0.97
	Replicate F									4.116
	Replicate Prob(F)									0.0337
	Treatment F									3942.835
	Treatment Prob(F)									0.0001

Southern Illinois University

Anthem Tank Mixtures in Corn.

Trial ID: 13-DSO-AnthemCN Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol:FMC (Anthem corn).
2. CI 15 and 30 DA-A, 15 and 30 DA-B, 15 and 30 DA-C;
   WC 15, 30, and 60 DA-A, 5, 15, and 30 DA-B, 15 and 5, 15, and 30 DA-C.
3. Blanket burndown application of glyphosate (1.5 lbae/A) plus Salvo (12 floz/A) was applied to all plots on 4-2-13.
   Blanket application prior to planting of Gramoxone (3 pt/A) plus COC 1%) plus Warrior (1.92 oz/A) was applied to all plots on 5-20-13.
4. Yield if possible.
5. At application C (EPOST) on 6-20-13, there was no new AMATA emergence, probably due to dry soil conditions.
6. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
7. Following the PRE application the first rainfall event, beginning the same day, was 2.08 inch over 4 days.
   Following the SPIKE application the first rainfall event, beginning 2 days later, was only 0.13 inch over 7 days.
   Following the EPOST application the first rainfall event, beginning 2 days later, was 0.34 inch over 2 days, then 2.71 inch over 6 days beginning 6 days after the EPOST application.
8. Harvest 10-21-13, (2) 30 inch rows by 26.5 ft.

Impact Tank-Mixes.

Trial ID: 13-DSO-Impact Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-20-13
Completion Date: 10-21-13

Trial Location

City: De Soto **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62924

Objectives:
Evaluate Impact alone and in tank-mixes with glyphosate for control of glyphosate-resistant weeds.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33 **BBCH Scale:** BCOR
Description: SS RIB
Planting Date: 5-20-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 14 **% OM:** 2.12 **Texture:** SIL silt loam
% Silt: 67 **pH:** 6.9 **Soil Name:** Okaw
% Clay: 19 **CEC:** 12.7

Additional Measured Elements

Element	Quantity	Unit
P1	112	lb/A
K	386	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Impact Tank-Mixes.

Trial ID: 13-DSO-Impact Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
2.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
3.	5-6-13					7	DAY	41	80	F
4.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
5.	5-13-13					7	DAY	37	87	F
6.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
7.	5-20-13					7	DAY	43	85	F
8.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
9.	5-27-13					7	DAY	59	86	F
10.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
11.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
12.	6-3-13					7	DAY	50	82	F
13.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
14.	6-10-13					7	DAY	57	93	F
15.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
16.	6-17-13					7	DAY	61	92	F
17.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
18.	6-24-13					7	DAY	64	93	F
19.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
20.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
21.	7-1-13					7	DAY	57	88	F
22.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
23.	7-8-13					7	DAY	59	92	F
24.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
25.	7-15-13					7	DAY	68	93	F
26.	7-20-13	1.24	IN	RAIN	rain	2	DAY			
27.	7-22-13					7	DAY	51	90	F
28.	7-27-13	0.13	IN	RAIN	rain	2	DAY			
29.	7-29-13					7	DAY	58	86	F
30.	7-30-13	0.98	IN	RAIN	rain	1	DAY			
31.	8-3-13	0.24	IN	RAIN	rain	3	DAY			
32.	8-5-13	0.53	IN	RAIN	rain	2	DAY			
33.	8-5-13					7	DAY	61	98	F
34.	8-8-13	1.78	IN	RAIN	rain	4	DAY			
35.	8-12-13	0.12	IN	RAIN	rain	2	DAY			
36.	8-12-13					7	DAY	51	84	F
37.	8-17-13	0.21	IN	RAIN	rain	2	DAY			
38.	8-19-13	0.01	IN	RAIN	rain	1	DAY			
39.	8-19-13					7	DAY	60	90	F

Impact Tank-Mixes.

Trial ID: 13-DSO-Impact Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Application Description

	A
Application Date:	6-11-13
Appl. Start Time:	9:00
Appl. Stop Time:	9:15
Application Method:	Spray
Application Timing:	2-4"W
Application Placement:	BROFOL
Applied By:	NTH
Air Temperature, Unit:	88 F
% Relative Humidity:	65
Wind Velocity, Unit:	4 MPH
Wind Direction:	E
Dew Presence (Y/N):	N
Soil Temperature, Unit:	72 F
Soil Moisture:	NORMAL
% Cloud Cover:	10
Next Moisture Occurred On:	6-17-13
Time to Next Moisture, Unit:	6 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD
Stage Scale Used:	DESC
Stage Majority, Percent:	V4
Stage Minimum, Percent:	V3
Stage Maximum, Percent:	V4
Height, Unit:	8 IN
Height Minimum, Maximum:	6 8

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	6
Stage Minimum, Percent:	COTY
Stage Maximum, Percent:	8
Height, Unit:	2 IN
Height Minimum, Maximum:	0.5 5
Density, Unit:	2 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Impact Tank-Mixes.

Trial ID: 13-DSO-Impact Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-21-13 Moisture Percent	ZEAMD 10-21-13 Yield bu/A	ZEAMD 6-18-13 Injury Percent 7 DA-A	ZEAMD 6-26-13 Injury Percent 15 DA-A	ZEAMD 7-11-13 Injury Percent 30 DA-A	ZEAMD 8-10-13 Injury Percent 60 DA-A
1	NONTREATED									16.6 a	190 b	0 a	0 a	0 a	0 a
2	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W	A	16.8 a	226 a	0 a	0 a	0 a	0 a
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W	A						
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
3	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W	A	16.9 a	231 a	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
4	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W	A	17.5 a	241 a	0 a	0 a	0 a	0 a
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W	A						
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A						
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
5	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"W	A	16.9 a	230 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W	A						
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W	A						
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A						
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
6	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W	A	17.1 a	235 a	0 a	0 a	0 a	0 a
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A						
LSD (P=.05)										1.12	19.3	0.0	0.0	0.0	0.0
Standard Deviation										0.75	12.8	0.0	0.0	0.0	0.0
CV										4.39	5.7	0.0	0.0	0.0	0.0
Replicate F										1.154	0.083	0.000	0.000	0.000	0.000
Replicate Prob(F)										0.3598	0.9682	1.0000	1.0000	1.0000	1.0000
Treatment F										0.635	8.078	0.000	0.000	0.000	0.000
Treatment Prob(F)										0.6764	0.0007	1.0000	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Impact Tank-Mixes.

Trial ID: 13-DSO-Impact Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Pest Code									AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Crop Code												
	Rating Date									6-18-13	6-26-13	7-11-13	8-10-13
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									7 DA-A	15 DA-A	30 DA-A	60 DA-A
1	NONTREATED									0 c	0 c	0 c	0 c
2	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W	A	99 a	99 a	99 a	98 a
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W	A				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A				
3	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W	A	85 b	87 b	92 b	86 b
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A				
4	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W	A	99 a	99 a	99 a	99 a
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W	A				
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A				
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A				
5	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"W	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	2-4"W	A				
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W	A				
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A				
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A				
6	HALEX GT	4.389	CS	1.98	lb ai/a	3.6	pt/a	2-4"W	A	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	0.5	lb ai/a	1	pt/a	2-4"W	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	A				
	LSD (P=.05)									2.5	2.9	2.4	2.6
	Standard Deviation									1.7	1.9	1.6	1.7
	CV									2.08	2.39	1.93	2.15
	Replicate F									1.000	1.000	1.855	2.367
	Replicate Prob(F)									0.4199	0.4199	0.1806	0.1118
	Treatment F									2266.224	1701.746	2588.647	2104.955
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Impact Tank-Mixes.

Trial ID: 13-DSO-Impact Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Amvac (13C04H059A).
2. Ratings: CI/WC 7, 15, and 30 DA-A; WC 60 DA-A.
3. Application A is 2-4 inch weeds, target V3-V4 corn.
4. Blanket burndown application of glyphosate (1.5 lbae/A) plus Salvo (12 floz/A) was applied to all plots on 4-2-13.
   Blanket prior to planting of Gramoxone (3 pt/A) + Warrior (1.92 oz/A) was applied to all plots on 5-20-13.
5. Yield optional.
6. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
7. Following the 2-4"W application the first rainfall event, beginning 6 days later, was 0.36 inch over 2 days.
8. Harvest 10-21-13, (2) 30 inch rows by 26.5 ft.

F9387 Tankmixtures in Corn.

Trial ID: 13-DSO-F9387tankmix Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-20-13
Completion Date: 10-21-13

Trial Location

City: De Soto **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62924

Objectives:
Evaluate crop tolerance and weed control from F9387 tank mixed with glyphosate.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33 **BBCH Scale:** BCOR
Description: SS RIB
Planting Date: 5-20-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 180 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 14 **% OM:** 2.12 **Texture:** SIL silt loam
% Silt: 67 **pH:** 6.9 **Soil Name:** Okaw
% Clay: 19 **CEC:** 12.7

Additional Measured Elements

Element	Quantity	Unit
P1	112	lb/A
K	386	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

F9387 Tankmixtures in Corn.

Trial ID: 13-DSO-F9387tankmix Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
2.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
3.	5-6-13					7	DAY	41	80	F
4.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
5.	5-13-13					7	DAY	37	87	F
6.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
7.	5-20-13					7	DAY	43	85	F
8.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
9.	5-27-13					7	DAY	59	86	F
10.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
11.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
12.	6-3-13					7	DAY	50	82	F
13.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
14.	6-10-13					7	DAY	57	93	F
15.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
16.	6-17-13					7	DAY	61	92	F
17.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
18.	6-24-13					7	DAY	64	93	F
19.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
20.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
21.	7-1-13					7	DAY	57	88	F
22.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
23.	7-8-13					7	DAY	59	92	F
24.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
25.	7-15-13					7	DAY	68	93	F
26.	7-20-13	1.24	IN	RAIN	rain	2	DAY			
27.	7-22-13					7	DAY	51	90	F
28.	7-27-13	0.13	IN	RAIN	rain	2	DAY			
29.	7-29-13					7	DAY	58	86	F
30.	7-30-13	0.98	IN	RAIN	rain	1	DAY			
31.	8-3-13	0.24	IN	RAIN	rain	3	DAY			
32.	8-5-13	0.53	IN	RAIN	rain	2	DAY			
33.	8-5-13					7	DAY	61	98	F
34.	8-8-13	1.78	IN	RAIN	rain	4	DAY			
35.	8-12-13	0.12	IN	RAIN	rain	2	DAY			
36.	8-12-13					7	DAY	51	84	F
37.	8-17-13	0.21	IN	RAIN	rain	2	DAY			
38.	8-19-13	0.01	IN	RAIN	rain	1	DAY			
39.	8-19-13					7	DAY	60	90	F

F9387 Tankmixtures in Corn.

Trial ID: 13-DSO-F9387tankmix Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Application Description

	A	B
Application Date:	5-20-13	6-14-13
Appl. Start Time:	19:15	10:15
Appl. Stop Time:	19:30	11:00
Application Method:	Spray	Spray
Application Timing:	PRE	4"W
Application Placement:	BROSOI	BROFOL
Applied By:	EJM	LXF
Air Temperature, Unit:	84 F	88 F
% Relative Humidity:	58	50
Wind Velocity, Unit:	6 MPH	3 MPH
Wind Direction:	SE	NE
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	79 F	77 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	5	0
Next Moisture Occurred On:	5-21-13	6-17-13
Time to Next Moisture, Unit:	7 HR	3 DAY

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMD	ZEAMD
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V4
Stage Minimum, Percent:		V3
Stage Maximum, Percent:		V4
Height, Unit:		30 IN
Height Minimum, Maximum:		15 20

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMATA W	AMATA W
Stage Majority, Percent:	NA	8
Stage Minimum, Percent:		2
Stage Maximum, Percent:		20
Height, Unit:		4 IN
Height Minimum, Maximum:		1 8
Density, Unit:		10 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

F9387 Tankmixtures in Corn.

Trial ID: 13-DSO-F9387tankmix Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-21-13 Moisture Percent	ZEAMD 10-21-13 Yield bu/A	ZEAMD 6-19-13 Injury Percent 5 DA-B	ZEAMD 6-28-13 Injury Percent 14 DA-B	ZEAMD 7-14-13 Injury Percent 30 DA-B
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B	15.1 a	202 bc	0 f	0 d	0 a
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					
2	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B	15.2 a	220 abc	0 f	0 d	0 a
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					
3	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B	15.8 a	231 a	0 f	0 d	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					
4	F9387-1	4	SC	0.098	lb ai/a	3.15	fl oz/a	4"W	B	15.8 a	210 abc	1 ef	1 cd	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					
5	CADET	0.91	EC	0.00533	lb ai/a	0.75	fl oz/a	4"W	B	15.6 a	202 bc	6 ab	3 b	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					
6	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	4"W	B	15.3 a	208 abc	0 f	0 d	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					
7	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B	15.8 a	202 bc	2 de	1 c	0 a
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					
8	F9387-1	4	SC	0.098	lb ai/a	3.15	fl oz/a	4"W	B	15.2 a	209 abc	3 cd	4 b	0 a
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					
9	CADET	0.91	EC	0.00533	lb ai/a	0.75	fl oz/a	4"W	B	15.2 a	209 abc	7 a	5 a	0 a
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					
10	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B	15.7 a	205 abc	2 ef	0 d	0 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					
11	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B	15.6 a	231 a	4 bc	3 b	0 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	B					
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					
12	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	PRE	A	15.6 a	215 abc	2 de	0 d	0 a
	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B					
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					
13	ANTHEM	2.15	SE	0.134	lb ai/a	8	fl oz/a	PRE	A	15.6 a	227 ab	4 cd	1 c	0 a
	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B					
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					
14	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	4"W	B	15.0 a	193 c	0 f	0 d	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B					

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

F9387 Tankmixtures in Corn.

Trial ID: 13-DSO-F9387tankmix Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval									ZEAMD 10-21-13 Moisture Percent	ZEAMD 10-21-13 Yield bu/A	ZEAMD 6-19-13 Injury Percent 5 DA-B	ZEAMD 6-28-13 Injury Percent 14 DA-B	ZEAMD 7-14-13 Injury Percent 30 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
15	NONTREATED									15.3 a	142 d	0 f	0 d	0 a
LSD (P=.05)										0.67	27.4	1.6	0.9	0.0
Standard Deviation										0.47	19.2	1.1	0.6	0.0
CV										3.02	9.27	58.29	53.28	0.0
Replicate F										4.599	0.735	0.964	0.873	0.000
Replicate Prob(F)										0.0072	0.5373	0.4188	0.4626	1.0000
Treatment F										1.364	4.862	14.399	29.093	0.000
Treatment Prob(F)										0.2134	0.0001	0.0001	0.0001	1.0000

F9387 Tankmixtures in Corn.

Trial ID: 13-DSO-F9387tankmix Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-19-13 Necrosis Percent 5 DA-B	ZEAMD 6-28-13 Necrosis Percent 14 DA-B	ZEAMD 7-14-13 Stunt Percent 30 DA-B
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B	0 f	0 d	0 a
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			
2	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B	0 f	0 d	0 a
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			
3	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B	0 f	0 d	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			
4	F9387-1	4	SC	0.098	lb ai/a	3.15	fl oz/a	4"W	B	1 ef	1 cd	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			
5	CADET	0.91	EC	0.00533	lb ai/a	0.75	fl oz/a	4"W	B	6 ab	3 b	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			
6	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	4"W	B	0 f	0 d	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			
7	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B	2 cde	1 c	0 a
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			
8	F9387-1	4	SC	0.098	lb ai/a	3.15	fl oz/a	4"W	B	3 cd	3 b	0 a
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			
9	CADET	0.91	EC	0.00533	lb ai/a	0.75	fl oz/a	4"W	B	7 a	5 a	0 a
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			
10	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B	2 def	0 d	0 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			
11	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B	4 bc	3 b	0 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	B			
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			
12	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	PRE	A	2 cde	0 d	0 a
	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B			
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			
13	ANTHEM	2.15	SE	0.134	lb ai/a	8	fl oz/a	PRE	A	3 cd	1 c	0 a
	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B			
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			
14	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	4"W	B	0 f	0 d	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B			

F9387 Tankmixtures in Corn.

Trial ID: 13-DSO-F9387tankmix Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

| Pest Code | | |

F9387 Tankmixtures in Corn.

Trial ID: 13-DSO-F9387tankmix Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 6-19-13 Control Percent 5 DA-B	AMATA-HR 6-28-13 Control Percent 14 DA-B	AMATA-HR 7-5-13 Control Percent 21 DA-B	AMATA-HR 7-14-13 Control Percent 30 DA-B
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B	16 d	58 g	62 e	61 d
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				
2	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B	98 a	98 abc	97 abc	96 ab
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				
3	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B	85 b	92 cd	93 bc	92 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				
4	F9387-1	4	SC	0.098	lb ai/a	3.15	fl oz/a	4"W	B	86 b	93 bcd	95 abc	94 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				
5	CADET	0.91	EC	0.00533	lb ai/a	0.75	fl oz/a	4"W	B	82 b	76 f	72 d	68 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				
6	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	4"W	B	48 c	83 e	93 c	88 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				
7	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B	98 a	98 abc	99 ab	98 ab
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				
8	F9387-1	4	SC	0.098	lb ai/a	3.15	fl oz/a	4"W	B	98 a	99 ab	98 ab	98 ab
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				
9	CADET	0.91	EC	0.00533	lb ai/a	0.75	fl oz/a	4"W	B	98 a	98 abc	98 abc	95 ab
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				
10	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B	98 a	99 ab	99 a	99 a
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				
11	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B	98 a	99 ab	99 ab	99 ab
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	B				
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4"W	B				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				
12	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	PRE	A	99 a	99 a	99 a	99 a
	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B				
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				
13	ANTHEM	2.15	SE	0.134	lb ai/a	8	fl oz/a	PRE	A	99 a	99 ab	99 a	99 a
	F9387-1	4	SC	0.078	lb ai/a	2.5	fl oz/a	4"W	B				
	AATREX 4L	4	SC	0.5	lb ai/a	16	fl oz/a	4"W	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				
14	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	4"W	B	83 b	87 de	93 c	93 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	B				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	4"W	B				

F9387 Tankmixtures in Corn.

Trial ID: 13-DSO-F9387tankmix Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code									AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Crop Code												
Rating Date									6-19-13	6-28-13	7-5-13	7-14-13
Rating Type									Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent
Rating Timing												
Trt-Eval Interval									5 DA-B	14 DA-B	21 DA-B	30 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
15	NONTREATED									0 e	0 h	0 f	0 e
LSD (P=.05)										4.6	6.3	5.4	7.1
Standard Deviation										3.2	4.4	3.8	5.0
CV										4.07	5.22	4.4	5.86
Replicate F										0.782	2.950	1.660	0.957
Replicate Prob(F)										0.5108	0.0435	0.1901	0.4217
Treatment F										393.248	139.525	191.153	110.352
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

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F9387 Tankmixtures in Corn.

Trial ID: 13-DSO-F9387tankmix Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: FMC (NA13-1115B).
2. Ratings: CI/Necrosis 5 and 14 DA-B; CI/Stunt 30 DA-B. WC 5, 14, and 30 DA-B.
3. Photos to show weed size/height at application. Photos/describe CI syptoms. Photos 21 DA-B for WC.
4. Apply POST when 75% of weeds reach 4 inch height.
5. Blanket burndown of glyphosate (1.5 lbae/A) plus Salvo (12 floz/A) was applied to all plots on 4-2-13.
   Blanket prior to planting of Gramoxone (3 pt/A) + Warrior (1.92 oz/A) was applied to all plots on 5-20-13.
6. Yield.
7. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
8. Following the PRE application the first rainfall event, the next day, was 0.91 inch,
   then 2.36 inch, over 3 days, beginning 10 days after the PRE application.
   Following the 4"W application the first rainfall event, beginning 3 days later, was 0.36 inch over 2 days.
9. Harvest 10-21-13, (2) 30 inch rows by 26.5 ft.

BASF Two-Pass Weed Control in Corn.

Trial ID: 13-FagerS-BASF-corn Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-1-13
Completion Date: 6-20-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Evaluate two-pass programs for waterhemp control.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 63-33 **BBCH Scale:** BCOR
Description: SS RIB
Planting Date: 5-1-13
Planting Rate, Unit: 28000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	NON-CROP	2012

Maintenance

No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL silt loam
pH: 5.5 **Soil Name:** Alvin
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	lb/A
K	446	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

BASF Two-Pass Weed Control in Corn.

Trial ID: 13-FagerS-BASF-corn Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-13					7	DAY	26	75	F
2.	4-8-13					7	DAY	32	81	F
3.	4-10-13	0.85	IN	RAIN	rain	2	DAY			
4.	4-15-13					7	DAY	32	83	F
5.	4-18-13	2.16	IN	RAIN	rain	1	DAY			
6.	4-22-13					7	DAY	32	72	F
7.	4-24-13	0.55	IN	RAIN	rain	2	DAY			
8.	4-27-13	0.37	IN	RAIN	rain	2	DAY			
9.	4-29-13					7	DAY	41	81	F
10.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
11.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
12.	5-6-13					7	DAY	41	80	F
13.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
14.	5-13-13					7	DAY	37	87	F
15.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
16.	5-20-13					7	DAY	43	85	F
17.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
18.	5-27-13					7	DAY	59	86	F
19.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
20.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
21.	6-3-13					7	DAY	50	82	F
22.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
23.	6-10-13					7	DAY	57	93	F
24.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
25.	6-17-13					7	DAY	61	92	F
26.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
27.	6-24-13					7	DAY	64	93	F
28.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
29.	6-30-13	0.3	IN	RAIN	rain	2	DAY			

Application Description

	A	B	C
Application Date:	5-2-13	5-16-13	5-30-13
Appl. Start Time:	7:40	11:00	8:20
Appl. Stop Time:	8:15	11:30	8:40
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	SPK-V2	8-12"CN
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	LXF	LXF	LXF
Air Temperature, Unit:	69 F	82 F	80 F
% Relative Humidity:	84	54	72
Wind Velocity, Unit:	1 MPH	4 MPH	6 MPH
Wind Direction:	SW	W	S
Dew Presence (Y/N):	Y	N	N
Soil Temperature, Unit:	52 F	72 F	74 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	20	60	90
Next Moisture Occurred On:	5-2-13	5-17-13	5-30-13
Time to Next Moisture, Unit:	10 HR	17 HR	12 HR

BASF Two-Pass Weed Control in Corn.

Trial ID: 13-FagerS-BASF-corn Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMD	ZEAMD	ZEAMD
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V2	V4
Stage Minimum, Percent:		V1	V3
Stage Maximum, Percent:		V2	V4
Height, Unit:		2 IN	12 IN
Height Minimum, Maximum:		1 2	8 12

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	3	8
Stage Minimum, Percent:		2	4
Stage Maximum, Percent:		4	10
Height, Unit:		0.75 IN	5 IN
Height Minimum, Maximum:		0.5 1	4 6
Density, Unit:		50 FT2	12 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

BASF Two-Pass Weed Control in Corn.

Trial ID: 13-FagerS-BASF-corn Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 5-17-13 Injury Percent 7 DAE	ZEAMD 5-30-13 Injury Percent 0 DA-C	ZEAMD 6-6-13 Injury Percent 21 DA-B	ZEAMD 6-20-13 Injury Percent 21 DA-C
1	NONTREATED									0 e	0 c	0 b	0 a
2	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	0 e	0 c	0 b	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C				
3	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	0 e	0 c	0 b	0 a
	ARMEZON	2.8	SL	0.0164	lb ai/a	0.75	fl oz/a	8-12"CN	C				
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	8-12"CN	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C				
4	LEXAR	3.7	SC	2.31	lb ai/a	2.5	qt/a	PRE	A	0 e	0 c	0 b	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C				
5	CORVUS	2.63	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	0 e	0 c	0 b	0 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C				
6	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	0 e	0 c	0 b	0 a
	GUARDSMAN MAX	5	SE	0.94	lb ai/a	1.5	pt/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C				
7	GUARDSMAN MAX	5	SE	2.5	lb ai/a	4	pt/a	SPK-V2	B	14 a	2 b	0 b	0 a
	ARMEZON	2.8	SL	0.0164	lb ai/a	0.75	fl oz/a	SPK-V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPK-V2	B				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	SPK-V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B				
8	HALEX GT	4.389	CS	2.2	lb ai/a	4	pt/a	SPK-V2	B	5 d	4 a	0 b	0 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	SPK-V2	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPK-V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B				
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	SPK-V2	B	9 c	2 b	4 a	0 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	SPK-V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPK-V2	B				
	HSOC (DESTINY HC)	100	SL	0.5	% v/v	0.5	% v/v	SPK-V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B				
10	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	SPK-V2	B	11 b	4 a	0 b	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPK-V2	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPK-V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B				
LSD (P=.05)										1.3	1.6	0.6	0.0
Standard Deviation										0.8	0.9	0.4	0.0
CV										19.33	75.9	84.27	0.0
Replicate F										3.692	1.446	1.000	0.000
Replicate Prob(F)										0.0453	0.2615	0.3874	1.0000
Treatment F										159.077	10.375	42.250	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

BASF Two-Pass Weed Control in Corn.

Trial ID: 13-FagerS-BASF-corn Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 5-23-13 Control Percent 21 DA-A	AMATA-HR 5-30-13 Control Percent 0 DA-C	AMATA-HR 6-6-13 Control Percent 21 DA-B	AMATA-HR 6-20-13 Control Percent 21 DA-C
1	NONTREATED									0 c	0 c	0 c	0 c
2	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	70 b	58 b	73 b	75 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C				
3	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	77 b	69 b	94 a	97 a
	ARMEZON	2.8	SL	0.0164	lb ai/a	0.75	fl oz/a	8-12"CN	C				
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	8-12"CN	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C				
4	LEXAR	3.7	SC	2.31	lb ai/a	2.5	qt/a	PRE	A	98 a	97 a	96 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C				
5	CORVUS	2.63	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	98 a	97 a	97 a	97 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C				
6	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	96 a	95 a	95 a	94 a
	GUARDSMAN MAX	5	SE	0.94	lb ai/a	1.5	pt/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C				
7	GUARDSMAN MAX	5	SE	2.5	lb ai/a	4	pt/a	SPK-V2	B	99 a	99 a	97 a	97 a
	ARMEZON	2.8	SL	0.0164	lb ai/a	0.75	fl oz/a	SPK-V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPK-V2	B				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	SPK-V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B				
8	HALEX GT	4.389	CS	2.2	lb ai/a	4	pt/a	SPK-V2	B	99 a	98 a	97 a	97 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	SPK-V2	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPK-V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B				
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	SPK-V2	B	99 a	99 a	97 a	97 a
	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	SPK-V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPK-V2	B				
	HSOC (DESTINY HC)	100	SL	0.5	% v/v	0.5	% v/v	SPK-V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B				
10	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	SPK-V2	B	99 a	99 a	97 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPK-V2	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPK-V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B				
LSD (P=.05)										13.3	15.1	7.5	7.8
Standard Deviation										7.7	8.8	4.4	4.5
CV										9.25	10.81	5.2	5.33
Replicate F										1.221	1.516	0.836	0.510
Replicate Prob(F)										0.3182	0.2464	0.4496	0.6091
Treatment F										48.859	39.747	145.873	137.146
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

Southern Illinois University

BASF Two-Pass Weed Control in Corn.

Trial ID: 13-FagerS-BASF-corn Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: (BASF AJ-1).
2. Ratings: CI 5-7 DAE; WC 3-4 WA-A (prior to C); 3-4 WA-B, and 3-4 WA-C.
3. Blanket burndown application of glyphosate (1.5 lbae/A) was applied to all plots on 4-13-13.
   Blanket prior to planting of Gramoxone (4 pt/A) was applied to all plots on 4-30-13.
4. Application C can also be 4"W.
5. Yield not requested
6. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
   DAE = Days after corn emergence.
7. Following the PRE application the first rainfall event, beginning the same day, was 2.08 inch over 4 days.
   Following the SPK-V2 application rainfall the next day, was 0.05 inch, then 0.91 inch 4 days later.
   Following the 8-12"CN application the first rainfall event, beginning the next day, was 2.37 inch over 3 days.
8. Not harvested.

Cobra versus Competitive Programs.

Trial ID: 13-DSO-Cobra6402 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-24-13
Completion Date: 10-20-13

Trial Location

City: De Soto **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62924

Objectives:
Evaluate soybean tolerance and glyphosate-resistant waterhemp control from Cobra versus competitive programs.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 5-24-13
Planting Rate, Unit: 145000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.75 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 15.4 **% OM:** 2.15 **Texture:** SIL silt loam
% Silt: 64.7 **pH:** 6.9 **Soil Name:** Okaw
% Clay: 19.9 **CEC:** 12.4

Additional Measured Elements

Element	Quantity	Unit
P1	94	lb/A
K	468	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Cobra versus Competitive Programs.

Trial ID: 13-DSO-Cobra6402 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
2.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
3.	5-6-13					7	DAY	41	80	F
4.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
5.	5-13-13					7	DAY	37	87	F
6.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
7.	5-20-13					7	DAY	43	85	F
8.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
9.	5-27-13					7	DAY	59	86	F
10.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
11.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
12.	6-3-13					7	DAY	50	82	F
13.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
14.	6-10-13					7	DAY	57	93	F
15.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
16.	6-17-13					7	DAY	61	92	F
17.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
18.	6-24-13					7	DAY	64	93	F
19.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
20.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
21.	7-1-13					7	DAY	57	88	F
22.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
23.	7-8-13					7	DAY	59	92	F
24.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
25.	7-15-13					7	DAY	68	93	F
26.	7-20-13	1.24	IN	RAIN	rain	2	DAY			
27.	7-22-13					7	DAY	51	90	F
28.	7-27-13	0.13	IN	RAIN	rain	2	DAY			
29.	7-29-13					7	DAY	58	86	F
30.	7-30-13	0.98	IN	RAIN	rain	1	DAY			
31.	8-3-13	0.24	IN	RAIN	rain	3	DAY			
32.	8-5-13	0.53	IN	RAIN	rain	2	DAY			
33.	8-5-13					7	DAY	61	98	F
34.	8-8-13	1.78	IN	RAIN	rain	4	DAY			
35.	8-12-13	0.12	IN	RAIN	rain	2	DAY			
36.	8-12-13					7	DAY	51	84	F
37.	8-17-13	0.21	IN	RAIN	rain	2	DAY			
38.	8-19-13	0.01	IN	RAIN	rain	1	DAY			
39.	8-19-13					7	DAY	60	90	F

Cobra versus Competitive Programs.

Trial ID: 13-DSO-Cobra6402 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Application Description

	A	B
Application Date:	5-24-13	6-27-13
Appl. Start Time:	15:00	7:00
Appl. Stop Time:	16:00	7:30
Application Method:	Spray	Spray
Application Timing:	PRE	POST
Application Placement:	BROSOI	BROFOL
Applied By:	LXF	NTH
Air Temperature, Unit:	82 F	85 F
% Relative Humidity:	31	74
Wind Velocity, Unit:	2 MPH	1 MPH
Wind Direction:	N	NW
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	77 F	79 F
Soil Moisture:	NORMAL	ABONOR
% Cloud Cover:	0	0
Next Moisture Occurred On:	5-30-13	6-29-13
Time to Next Moisture, Unit:	6 DAY	2 DAY

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V5
Stage Minimum, Percent:		V4
Stage Maximum, Percent:		V5
Height, Unit:		12 IN
Height Minimum, Maximum:		10 12

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMATA W	AMATA W
Stage Majority, Percent:	NA	10
Stage Minimum, Percent:		2
Stage Maximum, Percent:		40
Height, Unit:		5 IN
Height Minimum, Maximum:		1 14
Density, Unit:		10 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	40 PSI	40 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	10 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

Cobra versus Competitive Programs.

Trial ID: 13-DSO-Cobra6402 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-19-13 Moisture Percent	GLXMA 10-19-13 Yield bu/A	GLXMA 7-11-13 Injury Percent 14 DA-B	GLXMA 7-25-13 Injury Percent 28 DA-B	GLXMA 8-22-13 Injury Percent 56 DA-B
1	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	18.4 a	57 d	0 d	0 c	0 a
	NO POST HERBICIDE													
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	19.2 a	72 ab	0 d	1 bc	0 a
	ROUNDUP POWERMAX	4.5	SL	1.16	lb ae/a	33	fl oz/a	POST	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B					
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	18.0 a	67 c	16 a	3 a	0 a
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	POST	B					
	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	POST	B					
4	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	17.7 a	69 bc	17 a	3 a	0 a
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	POST	B					
	RESOURCE	0.86	EC	0.0403	lb ai/a	6	fl oz/a	POST	B					
	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	POST	B					
5	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	18.7 a	67 c	16 a	3 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.16	lb ae/a	33	fl oz/a	POST	B					
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	POST	B					
	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	POST	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B					
6	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	18.0 a	72 ab	8 bc	0 c	0 a
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	POST	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	B					
7	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	18.0 a	73 a	7 bc	0 c	0 a
	FLEXSTAR GT 3.5	2.82	SL	1.59	lb ae/a	4.5	pt/a	POST	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B					
8	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	17.7 a	71 ab	9 b	2 abc	0 a
	ROUNDUP POWERMAX	4.5	SL	1.16	lb ae/a	33	fl oz/a	POST	B					
	MARVEL	3	SL	0.164	lb ai/a	7	fl oz/a	POST	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B					
9	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	17.5 a	67 c	16 a	2 ab	0 a
	ROUNDUP POWERMAX	4.5	SL	1.16	lb ae/a	33	fl oz/a	POST	B					
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	POST	B					
	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	POST	B					
	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	POST	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B					
10	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	17.6 a	73 a	6 c	0 c	0 a
	TOUCHDOWN TOTAL	4.17	SL	1.08	lb ae/a	33	fl oz/a	POST	B					
	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	POST	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B					
11	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	17.9 a	68 bc	16 a	2 abc	0 a
	ROUNDUP POWERMAX	4.5	SL	1.16	lb ae/a	33	fl oz/a	POST	B					
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	POST	B					
	WARRANT	3	CS	1.13	lb ai/a	1.5	qt/a	POST	B					
	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	POST	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B					
LSD (P=.05)										1.58	3.7	3.1	1.6	0.2
Standard Deviation										1.09	2.5	2.2	1.1	0.2
CV										6.05	3.69	21.61	84.73	663.33
Replicate F										1.013	2.664	1.324	1.426	1.000
Replicate Prob(F)										0.4007	0.0658	0.2849	0.2546	0.4064
Treatment F										0.872	13.002	36.731	4.930	1.000
Treatment Prob(F)										0.5684	0.0001	0.0001	0.0003	0.4654

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Cobra versus Competitive Programs.

Trial ID: 13-DSO-Cobra6402 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 7-11-13 Control Percent 14 DA-B	AMATA-HR 7-25-13 Control Percent 28 DA-B	AMATA-HR 8-22-13 Control Percent 56 DA-B
1	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	0 e	0 c	0 e
	NO POST HERBICIDE											
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	81 d	86 b	88 bc
	ROUNDUP POWERMAX	4.5	SL	1.16	lb ae/a	33	fl oz/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	93 c	86 b	82 cd
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	POST	B			
	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	POST	B			
4	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	95 bc	82 b	78 d
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	POST	B			
	RESOURCE	0.86	EC	0.0403	lb ai/a	6	fl oz/a	POST	B			
	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	POST	B			
5	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	98 a	97 a	98 a
	ROUNDUP POWERMAX	4.5	SL	1.16	lb ae/a	33	fl oz/a	POST	B			
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	POST	B			
	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
6	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	96 ab	93 a	93 ab
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	POST	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	B			
7	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	97 ab	97 a	98 a
	FLEXSTAR GT 3.5	2.82	SL	1.59	lb ae/a	4.5	pt/a	POST	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
8	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	97 a	97 a	96 a
	ROUNDUP POWERMAX	4.5	SL	1.16	lb ae/a	33	fl oz/a	POST	B			
	MARVEL	3	SL	0.164	lb ai/a	7	fl oz/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
9	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	97 a	97 a	97 a
	ROUNDUP POWERMAX	4.5	SL	1.16	lb ae/a	33	fl oz/a	POST	B			
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	POST	B			
	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	POST	B			
	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
10	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	98 a	98 a	98 a
	TOUCHDOWN TOTAL	4.17	SL	1.08	lb ae/a	33	fl oz/a	POST	B			
	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
11	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	97 a	97 a	97 a
	ROUNDUP POWERMAX	4.5	SL	1.16	lb ae/a	33	fl oz/a	POST	B			
	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	POST	B			
	WARRANT	3	CS	1.13	lb ai/a	1.5	qt/a	POST	B			
	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	POST	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	B			
LSD (P=.05)										2.5	6.5	7.8
Standard Deviation										1.7	4.5	5.4
CV										1.98	5.32	6.42
Replicate F										1.006	1.466	1.836
Replicate Prob(F)										0.4038	0.2437	0.1619
Treatment F										1153.042	161.948	113.339
Treatment Prob(F)										0.0001	0.0001	0.0001

Southern Illinois University

Cobra versus Competitive Programs.

Trial ID: 13-DSO-Cobra6402 Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Valent (64.02).
2. Ratings: CI/WC 14, 28, and 56 DA-B.
3. Application A is a PRE blanket across the entire trial area.
4. Application B should be 21-28 DAP or 2-4 inch weeds.
5. Blanket burndown application of glyphosate (1.5 lbae/A) plus Salvo (12 floz/A)
   was applied to all plots on 4-2-13.
   Blanket application prior to planting of Gramoxone (2.5 pt/A) was applied to all plots on 5-24-13.
   Blanket of Select (8 oz/A) plus COC (1%) was applied for grass control on 6-27-13.
6. Yield.
7. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
8. Following the PRE application the first rainfall event, beginning 6 days later, was 2.37 inch over 3 days.
   Following the POST application the first rainfall event, beginning 2 days later, was 1.46 inch over 4 days.
9. Harvested 10-20-13, (2) 30 inch or (4) 15 inch rows by 26.5 ft.

Herbicide Response Screen.

Trial ID: 13-COL-Screen Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-5-13
Completion Date: 7-23-13

Trial Location

City: Collinsville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62234

Objectives:
Determine the efficacy of various herbicides on a glyphosate-resistant population of Palmer amaranth.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: NONE - Non-crop
Variety: NON-CROP
Planting Method: NA

Pest Description

Pest 1 Type: W **Code:** AMAPA Amaranthus palmeri S.Wats.
Common Name: amaranth, Palmer
Description: glyphosate-resistant Palmer amaranth

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 5.26 **% OM:** 1.95 **Texture:** SIL silt loam
% Silt: 84.13 **pH:** 5.7 **Soil Name:** Worthen/Littleton
% Clay: 10.61 **CEC:** 11.77

Additional Measured Elements

Element	Quantity	Unit
P1	88	lb/A
K	338	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: On-site Watch Dog Station **Distance, Unit:** 0.25 MI

Herbicide Response Screen.

Trial ID: 13-COL-Screen Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-4-13	0.24	IN	RAIN	rain					
3.	6-5-13	0.04	IN	RAIN	rain					
4.	6-7-13	0.06	IN	RAIN	rain					
5.	6-9-13					7	DAY	59	94	F
6.	6-9-13	0.17	IN	RAIN	rain	2	DAY			
7.	6-16-13					7	DAY	61	90	F
8.	6-17-13	2.35	IN	RAIN	rain	3	DAY			
9.	6-23-13					7	DAY	64	92	F
10.	6-23-13	3.31	IN	RAIN	rain	2	DAY			
11.	6-26-13	0.67	IN	RAIN	rain	1	DAY			
12.	6-30-13	0.53	IN	RAIN	rain	2	DAY			
13.	6-30-13					7	DAY	61	86	F
14.	7-2-13	1.42	IN	RAIN	rain	2	DAY			
15.	7-6-13	0.92	IN	RAIN	rain	1	DAY			
16.	7-7-13					7	DAY	62	94	F
17.	7-10-13	0.14	IN	RAIN	rain	1	DAY			
18.	7-14-13					7	DAY	64	94	F
19.	7-19-13	0.03	IN	RAIN	rain	1	DAY			
20.	7-21-13	0.47	IN	RAIN	rain	2	DAY			
21.	7-21-13					7	DAY	56	91	F
22.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
23.	7-30-13	0.5	IN	RAIN	rain	2	DAY			

Application Description

	A	B
Application Date:	6-5-13	6-25-13
Appl. Start Time:	16:00	6:00
Appl. Stop Time:	16:20	6:50
Application Method:	Spray	Spray
Application Timing:	PRE	3-4"W
Application Placement:	BROFOL	BROFOL
Applied By:	EJM	LXF
Air Temperature, Unit:	85 F	80 F
% Relative Humidity:	45	80
Wind Velocity, Unit:	3 MPH	4 MPH
Wind Direction:	E	S
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	76 F	76 F
Soil Moisture:	NORMAL	ABONOR
% Cloud Cover:	60	10
Next Moisture Occurred On:	6-5-13	6-26-13
Time to Next Moisture, Unit:	5 HR	24 HR

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	NONE	NONE
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	NA

Herbicide Response Screen.

Trial ID: 13-COL-Screen Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMAPA W	AMAPA W
Stage Majority, Percent:	NA	10
Stage Minimum, Percent:		5
Stage Maximum, Percent:		20
Height, Unit:		6 IN
Height Minimum, Maximum:		4 8
Density, Unit:		12 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

Herbicide Response Screen.

Trial ID: 13-COL-Screen Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMAPA-HR 7-9-13 Control Percent 14 DA-B	AMAPA-HR 7-23-13 Control Percent 28 DA-B
1	NONTREATED									0 h	0 n
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"W	B	33 f	23 m
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
3	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	3-4"W	B	63 e	38 l
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
4	ROUNDUP POWERMAX	4.5	SL	12.4	lb ae/a	352	fl oz/a	3-4"W	B	98 a	73 fgh
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
5	RAPTOR	1	SL	0.039	lb ai/a	5	fl oz/a	3-4"W	B	18 g	10 mn
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
6	AATREX	4	SC	1	lb ai/a	1	qt/a	3-4"W	B	92 ab	87 a-e
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
7	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	3-4"W	B	98 a	96 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"W	B	98 a	95 ab
	RAPTOR	1	SL	0.039	lb ai/a	5	fl oz/a	3-4"W	B		
	AATREX	4	SC	1	lb ai/a	1	qt/a	3-4"W	B		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"W	B	98 a	94 abc
	RAPTOR	1	SL	0.039	lb ai/a	5	fl oz/a	3-4"W	B		
	AATREX	4	SC	1	lb ai/a	1	qt/a	3-4"W	B		
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	3-4"W	B		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
10	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	3-4"W	B	82 bc	61 hij
11	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	3-4"W	B	91 ab	77 d-g
12	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	3-4"W	B	73 cde	65 ghi
13	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	3-4"W	B	82 bc	82 b-f
14	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W	B	97 a	80 def
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
15	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	3-4"W	B	97 a	76 efg
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
16	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	3-4"W	B	72 cde	48 jkl
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
17	BALANCE PRO	4	SC	0.0625	lb ai/a	2	fl oz/a	3-4"W	B	68 de	47 kl
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
18	GRAMOXONE 2 SL	2	SL	0.625	lb ai/a	2.5	pt/a	3-4"W	B	94 ab	71 fgh
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Herbicide Response Screen.

Trial ID: 13-COL-Screen Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMAPA-HR 7-9-13 Control Percent 14 DA-B	AMAPA-HR 7-23-13 Control Percent 28 DA-B
19	NONTREATED									0 h	0 n
20	AATREX	4	SC	2	lb ai/a	2	qt/a	PRE	A	99 a	81 c-f
21	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	PRE	A	96 a	90 a-d
22	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	PRE	A	7 gh	7 n
23	CALLISTO	4	SC	0.188	lb ai/a	6	fl oz/a	PRE	A	78 cd	48 jkl
24	BALANCE PRO	4	SC	0.0625	lb ai/a	2	fl oz/a	PRE	A	76 cd	57 ijk
	LSD (P=.05)									12.5	13.6
	Standard Deviation									7.6	8.2
	CV									10.62	14.06
	Replicate F									0.180	3.466
	Replicate Prob(F)									0.8361	0.0396
	Treatment F									58.697	42.780
	Treatment Prob(F)									0.0001	0.0001

Southern Illinois University

Herbicide Response Screen.

Trial ID: 13-COL-Screen Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: SIU (BGY).
2. Ratings: WC at 14 and 28 DA-B.
3. Blanket of Gramoxone at trial initiation if necessary to start weed-free.
4. AMAPA-HR = Herbicide-resistant Palmer amaranth (glyphosate).
5. Weeds that had emerged prior to planting were controlled with tillage and Gramoxone.
6. Rainfall following the PRE application was 0.27 inch within 4 days, then 2.35 inch 12 days after the PRE.
7. Not harvested (non-crop).

Palmer Amaranth Control with MANA Soybean Programs.

Trial ID: 13-COL-MANAprograms Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-5-13
Completion Date: 9-24-13

Trial Location

City: Collinsville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62234

Objectives:
Evaluate MANA herbicide programs for control of Palmer amaranth in soybean.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832
Description: RR2Y
Planting Date: 6-5-13
Planting Rate, Unit: 145000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.25 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMAPA Amaranthus palmeri S.Wats.
Common Name: amaranth, Palmer
Description: glyphosate-resistant Palmer amaranth

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 45 FT **Total Plot Length:** 45 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 2 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 5.26 **% OM:** 1.95 **Texture:** SIL silt loam
% Silt: 84.13 **pH:** 5.7 **Soil Name:** Worthen/Littleton
% Clay: 10.61 **CEC:** 11.77

Additional Measured Elements

Element	Quantity	Unit
P1	88	lb/A
K	338	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: On-site Watch Dog Station **Distance, Unit:** 0.25 MI

Palmer Amaranth Control with MANA Soybean Programs.

Trial ID: 13-COL-MANAprograms Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-4-13	0.24	IN	RAIN	rain					
3.	6-5-13	0.04	IN	RAIN	rain					
4.	6-7-13	0.06	IN	RAIN	rain					
5.	6-9-13					7	DAY	59	94	F
6.	6-9-13	0.17	IN	RAIN	rain	2	DAY			
7.	6-16-13					7	DAY	61	90	F
8.	6-17-13	2.35	IN	RAIN	rain	3	DAY			
9.	6-23-13					7	DAY	64	92	F
10.	6-23-13	3.31	IN	RAIN	rain	2	DAY			
11.	6-26-13	0.67	IN	RAIN	rain	1	DAY			
12.	6-30-13	0.53	IN	RAIN	rain	2	DAY			
13.	6-30-13					7	DAY	61	86	F
14.	7-2-13	1.42	IN	RAIN	rain	2	DAY			
15.	7-6-13	0.92	IN	RAIN	rain	1	DAY			
16.	7-7-13					7	DAY	62	94	F
17.	7-10-13	0.14	IN	RAIN	rain	1	DAY			
18.	7-14-13					7	DAY	64	94	F
19.	7-19-13	0.03	IN	RAIN	rain	1	DAY			
20.	7-21-13	0.47	IN	RAIN	rain	2	DAY			
21.	7-21-13					7	DAY	56	91	F
22.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
23.	7-30-13	0.5	IN	RAIN	rain	2	DAY			

Application Description

	A	B	C
Application Date:	6-5-13	6-5-13	6-27-13
Appl. Start Time:	16:50	16:50	8:40
Appl. Stop Time:	17:30	17:30	9:20
Application Method:	Spray	Spray	Spray
Application Timing:	PPI	PRE	2-4"W
Application Placement:	BROSOI	BROSOI	BROFOL
Applied By:	BCS	BCS	LXF
Air Temperature, Unit:	84 F	84 F	90 F
% Relative Humidity:	44	44	70
Wind Velocity, Unit:	3 MPH	3 MPH	4 MPH
Wind Direction:	E	E	W
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	76 F	76 F	79 F
Soil Moisture:	NORMAL	NORMAL	ABONOR
% Cloud Cover:	60	60	5
Next Moisture Occurred On:	6-5-13	6-5-13	6-29-13
Time to Next Moisture, Unit:	3 HR	3 HR	56 HR

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	V3
Stage Minimum, Percent:			V2
Stage Maximum, Percent:			V3
Height, Unit:			14 IN
Height Minimum, Maximum:			8 14

Southern Illinois University

Palmer Amaranth Control with MANA Soybean Programs.

Trial ID: 13-COL-MANAprograms Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W
Stage Majority, Percent:	NA	NA	20
Stage Minimum, Percent:			2
Stage Maximum, Percent:			40
Height, Unit:			4 IN
Height Minimum, Maximum:			0.5 6
Density, Unit:			3 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Palmer Amaranth Control with MANA Soybean Programs.

Trial ID: 13-COL-MANAprograms Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-12-13 Injury Percent 7 DA-A 7 DA-B	GLXMA 6-19-13 Injury Percent 14 DA-A 14 DA-B	GLXMA 6-27-13 Injury Percent 0 DA-C	GLXMA 7-4-13 Injury Percent 7 DA-C	GLXMA 7-11-13 Injury Percent 14 DA-C	GLXMA 7-27-13 Injury Percent 30 DA-C	GLXMA 8-26-13 Injury Percent 60 DA-C
1	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	B	0 a	5 bcd	3 bc	9 b	3 c	0 a	0 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
2	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	0 a	23 a	11 a	7 bc	3 c	0 a	0 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
3	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	0 a	23 a	11 a	4 c	3 c	0 a	0 a
	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
4	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	0 a	19 a	10 a	14 a	5 ab	0 a	0 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
5	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	B	0 a	0 d	0 c	0 d	0 d	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
6	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	B	0 a	8 bc	3 bc	0 d	0 d	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
7	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	0 a	0 d	0 c	9 b	4 bc	0 a	0 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
8	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	0 a	5 bcd	3 bc	6 bc	4 bc	0 a	0 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
9	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	0 a	8 bc	2 bc	13 a	5 ab	0 a	0 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
10	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	0 a	10 b	5 b	8 bc	3 c	0 a	0 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B							
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
11	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	0 a	0 d	0 c	15 a	5 ab	0 a	0 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B							
	RUMBLE	1.88	EC	0.376	lb ai/a	1.6	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
12	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	0 a	3 cd	2 bc	15 a	6 a	0 a	0 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B							
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							
13	NO PRE HERBICIDE												0 d	0 d	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C							

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Palmer Amaranth Control with MANA Soybean Programs.

Trial ID: 13-COL-MANAprograms Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code														
Crop Code								GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Rating Date								6-12-13	6-19-13	6-27-13	7-4-13	7-11-13	7-27-13	8-26-13
Rating Type								Injury	Injury	Injury	Injury	Injury	Injury	Injury
Rating Unit								Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing								7 DA-A	14 DA-A					
Trt-Eval Interval								7 DA-B	14 DA-B	0 DA-C	7 DA-C	14 DA-C	30 DA-C	60 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
14	NONTREATED									0	0 d	0 c	0 d	0 d	0 a	0 a
LSD (P=.05)										0.0	5.0	3.6	3.6	1.3	0.0	0.0
Standard Deviation										0.0	2.3	1.6	1.7	0.6	0.0	0.0
CV										0.0	29.61	44.14	24.05	20.56	0.0	0.0
Replicate F										0.000	0.065	0.355	2.152	3.545	0.000	0.000
Replicate Prob(F)										1.0000	0.8035	0.5626	0.1662	0.0823	1.0000	1.0000
Treatment F										0.000	26.492	13.203	22.555	25.000	0.000	0.000
Treatment Prob(F)										1.0000	0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

Palmer Amaranth Control with MANA Soybean Programs.

Trial ID: 13-COL-MANAprograms Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMAPA-HR 6-19-13 Control Percent 14 DA-A 14 DA-B	AMAPA-HR 6-27-13 Control Percent 0 DA-C	AMAPA-HR 7-4-13 Control Percent 7 DA-C	AMAPA-HR 7-11-13 Control Percent 14 DA-C	AMAPA-HR 7-27-13 Control Percent 30 DA-C	AMAPA-HR 8-26-13 Control Percent 60 DA-C
1	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	B	93 abc	87 bc	96 a	96 a	94 a	92 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
2	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	99 a	97 a	99 a	99 a	99 a	99 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
3	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	99 a	97 a	98 a	96 a	97 a	96 a
	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
4	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	99 a	97 a	99 a	99 a	99 a	99 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
5	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	B	87 c	79 d	81 c	78 c	69 c	63 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
6	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	B	94 ab	88 bc	87 b	85 b	72 c	65 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
7	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	73 d	68 e	97 a	92 ab	85 b	73 bc
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
8	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	88 bc	83 cd	96 a	95 a	94 a	88 ab
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
9	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	92 bc	88 bc	97 a	97 a	97 a	94 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
10	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	91 bc	87 bc	97 a	97 a	95 a	92 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
11	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	93 abc	90 b	98 a	98 a	98 a	97 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	RUMBLE	1.88	EC	0.376	lb ai/a	1.6	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
12	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	92 bc	89 b	98 a	97 a	97 a	96 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B						
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						
13	NO PRE HERBICIDE											30 d	23 d	25 d	20 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C						

Southern Illinois University

Palmer Amaranth Control with MANA Soybean Programs.

Trial ID: 13-COL-MANAprograms Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code								AMAPA-HR	AMAPA-HR	AMAPA-HR	AMAPA-HR	AMAPA-HR	AMAPA-HR
Crop Code													
Rating Date								6-19-13	6-27-13	7-4-13	7-11-13	7-27-13	8-26-13
Rating Type								Control	Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing								14 DA-A					
Trt-Eval Interval								14 DA-B	0 DA-C	7 DA-C	14 DA-C	30 DA-C	60 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
14	NONTREATED									0 e	0 f	0 e	0 e	0 e	0 e
LSD (P=.05)										6.8	5.9	4.9	7.2	8.0	18.5
Standard Deviation										3.1	2.7	2.3	3.3	3.7	8.6
CV										3.73	3.36	2.71	4.06	4.64	11.2
Replicate F										3.742	7.193	2.784	3.095	2.831	4.867
Replicate Prob(F)										0.0770	0.0200	0.1191	0.1020	0.1163	0.0460
Treatment F										139.806	177.604	351.976	171.471	135.564	26.075
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Palmer Amaranth Control with MANA Soybean Programs.

Trial ID: 13-COL-MANAprograms Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMAPA-HR
	Pest Code									AMAPA-HR
	Crop Code									
	Rating Date									9-24-13
	Rating Type									Control
	Rating Unit									Percent
	Rating Timing									At Harvest
	Trt-Eval Interval									
1	TAILWIND	6.5	SC	1.02	lb ai/a	20	fl oz/a	PRE	B	93 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C	
2	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	99 a
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C	
3	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	94 a
	PUMMEL	100	SL	1.5	pt/a	1.5	pt/a	2-4"W	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C	
4	OUTFLANK	51	WG	0.064	lb ai/a	2	oz/a	PRE	B	99 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C	
5	PUMMEL	100	SL	2	pt/a	2	pt/a	PRE	B	55 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C	
6	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	PRE	B	68 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C	
7	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	69 bc
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C	
8	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	86 ab
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C	
9	TRIFLUREX HFP	4	EC	1	lb ai/a	2	pt/a	PPI	A	95 a
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C	
10	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	90 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B	
	TORMENT	2.5	SL	0.312	lb ae/a	1	pt/a	2-4"W	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C	
11	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	98 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B	
	RUMBLE	1.88	EC	0.376	lb ai/a	1.6	pt/a	2-4"W	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C	
12	PARALLEL	7.8	EC	0.91	lb ai/a	0.938	pt/a	PRE	B	97 a
	GLORY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B	
	VISE	5.4	EC	1.35	lb ai/a	2	pt/a	2-4"W	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C	
13	NO PRE HERBICIDE									5 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	C	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	C	

Southern Illinois University

Palmer Amaranth Control with MANA Soybean Programs.

Trial ID: 13-COL-MANAprograms Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code										AMAPA-HR
Crop Code										
Rating Date										9-24-13
Rating Type										Control
Rating Unit										Percent
Rating Timing										At Harvest
Trt-Eval Interval										
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
14	NONTREATED									0 d
LSD (P=.05)										19.1
Standard Deviation										8.9
CV										11.86
Replicate F										4.734
Replicate Prob(F)										0.0486
Treatment F										28.539
Treatment Prob(F)										0.0001

Southern Illinois University

Palmer Amaranth Control with MANA Soybean Programs.

Trial ID: 13-COL-MANAprograms Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: MANA (13-HER-CR-57-2612313).
2. Ratings: CI at 7 and 14 DA-A/B.
   CI/WC at 0, 7, 14, 30, and 60 DA-C, and at harvest.
3. Photos, overall and closeup, at 30 DA-A/B and C, and at harvest.
4. Special instructions; PPI application in treatments 8 and 9 is after staking but before planting
   and requires 1 to 2 passes of a finishing tool.
5. No yield.
6. AMAPA-HR = Herbicide-resistant Palmer amaranth (glyphosate).
7. Weeds that had emerged prior to planting were controlled with tillage and Gramoxone.
8. Rainfall following the PRE application was 0.27 inch within 4 days, then 2.35 inch 12 days after the PRE.
9. Not harvested.

Southern Illinois University

Preemergence Palmer Amaranth Control with Fierce.

Trial ID: 13-COL-FierceTM Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-5-13
Completion Date: 7-31-13

Trial Location

City: Collinsville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62234

Objectives:
Evaluate Palmer amaranth control from preemergence applications of Fierce and Valor.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832
Description: RR2Y
Planting Date: 6-5-13
Planting Rate, Unit: 145000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.25 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMAPA Amaranthus palmeri S.Wats.
Common Name: amaranth, Palmer
Description: glyphosate-resistant Palmer amaranth

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 5.26 **% OM:** 1.95 **Texture:** SIL silt loam
% Silt: 84.13 **pH:** 5.7 **Soil Name:** Worthen/Littleton
% Clay: 10.61 **CEC:** 11.77

Additional Measured Elements

Element	Quantity	Unit
P1	88	lb/A
K	338	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: On-site Watch Dog Station **Distance, Unit:** 0.25 MI

Preemergence Palmer Amaranth Control with Fierce.

Trial ID: 13-COL-FierceTM Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-4-13	0.24	IN	RAIN	rain					
3.	6-5-13	0.04	IN	RAIN	rain					
4.	6-7-13	0.06	IN	RAIN	rain					
5.	6-9-13					7	DAY	59	94	F
6.	6-9-13	0.17	IN	RAIN	rain	2	DAY			
7.	6-16-13					7	DAY	61	90	F
8.	6-17-13	2.35	IN	RAIN	rain	3	DAY			
9.	6-23-13					7	DAY	64	92	F
10.	6-23-13	3.31	IN	RAIN	rain	2	DAY			
11.	6-26-13	0.67	IN	RAIN	rain	1	DAY			
12.	6-30-13	0.53	IN	RAIN	rain	2	DAY			
13.	6-30-13					7	DAY	61	86	F
14.	7-2-13	1.42	IN	RAIN	rain	2	DAY			
15.	7-6-13	0.92	IN	RAIN	rain	1	DAY			
16.	7-7-13					7	DAY	62	94	F
17.	7-10-13	0.14	IN	RAIN	rain	1	DAY			
18.	7-14-13					7	DAY	64	94	F
19.	7-19-13	0.03	IN	RAIN	rain	1	DAY			
20.	7-21-13	0.47	IN	RAIN	rain	2	DAY			
21.	7-21-13					7	DAY	56	91	F
22.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
23.	7-30-13	0.5	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	6-5-13
Appl. Start Time:	14:15
Appl. Stop Time:	15:00
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	RJW
Air Temperature, Unit:	84 F
% Relative Humidity:	43
Wind Velocity, Unit:	3 MPH
Wind Direction:	E
Dew Presence (Y/N):	N
Soil Temperature, Unit:	76 F
Soil Moisture:	NORMAL
% Cloud Cover:	60
Next Moisture Occurred On:	6-5-13
Time to Next Moisture, Unit:	5 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMAPA W
Stage Majority, Percent:	NA

Preemergence Palmer Amaranth Control with Fierce.

Trial ID: 13-COL-FierceTM Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Preemergence Palmer Amaranth Control with Fierce.

Trial ID: 13-COL-FierceTM Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-3-13 Injury Percent 28 DA-A	GLXMA 7-17-13 Injury Percent 42 DA-A	GLXMA 7-31-13 Injury Percent 56 DA-A	AMAPA-HR 7-3-13 Control Percent 28 DA-A	AMAPA-HR 7-17-13 Control Percent 42 DA-A	AMAPA-HR 7-31-13 Control Percent 56 DA-A
1	NONTREATED									0 d	0 a	0 a	0 c	0 c	0 d
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	5 bc	3 a	1 a	96 a	96 a	90 a
3	VALOR SX	51	WG	0.096	lb ai/a	3	oz/a	PRE	A	5 bc	1 a	0 a	95 a	96 a	92 a
4	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	8 ab	4 a	1 a	98 a	97 a	96 a
5	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	10 a	3 a	2 a	99 a	98 a	98 a
6	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	7 abc	3 a	3 a	98 a	95 a	90 a
7	GANGSTER (CO-PACK)					2.4	oz/a	PRE	A	3 cd	1 a	1 a	98 a	96 a	92 a
	GANGSTER FR	84	WG	0.021	lb ai/a			PRE	A						
	GANGSTER V	51	WG	0.064	lb ai/a			PRE	A						
8	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	8 ab	6 a	1 a	88 b	87 b	75 b
9	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	A	5 bc	2 a	1 a	85 b	82 b	63 c
10	SONIC	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	5 bc	2 a	1 a	87 b	82 b	63 c
11	ENLITE	47.86	WG	0.084	lb ai/a	2.8	oz/a	PRE	A	7 abc	2 a	0 a	98 a	96 a	91 a
12	FIERCE	76	WG	0.119	lb ai/a	2.5	oz/a	PRE	A	10 a	3 a	2 a	99 a	98 a	97 a
	CLASSIC	25	WG	0.0156	lb ai/a	1	oz/a	PRE	A						
13	FIERCE	76	WG	0.13	lb ai/a	2.75	oz/a	PRE	A	7 abc	4 a	1 a	99 a	98 a	98 a
	CLASSIC	25	WG	0.0156	lb ai/a	1	oz/a	PRE	A						
14	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	10 a	4 a	1 a	99 a	99 a	98 a
	CLASSIC	25	WG	0.0156	lb ai/a	1	oz/a	PRE	A						
15	FIERCE	76	WG	0.119	lb ai/a	2.5	oz/a	PRE	A	5 bc	0 a	0 a	99 a	98 a	98 a
	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	PRE	A						
16	FIERCE	76	WG	0.13	lb ai/a	2.75	oz/a	PRE	A	8 ab	4 a	1 a	99 a	98 a	98 a
	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	PRE	A						
17	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	3 cd	3 a	1 a	98 a	97 a	96 a
	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	PRE	A						
18	FIERCE	76	WG	0.13	lb ai/a	2.75	oz/a	PRE	A	5 bc	0 a	0 a	99 a	98 a	98 a
	FIRSTRATE	84	WG	0.021	lb ai/a	0.4	oz/a	PRE	A						
19	FIERCE	76	WG	0.13	lb ai/a	2.75	oz/a	PRE	A	7 abc	2 a	2 a	99 a	98 a	98 a
	CLASSIC	25	WG	0.00516	lb ai/a	0.33	oz/a	PRE	A						
LSD (P=.05)										3.9	3.5	2.5	3.9	5.2	10.3
Standard Deviation										2.4	2.1	1.5	2.4	3.2	6.3
CV										38.26	89.94	156.24	2.58	3.53	7.3
Replicate F										4.017	3.375	4.292	2.022	0.597	1.203
Replicate Prob(F)										0.0266	0.0454	0.0213	0.1472	0.5556	0.3122
Treatment F										3.562	1.680	0.748	275.209	149.833	42.365
Treatment Prob(F)										0.0006	0.0909	0.7412	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Preemergence Palmer Amaranth Control with Fierce.

Trial ID: 13-COL-FierceTM Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Valent (Fierce 64.04).
2. Ratings: CI/WC 28, 42, and 56 DA-A (PRE). Target Palmer Amaranth.
3. Blanket POST glyphosate after 56 DAT rating.
4. No yield.
5. AMAPA-HR = Herbicide-resistant Palmer amaranth (glyphosate).
6. Weeds that had emerged prior to planting were controlled with tillage and Gramoxone.
7. Rainfall following the PRE application was 0.27 inch within 4 days, then 2.35 inch 12 days after the PRE.
8. Not harvested.

Postemergence Palmer Amaranth Control with Cobra.

Trial ID: 13-COL-CobraTM Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-5-13
Completion Date: 8-8-13

Trial Location

City: Collinsville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62234

Objectives:
Evaluate crop tolerance and Palmer Amaranth control from tank-mixtures of Cobra plus soil residual herbicides.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832
Description: RR2Y
Planting Date: 6-5-13
Planting Rate, Unit: 145000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.25 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMAPA Amaranthus palmeri S.Wats.
Common Name: amaranth, Palmer
Description: glyphosate-resistant Palmer amaranth

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 5.26 **% OM:** 1.95 **Texture:** SIL silt loam
% Silt: 84.13 **pH:** 5.7 **Soil Name:** Worthen/Littleton
% Clay: 10.61 **CEC:** 11.77

Additional Measured Elements

Element	Quantity	Unit
P1	88	lb/A
K	338	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: On-site Watch Dog Station **Distance, Unit:** 0.25 MI

Postemergence Palmer Amaranth Control with Cobra.

Trial ID: 13-COL-CobraTM Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-4-13	0.24	IN	RAIN	rain					
3.	6-5-13	0.04	IN	RAIN	rain					
4.	6-7-13	0.06	IN	RAIN	rain					
5.	6-9-13					7	DAY	59	94	F
6.	6-9-13	0.17	IN	RAIN	rain	2	DAY			
7.	6-16-13					7	DAY	61	90	F
8.	6-17-13	2.35	IN	RAIN	rain	3	DAY			
9.	6-23-13					7	DAY	64	92	F
10.	6-23-13	3.31	IN	RAIN	rain	2	DAY			
11.	6-26-13	0.67	IN	RAIN	rain	1	DAY			
12.	6-30-13	0.53	IN	RAIN	rain	2	DAY			
13.	6-30-13					7	DAY	61	86	F
14.	7-2-13	1.42	IN	RAIN	rain	2	DAY			
15.	7-6-13	0.92	IN	RAIN	rain	1	DAY			
16.	7-7-13					7	DAY	62	94	F
17.	7-10-13	0.14	IN	RAIN	rain	1	DAY			
18.	7-14-13					7	DAY	64	94	F
19.	7-19-13	0.03	IN	RAIN	rain	1	DAY			
20.	7-21-13	0.47	IN	RAIN	rain	2	DAY			
21.	7-21-13					7	DAY	56	91	F
22.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
23.	7-30-13	0.5	IN	RAIN	rain	2	DAY			

Application Description

	A	B
Application Date:	6-5-13	6-27-13
Appl. Start Time:	17:00	6:50
Appl. Stop Time:	17:20	7:20
Application Method:	Spray	Spray
Application Timing:	PRE	21DAP
Application Placement:	BROSOI	BROFOL
Applied By:	LXF	LXF
Air Temperature, Unit:	85 F	85 F
% Relative Humidity:	43	67
Wind Velocity, Unit:	3 MPH	3 MPH
Wind Direction:	E	W
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	76 F	77 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	60	5
Next Moisture Occurred On:	6-5-13	6-29-13
Time to Next Moisture, Unit:	3 HR	58 HR

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V3
Stage Minimum, Percent:		V2
Stage Maximum, Percent:		V3
Height, Unit:		13 IN
Height Minimum, Maximum:		8 13

Southern Illinois University

Postemergence Palmer Amaranth Control with Cobra.

Trial ID: 13-COL-CobraTM Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMAPA W	AMAPA W
Stage Majority, Percent:	NA	2
Stage Minimum, Percent:		COTY
Stage Maximum, Percent:		4
Height, Unit:		0.5 IN
Height Minimum, Maximum:		0.25 1
Density, Unit:		0.5 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	10 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

Postemergence Palmer Amaranth Control with Cobra.

Trial ID: 13-COL-CobraTM Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-4-13 Injury Percent 7 DA-B	GLXMA 7-11-13 Injury Percent 14 DA-B	GLXMA 7-25-13 Injury Percent 28 DA-B	GLXMA 8-8-13 Injury Percent 42 DA-B	AMAPA-HR 7-11-13 Control Percent 14 DA-B	AMAPA-HR 7-25-13 Control Percent 28 DA-B	AMAPA-HR 8-8-13 Control Percent 42 DA-B
1	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	0 c	0 c	0 c	0 c	85 b	79 c	75 c
	NO POST HERBICIDE															
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	0 c	0 c	0 c	0 c	93 a	93 b	90 b
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	21DAP	B							
	AMS	100	SG	2.5	lb/a	2.5	lb/a	21DAP	B							
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	27 b	18 b	7 b	3 bc	99 a	99 a	99 a
	PREFIX	5.29	EC	1.32	lb ai/a	1	qt/a	21DAP	B							
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	21DAP	B							
	AMS	100	SG	2.5	lb/a	2.5	lb/a	21DAP	B							
	COC (PRIME OIL)	100	SL	1	qt/a	1	qt/a	21DAP	B							
4	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	48 a	37 a	20 a	7 ab	99 a	99 a	99 a
	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	21DAP	B							
	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	21DAP	B							
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	21DAP	B							
	AMS	100	SG	2.5	lb/a	2.5	lb/a	21DAP	B							
	COC (PRIME OIL)	100	SL	1	qt/a	1	qt/a	21DAP	B							
5	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	43 a	37 a	20 a	9 ab	99 a	99 a	99 a
	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	21DAP	B							
	V-10206	85	WG	0.106	lb ai/a	2	oz/a	21DAP	B							
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	21DAP	B							
	AMS	100	SG	2.5	lb/a	2.5	lb/a	21DAP	B							
	COC (PRIME OIL)	100	SL	1	qt/a	1	qt/a	21DAP	B							
6	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	50 a	37 a	17 a	8 ab	99 a	99 a	99 a
	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	21DAP	B							
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	21DAP	B							
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	21DAP	B							
	AMS	100	SG	2.5	lb/a	2.5	lb/a	21DAP	B							
	COC (PRIME OIL)	100	SL	1	qt/a	1	qt/a	21DAP	B							
7	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	48 a	38 a	20 a	10 a	99 a	99 a	99 a
	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	21DAP	B							
	DUAL II MAGNUM	7.64	EC	1.27	lb ai/a	1.33	pt/a	21DAP	B							
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	21DAP	B							
	AMS	100	SG	2.5	lb/a	2.5	lb/a	21DAP	B							
	COC (PRIME OIL)	100	SL	1	qt/a	1	qt/a	21DAP	B							
LSD (P=.05)										8.1	8.3	4.4	6.1	5.8	3.5	6.4
Standard Deviation										4.6	4.7	2.5	3.4	3.3	1.9	3.6
CV										14.75	19.68	20.83	64.35	3.4	2.04	3.81
Replicate F										1.600	3.857	0.774	1.896	1.778	2.735	1.000
Replicate Prob(F)										0.2421	0.0509	0.4828	0.1925	0.2108	0.1050	0.3966
Treatment F										73.314	43.125	43.097	4.538	8.067	43.403	19.542
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0125	0.0012	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Postemergence Palmer Amaranth Control with Cobra.

Trial ID: 13-COL-CobraTM Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Valent (V10206 MD64.01).
2. Ratings: CI at 7 and 14 DA-B; WC 14, 28, and 42 DA-B, target AMAPA.
3. Blanket PRE application, Valor 2 oz/A, is application A in treatment list, spray center, 10 ft wide all plots.
4. No yield.
5. AMAPA-HR = Herbicide-resistant Palmer amaranth (glyphosate).
6. Weeds that had emerged prior to planting were controlled with tillage and Gramoxone.
7. Rainfall following the PRE application was 0.27 inch within 4 days, then 2.35 inch 12 days after the PRE.
8. Not harvested.

Southern Illinois University

Palmer Amaranth Control with Statement Postemergence.

Trial ID: 13-COL-StatementPOST Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-5-13
Completion Date: 8-2-13

Trial Location

City: Collinsville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62234

Objectives:
Compare the efficacy of Statement and Prefix applied postemergence for Palmer amaranth control.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: HS 42L02
Description: LL
Planting Date: 6-5-13
Planting Rate, Unit: 160000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.25 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMAPA Amaranthus palmeri S.Wats.
Common Name: amaranth, Palmer
Description: glyphosate-resistant Palmer amaranth

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 5.26 **% OM:** 1.95 **Texture:** SIL silt loam
% Silt: 84.13 **pH:** 5.7 **Soil Name:** Worthen/Littleton
% Clay: 10.61 **CEC:** 11.77

Additional Measured Elements

Element	Quantity	Unit
P1	88	lb/A
K	338	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR
Closest Weather Station: On-site Watch Dog Station **Distance, Unit:** 0.25 MI

Palmer Amaranth Control with Statement Postemergence.

Trial ID: 13-COL-StatementPOST Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-4-13	0.24	IN	RAIN	rain					
3.	6-5-13	0.04	IN	RAIN	rain					
4.	6-7-13	0.06	IN	RAIN	rain					
5.	6-9-13					7	DAY	59	94	F
6.	6-9-13	0.17	IN	RAIN	rain	2	DAY			
7.	6-16-13					7	DAY	61	90	F
8.	6-17-13	2.35	IN	RAIN	rain	3	DAY			
9.	6-23-13					7	DAY	64	92	F
10.	6-23-13	3.31	IN	RAIN	rain	2	DAY			
11.	6-26-13	0.67	IN	RAIN	rain	1	DAY			
12.	6-30-13	0.53	IN	RAIN	rain	2	DAY			
13.	6-30-13					7	DAY	61	86	F
14.	7-2-13	1.42	IN	RAIN	rain	2	DAY			
15.	7-6-13	0.92	IN	RAIN	rain	1	DAY			
16.	7-7-13					7	DAY	62	94	F
17.	7-10-13	0.14	IN	RAIN	rain	1	DAY			
18.	7-14-13					7	DAY	64	94	F
19.	7-19-13	0.03	IN	RAIN	rain	1	DAY			
20.	7-21-13	0.47	IN	RAIN	rain	2	DAY			
21.	7-21-13					7	DAY	56	91	F
22.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
23.	7-30-13	0.5	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	6-21-13
Appl. Start Time:	8:00
Appl. Stop Time:	8:30
Application Method:	Spray
Application Timing:	2"W
Application Placement:	BROFOL
Applied By:	NTH
Air Temperature, Unit:	85 F
% Relative Humidity:	72
Wind Velocity, Unit:	4 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	77 F
Soil Moisture:	NORMAL
% Cloud Cover:	0
Next Moisture Occurred On:	6-22-13
Time to Next Moisture, Unit:	32 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	V2
Stage Minimum, Percent:	V1
Stage Maximum, Percent:	V2
Height, Unit:	5 IN
Height Minimum, Maximum:	3 5

Southern Illinois University

Palmer Amaranth Control with Statement Postemergence.

Trial ID: 13-COL-StatementPOST Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMAPA W
Stage Majority, Percent:	6
Stage Minimum, Percent:	COTY
Stage Maximum, Percent:	8
Height, Unit:	2 IN
Height Minimum, Maximum:	0.5 4
Density, Unit:	5 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Palmer Amaranth Control with Statement Postemergence.

Trial ID: 13-COL-StatementPOST Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-5-13 Injury Percent 14 DA-A	GLXMA 7-19-13 Injury Percent 28 DA-A	GLXMA 8-2-13 Injury Percent 42 DA-A	GLXMA 7-5-13 Chlorosis Percent 14 DA-A	GLXMA 7-19-13 Chlorosis Percent 28 DA-A	GLXMA 8-2-13 Chlorosis Percent 42 DA-A
1	STATEMENT	5.25	EC	1.31	lb ai/a	32	fl oz/a	2"W	A	11 c	2 b	0 a	0 a	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
2	STATEMENT	5.25	EC	1.64	lb ai/a	40	fl oz/a	2"W	A	17 a	4 a	0 a	0 a	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
3	RHYTHM	1.88	ME	0.375	lb ai/a	25.5	fl oz/a	2"W	A	5 d	0 c	0 a	0 a	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
4	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	2"W	A	5 d	0 c	0 a	0 a	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
5	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	2"W	A	15 b	3 ab	0 a	0 a	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
6	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	2"W	A	19 a	4 a	0 a	0 a	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
7	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A	0 e	0 c	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
8	NONTREATED									0 e	0 c	0 a	0 a	0 a	0 a
LSD (P=.05)										1.8	1.8	0.0	0.0	0.0	0.0
Standard Deviation										1.2	1.2	0.0	0.0	0.0	0.0
CV										13.96	72.05	0.0	0.0	0.0	0.0
Replicate F										0.488	3.006	0.000	0.000	0.000	0.000
Replicate Prob(F)										0.6941	0.0533	1.0000	1.0000	1.0000	1.0000
Treatment F										149.488	9.878	0.000	0.000	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	1.0000	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Palmer Amaranth Control with Statement Postemergence.

Trial ID: 13-COL-StatementPOST Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-5-13 Necrosis Percent 14 DA-A	GLXMA 7-19-13 Necrosis Percent 28 DA-A	GLXMA 8-2-13 Necrosis Percent 42 DA-A	GLXMA 7-5-13 Stunt Percent 14 DA-A	GLXMA 7-19-13 Stunt Percent 28 DA-A	GLXMA 8-2-13 Stunt Percent 42 DA-A
1	STATEMENT	5.25	EC	1.31	lb ai/a	32	fl oz/a	2"W	A	5 ab	0 a	0 a	6 c	2 b	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
2	STATEMENT	5.25	EC	1.64	lb ai/a	40	fl oz/a	2"W	A	5 ab	0 a	0 a	13 a	4 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
3	RHYTHM	1.88	ME	0.375	lb ai/a	25.5	fl oz/a	2"W	A	4 c	0 a	0 a	0 d	0 c	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
4	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	2"W	A	5 bc	0 a	0 a	0 d	0 c	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
5	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	2"W	A	5 ab	0 a	0 a	10 b	3 ab	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
6	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	2"W	A	6 a	0 a	0 a	15 a	4 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
7	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A	0 d	0 a	0 a	0 d	0 c	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
8	NONTREATED									0 d	0 a	0 a	0 d	0 c	0 a
LSD (P=.05)										0.9	0.0	0.0	2.4	1.8	0.0
Standard Deviation										0.6	0.0	0.0	1.6	1.2	0.0
CV										17.55	0.0	0.0	29.5	72.05	0.0
Replicate F										1.235	0.000	0.000	1.358	3.006	0.000
Replicate Prob(F)										0.3219	1.0000	1.0000	0.2829	0.0533	1.0000
Treatment F										51.353	0.000	0.000	61.883	9.878	0.000
Treatment Prob(F)										0.0001	1.0000	1.0000	0.0001	0.0001	1.0000

Palmer Amaranth Control with Statement Postemergence.

Trial ID: 13-COL-StatementPOST Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMAPA-HR 7-5-13 Control Percent 14 DA-A	AMAPA-HR 7-12-13 Control Percent 21 DA-A	AMAPA-HR 7-26-13 Control Percent 35 DA-A
1	STATEMENT	5.25	EC	1.31	lb ai/a	32	fl oz/a	2"W	A	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A			
2	STATEMENT	5.25	EC	1.64	lb ai/a	40	fl oz/a	2"W	A	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A			
3	RHYTHM	1.88	ME	0.375	lb ai/a	25.5	fl oz/a	2"W	A	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A			
4	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	2"W	A	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A			
5	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	2"W	A	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A			
6	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	2"W	A	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A			
7	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A	96 b	93 b	88 b
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A			
8	NONTREATED									0 c	0 c	0 c
LSD (P=.05)										0.5	0.7	2.6
Standard Deviation										0.3	0.5	1.8
CV										0.37	0.55	2.11
Replicate F										1.928	3.595	1.711
Replicate Prob(F)										0.1561	0.0307	0.1953
Treatment F										47322.048	21906.083	1487.289
Treatment Prob(F)										0.0001	0.0001	0.0001

Southern Illinois University

Palmer Amaranth Control with Statement Postemergence.

Trial ID: 13-COL-StatementPOST Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Cheminova (fomme 1302).
2. Ratings: CI / necrosis / chlorosis / stunting at 14, 28, and 42 DA-A; WC 14, 21, and 35 DA-A.
3. No yield.
4. AMAPA-HR = Herbicide-resistant Palmer amaranth (glyphosate).
5. Weeds that had emerged prior to planting were controlled with tillage and Gramoxone.
6. Rainfall following the 2"W application was 3.31 inch over the next two days.
7. Not harvested.

Winfield Solutions Adjuvant by Nozzle Evaluation with Dicamba.

Trial ID: 13-FagerS-WinATVdica Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 6-24-13
Completion Date: 7-22-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Evaluate the influence of Winfield Solutions adjuvant and nozzles on efficacy with dicamba.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: NONE - Non-crop
Variety: NON-CROP
Planting Method: NA

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	NON-CROP	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL silt loam
pH: 5.5 **Soil Name:** Alvin
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	lb/A
K	446	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Winfield Solutions Adjuvant by Nozzle Evaluation with Dicamba.

Trial ID: 13-FagerS-WinATVdica Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
2.	6-3-13					7	DAY	50	82	F
3.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
4.	6-10-13					7	DAY	57	93	F
5.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
6.	6-17-13					7	DAY	61	92	F
7.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
8.	6-24-13					7	DAY	64	93	F
9.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
10.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
11.	7-1-13					7	DAY	57	88	F
12.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
13.	7-8-13					7	DAY	59	92	F
14.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
15.	7-15-13					7	DAY	68	93	F
16.	7-20-13	1.24	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	6-24-13
Appl. Start Time:	7:00
Appl. Stop Time:	7:45
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	72 F
% Relative Humidity:	90
Wind Velocity, Unit:	6 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	81 F
Soil Moisture:	NORMAL
% Cloud Cover:	50
Next Moisture Occurred On:	6-26-13
Time to Next Moisture, Unit:	2 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	8
Stage Minimum, Percent:	4
Stage Maximum, Percent:	20
Height, Unit:	4 IN
Height Minimum, Maximum:	2 6
Density, Unit:	20 FT2

Southern Illinois University

Winfield Solutions Adjuvant by Nozzle Evaluation with Dicamba.

Trial ID: 13-FagerS-WinATVdica Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	ALTEVE
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

Winfield Solutions Adjuvant by Nozzle Evaluation with Dicamba.

Trial ID: 13-FagerS-WinATVdica Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 7-1-13 Control Percent 7 DA-A	AMATA-HR 7-8-13 Control Percent 14 DA-A	AMATA-HR 7-22-13 Control Percent 28 DA-A
1	XR 11003 at 43.5 PSI - 9 MPH 10 GPA - FINE											
	CLARITY	4	SL	0.375	lb ae/a	12	fl oz/a	4-6"W	A	64 a	65 c	67 abc
2	XR 11003 at 43.5 PSI - 9 MPH 10 GPA - FINE											
	CLARITY	4	SL	0.375	lb ae/a	12	fl oz/a	4-6"W	A			
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A	65 a	67 bc	71 abc
3	XR 11004 at 40 PSI - 12 MPH 10 GPA - MEDIUM											
	CLARITY	4	SL	0.375	lb ae/a	12	fl oz/a	4-6"W	A	63 a	68 abc	70 abc
4	XR 11004 at 40 PSI - 12 MPH 10 GPA - MEDIUM											
	CLARITY	4	SL	0.375	lb ae/a	12	fl oz/a	4-6"W	A			
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A	66 a	70 ab	74 a
5	AIXR 11004 at 50 PSI - 13.3 MPH 10 GPA - VERY COARSE											
	CLARITY	4	SL	0.375	lb ae/a	12	fl oz/a	4-6"W	A	66 a	67 bc	67 bc
6	AIXR 11004 at 50 PSI - 13.3 MPH 10 GPA - VERY COARSE											
	CLARITY	4	SL	0.375	lb ae/a	12	fl oz/a	4-6"W	A			
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A	65 a	69 abc	72 ab
7	AI 11004 at 50 PSI - 13.3 MPH 10 GPA - EXTRA COARSE											
	CLARITY	4	SL	0.375	lb ae/a	12	fl oz/a	4-6"W	A	65 a	68 abc	65 c
8	AI 11004 at 50 PSI - 13.3 MPH 10 GPA - EXTRA COARSE											
	CLARITY	4	SL	0.375	lb ae/a	12	fl oz/a	4-6"W	A			
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A	66 a	73 a	67 bc
9	TTI 11004 at 50 PSI - 13.3 MPH 10 GPA - ULTRA COARSE											
	CLARITY	4	SL	0.375	lb ae/a	12	fl oz/a	4-6"W	A	65 a	69 abc	67 bc
10	TTI 11004 at 50 PSI - 13.3 MPH 10 GPA - ULTRA COARSE											
	CLARITY	4	SL	0.375	lb ae/a	12	fl oz/a	4-6"W	A			
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A	64 a	71 ab	70 abc
11	NONTREATED									0 b	0 d	0 d
	LSD (P=.05)									6.5	4.8	6.8
	Standard Deviation									3.8	2.8	4.0
	CV									6.46	4.5	6.39
	Replicate F									0.315	0.911	2.164
	Replicate Prob(F)									0.7331	0.4181	0.1410
	Treatment F									79.209	165.040	82.246
	Treatment Prob(F)									0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Winfield Solutions Adjuvant by Nozzle Evaluation with Dicamba.

Trial ID: 13-FagerS-WinATVdica Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. WC at 7, 14, and 28 DA-A.
3. Nozzle type and size, spray pressure, and application speed are per treatment, see treatment list.
4. Mix size is 2.5 gallons, mix a single 2.5 gallon can for treatments 1, 3, 5, 7, and 9,
   and another 2.5 gallon can for treatments 2, 4, 6, 8, and 10.
   Change nozzles, PSI and speed per treatment using same 2.5 gallon can.
5. No yield.
6. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
7. Not harvested (non-crop).

Winfield Solutions Adjuvant by Nozzle Evaluation with Acifluorfen.

Trial ID: 13-KRC-1-WinATVacif Location: Kuehn Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-27-13
Completion Date: 7-22-13

Trial Location

City: Dowell **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62927

Objectives:
Evaluate the influence of Winfield Solutions adjuvant and nozzles on efficacy with acifluoren.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: P94Y70 **BBCH Scale:** BSOY
Description: RR
Planting Date: 5-27-13
Planting Rate, Unit: 140000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 29 LB/A, P2O5 74 LB/A, K2O 160 LB/A
2.	Variable-rate applied

Soil Description

% OM: 2.3 **Texture:** SIL silt loam
pH: 6.7 **Soil Name:** Hoyleton/Wynoose
CEC: 9.8

Additional Measured Elements

Element	Quantity	Unit
P1	59	lb/A
K	181	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 11 MI

Winfield Solutions Adjuvant by Nozzle Evaluation with Acifluorfen.

Trial ID: 13-KRC-1-WinATVacif Location: Kuehn Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
2.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
3.	5-6-13					7	DAY	41	80	F
4.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
5.	5-13-13					7	DAY	37	87	F
6.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
7.	5-20-13					7	DAY	43	85	F
8.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
9.	5-27-13					7	DAY	59	86	F
10.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
11.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
12.	6-3-13					7	DAY	50	82	F
13.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
14.	6-10-13					7	DAY	57	93	F
15.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
16.	6-17-13					7	DAY	61	92	F
17.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
18.	6-24-13					7	DAY	64	93	F
19.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
20.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
21.	7-1-13					7	DAY	57	88	F
22.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
23.	7-8-13					7	DAY	59	92	F
24.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
25.	7-15-13					7	DAY	68	93	F
26.	7-20-13	1.24	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	6-24-13
Appl. Start Time:	15:00
Appl. Stop Time:	15:35
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	89 F
% Relative Humidity:	97
Wind Velocity, Unit:	6 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	81 F
Soil Moisture:	NORMAL
% Cloud Cover:	50
Next Moisture Occurred On:	6-26-13
Time to Next Moisture, Unit:	40 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	V3
Stage Minimum, Percent:	V2
Stage Maximum, Percent:	V3
Height, Unit:	8 IN
Height Minimum, Maximum:	6 8

Winfield Solutions Adjuvant by Nozzle Evaluation with Acifluorfen.

Trial ID: 13-KRC-1-WinATVacif Location: Kuehn Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	8
Stage Minimum, Percent:	4
Stage Maximum, Percent:	20
Height, Unit:	4 IN
Height Minimum, Maximum:	2 6
Density, Unit:	20 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	ALTEVE
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

Winfield Solutions Adjuvant by Nozzle Evaluation with Acifluorfen.

Trial ID: 13-KRC-1-WinATVacif Location: Kuehn Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-1-13 Injury Percent 7 DA-A	GLXMA 7-8-13 Injury Percent 14 DA-A	GLXMA 7-22-13 Injury Percent 28 DA-A	AMATA-HR 7-1-13 Control Percent 7 DA-A	AMATA-HR 7-8-13 Control Percent 14 DA-A	AMATA-HR 7-22-13 Control Percent 28 DA-A
1	XR 11003 at 43.5 PSI - 9 MPH 10 GPA - FINE									13 bc	8 a	0 a	72 bc	81 ab	43 bc
	AVALANCHE ULTRA	2	EC	0.25	lb ai/a	1	pt/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
2	XR 11003 at 43.5 PSI - 9 MPH 10 GPA - FINE									13 bc	8 a	0 a	73 abc	78 b	43 bc
	AVALANCHE ULTRA	2	EC	0.25	lb ai/a	1	pt/a	4-6"W	A						
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
3	XR 11004 at 40 PSI - 12 MPH 10 GPA - MEDIUM									12 c	9 a	0 a	75 abc	76 b	40 c
	AVALANCHE ULTRA	2	EC	0.25	lb ai/a	1	pt/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
4	XR 11004 at 40 PSI - 12 MPH 10 GPA - MEDIUM									18 a	11 a	0 a	80 a	82 ab	47 abc
	AVALANCHE ULTRA	2	EC	0.25	lb ai/a	1	pt/a	4-6"W	A						
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
5	AIXR 11004 at 50 PSI - 13.3 MPH 10 GPA - VERY COARSE									13 bc	11 a	0 a	78 ab	81 ab	43 bc
	AVALANCHE ULTRA	2	EC	0.25	lb ai/a	1	pt/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
6	AIXR 11004 at 50 PSI - 13.3 MPH 10 GPA - VERY COARSE									17 ab	12 a	0 a	80 a	87 a	53 a
	AVALANCHE ULTRA	2	EC	0.25	lb ai/a	1	pt/a	4-6"W	A						
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
7	AI 11004 at 50 PSI - 13.3 MPH 10 GPA - EXTRA COARSE									15 abc	10 a	0 a	70 c	76 b	44 abc
	AVALANCHE ULTRA	2	EC	0.25	lb ai/a	1	pt/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
8	AI 11004 at 50 PSI - 13.3 MPH 10 GPA - EXTRA COARSE									18 a	12 a	0 a	77 abc	82 ab	46 abc
	AVALANCHE ULTRA	2	EC	0.25	lb ai/a	1	pt/a	4-6"W	A						
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
9	TTI 11004 at 50 PSI - 13.3 MPH 10 GPA - ULTRA COARSE									15 abc	12 a	0 a	72 bc	78 b	39 c
	AVALANCHE ULTRA	2	EC	0.25	lb ai/a	1	pt/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
10	TTI 11004 at 50 PSI - 13.3 MPH 10 GPA - ULTRA COARSE									15 abc	12 a	0 a	78 ab	86 a	50 ab
	AVALANCHE ULTRA	2	EC	0.25	lb ai/a	1	pt/a	4-6"W	A						
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Winfield Solutions Adjuvant by Nozzle Evaluation with Acifluorfen.

Trial ID: 13-KRC-1-WinATVacif Location: Kuehn Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code																	
Crop Code											GLXMA	GLXMA	GLXMA	AMATA-HR	AMATA-HR	AMATA-HR
Rating Date											7-1-13	7-8-13	7-22-13	7-1-13	7-8-13	7-22-13
Rating Type											Injury	Injury	Injury	Control	Control	Control
Rating Unit											Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing																
Trt-Eval Interval											7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
11	NONTREATED										0 d	0 b	0 a	0 d	0 c	0 d
LSD (P=.05)											4.4	5.3	0.0	7.3	6.9	8.9
Standard Deviation											2.6	3.1	0.0	4.3	4.0	5.2
CV											19.04	32.68	0.0	6.21	5.53	12.84
Replicate F											2.360	8.979	0.000	2.375	1.250	6.206
Replicate Prob(F)											0.1202	0.0016	1.0000	0.1187	0.3079	0.0080
Treatment F											11.079	3.935	0.000	87.525	110.290	21.683
Treatment Prob(F)											0.0001	0.0044	1.0000	0.0001	0.0001	0.0001

Southern Illinois University

Winfield Solutions Adjuvant by Nozzle Evaluation with Acifluorfen.

Trial ID: 13-KRC-1-WinATVacif Location: Kuehn Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. CI/WC at 7, 14, and 28 DA-A.
3. Nozzle type and size, spray pressure, and application speed are per treatment, see treatment list.
4. Mix size is 2.5 gallons, mix a single 2.5 gallon can for treatments 1, 3, 5, 7, and 9,
   and another 2.5 gallon can for treatments 2, 4, 6, 8, and 10.
   Change nozzles, PSI and speed per treatment using same 2.5 gallon can.
5. No yield.
6. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
7. Not harvested.

Southern Illinois University

Winfield Solutions Adjuvant by Nozzle Evaluation with Fomesafen.

Trial ID: 13-KRC-1-WinATVfome Location: Kuehn Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-27-13
Completion Date: 7-22-13

Trial Location

City: Dowell **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62927

Objectives:
Evaluate the influence of Winfield Solutions adjuvant and nozzles on efficacy with fomesafen.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: P94Y70 **BBCH Scale:** BSOY
Description: RR
Planting Date: 5-27-13
Planting Rate, Unit: 140000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 29 LB/A, P2O5 74 LB/A, K2O 160 LB/A
2.	Variable-rate applied

Soil Description

% OM: 2.3 **Texture:** SIL silt loam
pH: 6.7 **Soil Name:** Hoyleton/Wynoose
CEC: 9.8

Additional Measured Elements

Element	Quantity	Unit
P1	53	lb/A
K	168	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 11 MI

Winfield Solutions Adjuvant by Nozzle Evaluation with Fomesafen.

Trial ID: 13-KRC-1-WinATVfome Location: Kuehn Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
2.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
3.	5-6-13					7	DAY	41	80	F
4.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
5.	5-13-13					7	DAY	37	87	F
6.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
7.	5-20-13					7	DAY	43	85	F
8.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
9.	5-27-13					7	DAY	59	86	F
10.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
11.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
12.	6-3-13					7	DAY	50	82	F
13.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
14.	6-10-13					7	DAY	57	93	F
15.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
16.	6-17-13					7	DAY	61	92	F
17.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
18.	6-24-13					7	DAY	64	93	F
19.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
20.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
21.	7-1-13					7	DAY	57	88	F
22.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
23.	7-8-13					7	DAY	59	92	F
24.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
25.	7-15-13					7	DAY	68	93	F
26.	7-20-13	1.24	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	6-24-13
Appl. Start Time:	14:00
Appl. Stop Time:	14:45
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	89 F
% Relative Humidity:	97
Wind Velocity, Unit:	6 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	81 F
Soil Moisture:	NORMAL
% Cloud Cover:	40
Next Moisture Occurred On:	6-26-13
Time to Next Moisture, Unit:	40 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	V3
Stage Minimum, Percent:	V2
Stage Maximum, Percent:	V3
Height, Unit:	8 IN
Height Minimum, Maximum:	6 8

Winfield Solutions Adjuvant by Nozzle Evaluation with Fomesafen.

Trial ID: 13-KRC-1-WinATVfome Location: Kuehn Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	8
Stage Minimum, Percent:	4
Stage Maximum, Percent:	20
Height, Unit:	4 IN
Height Minimum, Maximum:	2 6
Density, Unit:	20 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	ALTEVE
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

Winfield Solutions Adjuvant by Nozzle Evaluation with Fomesafen.

Trial ID: 13-KRC-1-WinATVfome Location: Kuehn Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-1-13 Injury Percent 7 DA-A	GLXMA 7-8-13 Injury Percent 14 DA-A	GLXMA 7-22-13 Injury Percent 28 DA-A	AMATA-HR 7-1-13 Control Percent 7 DA-A	AMATA-HR 7-8-13 Control Percent 14 DA-A	AMATA-HR 7-22-13 Control Percent 28 DA-A
1	XR 11003 at 43.5 PSI - 9 MPH 10 GPA - FINE									10 a	15 a	0 a	77 a	78 a	38 bc
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
2	XR 11003 at 43.5 PSI - 9 MPH 10 GPA - FINE									8 b	6 c	0 a	74 ab	78 a	33 bc
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	A						
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
3	XR 11004 at 40 PSI - 12 MPH 10 GPA - MEDIUM									10 a	12 ab	0 a	72 ab	73 ab	30 c
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
4	XR 11004 at 40 PSI - 12 MPH 10 GPA - MEDIUM									8 b	6 c	0 a	75 ab	74 ab	31 c
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	A						
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
5	AIXR 11004 at 50 PSI - 13.3 MPH 10 GPA - VERY COARSE									10 a	11 b	0 a	76 ab	75 ab	34 bc
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
6	AIXR 11004 at 50 PSI - 13.3 MPH 10 GPA - VERY COARSE									8 b	7 c	0 a	74 ab	76 ab	37 bc
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	A						
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
7	AI 11004 at 50 PSI - 13.3 MPH 10 GPA - EXTRA COARSE									10 a	6 c	0 a	70 b	73 ab	37 bc
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
8	AI 11004 at 50 PSI - 13.3 MPH 10 GPA - EXTRA COARSE									10 a	7 c	0 a	74 ab	76 ab	40 ab
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	A						
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
9	TTI 11004 at 50 PSI - 13.3 MPH 10 GPA - ULTRA COARSE									8 b	6 c	0 a	70 b	71 b	32 bc
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
10	TTI 11004 at 50 PSI - 13.3 MPH 10 GPA - ULTRA COARSE									10 a	6 c	0 a	70 b	74 ab	48 a
	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	4-6"W	A						
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Winfield Solutions Adjuvant by Nozzle Evaluation with Fomesafen.

Trial ID: 13-KRC-1-WinATVfome Location: Kuehn Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code																	
Crop Code												GLXMA	GLXMA	GLXMA	AMATA-HR	AMATA-HR	AMATA-HR
Rating Date												7-1-13	7-8-13	7-22-13	7-1-13	7-8-13	7-22-13
Rating Type												Injury	Injury	Injury	Control	Control	Control
Rating Unit												Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing																	
Trt-Eval Interval												7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code								
11	NONTREATED											0 c	0 d	0 a	0 c	0 c	0 d
LSD (P=.05)												1.8	3.0	0.0	6.5	6.2	8.4
Standard Deviation												1.1	1.8	0.0	3.8	3.6	4.9
CV												12.95	23.44	0.0	5.75	5.34	15.02
Replicate F												0.233	8.227	0.000	0.753	0.833	1.426
Replicate Prob(F)												0.7946	0.0025	1.0000	0.4837	0.4491	0.2636
Treatment F												22.140	15.035	0.000	100.974	116.530	17.928
Treatment Prob(F)												0.0001	0.0001	1.0000	0.0001	0.0001	0.0001

Southern Illinois University

Winfield Solutions Adjuvant by Nozzle Evaluation with Fomesafen.

Trial ID: 13-KRC-1-WinATVfome Location: Kuehn Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. CI/WC at 7, 14, and 28 DA-A.
3. Nozzle type and size, spray pressure, and application speed are per treatment, see treatment list.
4. Mix size is 2.5 gallons, mix a single 2.5 gallon can for treatments 1, 3, 5, 7, and 9,
   and another 2.5 gallon can for treatments 2, 4, 6, 8, and 10.
   Change nozzles, PSI and speed per treatment using same 2.5 gallon can.
5. No yield.
6. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
7. Not harvested.

Southern Illinois University

Adjuvant Evaluation for Glyphosate and PPO Herbicides on Glyphosate-Resistant Waterhemp.

Trial ID: 13-DSO-PPOadj Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-24-13
Completion Date: 7-18-13

Trial Location

City: De Soto **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62924

Objectives:
Evaluate the efficacy of adjuvants for combinations of glyphosate and PPO-inhibiting herbicides on glyphosate-resistant waterhemp.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y

Planting Date: 5-24-13
Planting Rate, Unit: 145000 S/A **Planting Method:** SEEDED
Depth, Unit: 1.75 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 15.4 **% OM:** 2.15 **Texture:** SIL silt loam
% Silt: 64.7 **pH:** 6.9 **Soil Name:** Okaw
% Clay: 19.9 **CEC:** 12.4

Additional Measured Elements

Element	Quantity	Unit
P1	94	lb/A
K	468	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Adjuvant Evaluation for Glyphosate and PPO Herbicides on Glyphosate-Resistant Waterhemp.

Trial ID: 13-DSO-PPOadj Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
2.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
3.	5-6-13					7	DAY	41	80	F
4.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
5.	5-13-13					7	DAY	37	87	F
6.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
7.	5-20-13					7	DAY	43	85	F
8.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
9.	5-27-13					7	DAY	59	86	F
10.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
11.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
12.	6-3-13					7	DAY	50	82	F
13.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
14.	6-10-13					7	DAY	57	93	F
15.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
16.	6-17-13					7	DAY	61	92	F
17.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
18.	6-24-13					7	DAY	64	93	F
19.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
20.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
21.	7-1-13					7	DAY	57	88	F
22.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
23.	7-8-13					7	DAY	59	92	F
24.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
25.	7-15-13					7	DAY	68	93	F
26.	7-20-13	1.24	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	6-20-13
Appl. Start Time:	9:30
Appl. Stop Time:	10:00
Application Method:	Spray
Application Timing:	6"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	86 F
% Relative Humidity:	51
Wind Velocity, Unit:	1 MPH
Wind Direction:	N
Dew Presence (Y/N):	N
Soil Temperature, Unit:	80 F
Soil Moisture:	BELNOR
% Cloud Cover:	25
Next Moisture Occurred On:	6-22-13
Time to Next Moisture, Unit:	2 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	V3
Stage Minimum, Percent:	V2
Stage Maximum, Percent:	V3
Height, Unit:	8 IN
Height Minimum, Maximum:	6 8

Southern Illinois University

Adjuvant Evaluation for Glyphosate and PPO Herbicides on Glyphosate-Resistant Waterhemp.

Trial ID: 13-DSO-PPOadj Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	16
Stage Minimum, Percent:	4
Stage Maximum, Percent:	20
Height, Unit:	6 IN
Height Minimum, Maximum:	1 8
Density, Unit:	20 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Adjuvant Evaluation for Glyphosate and PPO Herbicides on Glyphosate-Resistant Waterhemp.

Trial ID: 13-DSO-PPOadj Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-23-13 Injury Percent 3 DA-A	GLXMA 6-27-13 Injury Percent 7 DA-A	GLXMA 7-4-13 Injury Percent 14 DA-A	GLXMA 7-18-13 Injury Percent 28 DA-A
1	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	6 g	5 f	4 f	0 a
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
2	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	9 fg	9 e	6 ef	0 a
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6"W	A				
3	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	20 c	17 c	8 cde	0 a
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A				
4	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	23 abc	19 abc	9 bcd	0 a
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	PRIME OIL COC	100	SL	1	% v/v	1	% v/v	6"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6"W	A				
5	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	24 ab	21 ab	14 a	0 a
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A				
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A				
6	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	23 abc	19 abc	9 bcd	0 a
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A				
	AG 8034	100	SL	2	% v/v	2	% v/v	6"W	A				
7	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	25 ab	21 ab	11 bc	0 a
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A				
	AG 8034	100	SL	2	% v/v	2	% v/v	6"W	A				
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A				
8	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	25 ab	19 bc	9 bcd	0 a
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6"W	A				
9	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	20 c	21 ab	10 bcd	0 a
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	DESTINY HC	100	SL	1	pt/a	1	pt/a	6"W	A				
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A				
10	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	25 a	22 a	11 ab	0 a
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	DESTINY HC	100	SL	1	pt/a	1	pt/a	6"W	A				
	AG 8034	100	SL	2	% v/v	2	% v/v	6"W	A				
11	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	22 bc	19 bc	12 ab	0 a
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	AG 11011	100	SL	1	% v/v	1	% v/v	6"W	A				
12	NONTREATED									0 h	0 g	0 g	0 a
13	FLEXSTAR GT 3.5	2.82	SL	0.93	lb ae/a	2.65	pt/a	6"W	A	12 ef	11 de	7 de	0 a
	DRX 101	100	SL	0.83	% v/v	1	pt/a	6"W	A				
14	FLEXSTAR GT 3.5	2.82	SL	0.93	lb ae/a	2.65	pt/a	6"W	A	13 de	11 de	7 de	0 a
	DRX 102	100	SL	0.417	% v/v	0.5	pt/a	6"W	A				

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Adjuvant Evaluation for Glyphosate and PPO Herbicides on Glyphosate-Resistant Waterhemp.

Trial ID: 13-DSO-PPOadj Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code															
Crop Code													GLXMA	GLXMA	GLXMA	GLXMA
Rating Date													6-23-13	6-27-13	7-4-13	7-18-13
Rating Type													Injury	Injury	Injury	Injury
Rating Unit													Percent	Percent	Percent	Percent
Rating Timing																
Trt-Eval Interval													3 DA-A	7 DA-A	14 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
15	FLEXSTAR GT 3.5	2.82	SL	0.93	lb ae/a	2.65	pt/a	6"W	A	16 d	13 d	7 de	0 a
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6"W	A				
LSD (P=.05)										3.5	2.9	3.3	0.0
Standard Deviation										2.1	1.7	2.0	0.0
CV										11.85	11.59	23.99	0.0
Replicate F										1.104	0.547	0.157	0.000
Replicate Prob(F)										0.3457	0.5848	0.8552	1.0000
Treatment F										43.616	43.831	8.907	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	1.0000

Adjuvant Evaluation for Glyphosate and PPO Herbicides on Glyphosate-Resistant Waterhemp.

Trial ID: 13-DSO-PPOadj Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 6-23-13 Control Percent 3 DA-A	AMATA-HR 6-27-13 Control Percent 7 DA-A	AMATA-HR 7-4-13 Control Percent 14 DA-A	AMATA-HR 7-18-13 Control Percent 28 DA-A
1	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	70 b	75 b	73 c	50 d
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
2	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	78 b	82 b	80 bc	62 cd
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6"W	A				
3	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	93 a	95 a	94 a	75 abc
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A				
4	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	90 a	92 a	90 a	72 abc
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	PRIME OIL COC	100	SL	1	% v/v	1	% v/v	6"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6"W	A				
5	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	95 a	95 a	94 a	75 abc
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A				
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A				
6	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	97 a	96 a	96 a	75 abc
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A				
	AG 8034	100	SL	2	% v/v	2	% v/v	6"W	A				
7	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	96 a	96 a	95 a	72 abc
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A				
	AG 8034	100	SL	2	% v/v	2	% v/v	6"W	A				
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A				
8	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	96 a	94 a	95 a	69 abc
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6"W	A				
9	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	93 a	93 a	94 a	74 abc
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	DESTINY HC	100	SL	1	pt/a	1	pt/a	6"W	A				
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A				
10	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	92 a	93 a	94 a	81 ab
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	DESTINY HC	100	SL	1	pt/a	1	pt/a	6"W	A				
	AG 8034	100	SL	2	% v/v	2	% v/v	6"W	A				
11	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6"W	A	94 a	94 a	92 a	74 abc
	AVALANCHE ULTRA 2 EC	2	EC	0.25	lb ai/a	1	pt/a	6"W	A				
	AG 11011	100	SL	1	% v/v	1	% v/v	6"W	A				
12	NONTREATED									0 c	0 c	0 d	0 e
13	FLEXSTAR GT 3.5	2.82	SL	0.93	lb ae/a	2.65	pt/a	6"W	A	88 a	91 a	88 ab	68 bc
	DRX 101	100	SL	0.83	% v/v	1	pt/a	6"W	A				
14	FLEXSTAR GT 3.5	2.82	SL	0.93	lb ae/a	2.65	pt/a	6"W	A	94 a	95 a	94 a	77 abc
	DRX 102	100	SL	0.417	% v/v	0.5	pt/a	6"W	A				

Southern Illinois University

Adjuvant Evaluation for Glyphosate and PPO Herbicides on Glyphosate-Resistant Waterhemp.

Trial ID: 13-DSO-PPOadj Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code									AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Crop Code												
Rating Date									6-23-13	6-27-13	7-4-13	7-18-13
Rating Type									Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent
Rating Timing												
Trt-Eval Interval									3 DA-A	7 DA-A	14 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
15	FLEXSTAR GT 3.5	2.82	SL	0.93	lb ae/a	2.65	pt/a	6"W	A	96 a	96 a	94 a	85 a
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6"W	A				
LSD (P=.05)										10.6	8.4	8.5	16.4
Standard Deviation										6.4	5.0	5.1	9.8
CV										7.51	5.88	5.96	14.56
Replicate F										1.412	1.484	1.124	3.076
Replicate Prob(F)										0.2604	0.2440	0.3391	0.0620
Treatment F										44.794	70.418	69.502	12.893
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Adjuvant Evaluation for Glyphosate and PPO Herbicides on Glyphosate-Resistant Waterhemp.

Trial ID: 13-DSO-PPOadj Location: De Soto, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions (study 8), and Drexel (HSMOC13).
2. Ratings: CI/WC at 3, 7, 14, and 28 DA-A.
3. No yield requested.
4. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. Blanket burndown of glyphosate (1.5 lbae/A) plus Salvo (12 floz/A) was applied to all plots on 4-2-13.
   Blanket prior to planting of Gramoxone (2.5 pt/A) was applied to all plots on 5-24-13.
   Blanket application of Arrow (8 floz/A) plus COC (1%) was applied to all plots on 6-11-13.
   Blanket application of Warrior (1.92 oz/A) was applied to all plots on 6-19-13.
6. Not harvested.

Southern Illinois University

Sharpen with Experimental United Suppliers Adjuvants.

Trial ID: 13-FagerS-SharpenADJ Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 5-7-13
Completion Date: 6-4-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Evaluate methylated seed oil adjuvants with Sharpen for burndown weed control.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: NONE - Non-crop
Variety: NON-CROP
Planting Method: NA

Pest Description

Pest 1 Type: W **Code:** ERICA Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** VERAR Veronica arvensis L.
Common Name: speedwell, corn

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: NONE control is other than an untreated

No.	Previous Crop	Year
1.	GLXMA	2012

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL silt loam
pH: 5.5 **Soil Name:** Alvin
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	lb/A
K	446	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Sharpen with Experimental United Suppliers Adjuvants.

Trial ID: 13-FagerS-SharpenADJ Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-13					7	DAY	26	75	F
2.	4-8-13					7	DAY	32	81	F
3.	4-10-13	0.85	IN	RAIN	rain	2	DAY			
4.	4-15-13					7	DAY	32	83	F
5.	4-18-13	2.16	IN	RAIN	rain	1	DAY			
6.	4-22-13					7	DAY	32	72	F
7.	4-24-13	0.55	IN	RAIN	rain	2	DAY			
8.	4-27-13	0.37	IN	RAIN	rain	2	DAY			
9.	4-29-13					7	DAY	41	81	F
10.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
11.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
12.	5-6-13					7	DAY	41	80	F
13.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
14.	5-13-13					7	DAY	37	87	F
15.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
16.	5-20-13					7	DAY	43	85	F
17.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
18.	5-27-13					7	DAY	59	86	F
19.	5-31-13	0.7	IN	RAIN	rain	3	DAY			
20.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
21.	6-3-13					7	DAY	50	82	F
22.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
23.	6-10-13					7	DAY	57	93	F
24.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
25.	6-17-13					7	DAY	61	92	F
26.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
27.	6-24-13					7	DAY	64	93	F
28.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
29.	6-30-13	0.3	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	5-7-13
Appl. Start Time:	13:30
Appl. Stop Time:	14:15
Application Method:	Spray
Application Timing:	6-8"MT
Application Placement:	BROFOL
Applied By:	EJM
Air Temperature, Unit:	83 F
% Relative Humidity:	45
Wind Velocity, Unit:	2 MPH
Wind Direction:	N
Dew Presence (Y/N):	N
Soil Temperature, Unit:	75 F
Soil Moisture:	ABONOR
% Cloud Cover:	40
Next Moisture Occurred On:	5-8-13
Time to Next Moisture, Unit:	31 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Sharpen with Experimental United Suppliers Adjuvants.

Trial ID: 13-FagerS-SharpenADJ Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ERICA W
Stage Majority, Percent:	16
Stage Minimum, Percent:	12
Stage Maximum, Percent:	25
Height, Unit:	7.5 IN
Height Minimum, Maximum:	4.5 10
Density, Unit:	9 FT2
Pest 2 Code, Type, Scale:	VERAR W
Stage Majority, Percent:	20
Stage Minimum, Percent:	18
Stage Maximum, Percent:	16
Height, Unit:	9 IN
Height Minimum, Maximum:	7 10
Density, Unit:	0.01 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TT
Nozzle Size:	110015
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

Sharpen with Experimental United Suppliers Adjuvants.

Trial ID: 13-FagerS-SharpenADJ Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 5-10-13 Control Percent 3 DA-A	ERICA-HR 5-14-13 Control Percent 7 DA-A	ERICA-HR 5-21-13 Control Percent 14 DA-A	ERICA-HR 6-4-13 Control Percent 28 DA-A
1	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	58 e	87 f	88 bc	76 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
2	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	63 bcd	93 abc	91 ab	79 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	SUCCEED	100	SL	1	% v/v	1	gal/100 gal	6-8"MT	A				
3	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	68 a	95 a	93 a	86 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	TRANSLATE	100	SL	0.75	% v/v	3	qt/100 gal	6-8"MT	A				
4	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	62 cde	91 b-e	88 bc	78 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	AIRFORCE	100	SL	0.75	% v/v	3	qt/100 gal	6-8"MT	A				
5	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	64 a-d	93 abc	90 ab	77 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	DOWNDRAFT	100	SL	6	fl oz/a	6	fl oz/a	6-8"MT	A				
6	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	60 de	88 ef	85 c	73 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	WETCIT	100	SL	0.39	% v/v	50	fl oz/100 gal	6-8"MT	A				
7	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	66 abc	92 a-d	89 bc	78 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	UAD-1331	100	SL	0.75	% v/v	3	qt/100 gal	6-8"MT	A				
8	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	61 de	89 def	88 bc	76 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	UAD-1306	100	SL	1	% v/v	4	qt/100 gal	6-8"MT	A				
9	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	61 de	91 b-e	92 ab	80 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	UAD-1316	100	SL	0.5	% v/v	2	qt/100 gal	6-8"MT	A				
10	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	63 bcd	92 a-d	90 ab	83 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	UAD-1317	100	SL	0.5	% v/v	2	qt/100 gal	6-8"MT	A				
11	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	63 bcd	90 c-f	89 b	78 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	UAD-1316	100	SL	0.75	% v/v	3	qt/100 gal	6-8"MT	A				
12	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	67 ab	94 ab	91 ab	79 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	UAD-1317	100	SL	0.75	% v/v	3	qt/100 gal	6-8"MT	A				
13	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	63 bcd	90 c-f	89 b	78 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	UAD-1344	100	SL	0.25	% v/v	1	qt/100 gal	6-8"MT	A				
14	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	63 bcd	89 def	89 bc	77 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	UAD-1344	100	SL	0.5	% v/v	2	qt/100 gal	6-8"MT	A				

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Sharpen with Experimental United Suppliers Adjuvants.

Trial ID: 13-FagerS-SharpenADJ Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Pest Code									ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Crop Code												
	Rating Date									5-10-13	5-14-13	5-21-13	6-4-13
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									3 DA-A	7 DA-A	14 DA-A	28 DA-A
15	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	66 ab	93 abc	91 ab	79 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A				
	UAD-1348	100	SL	0.75	% v/v	3	qt/100 gal	6-8"MT	A				
	LSD (P=.05)									4.2	3.6	3.8	9.0
	Standard Deviation									2.5	2.1	2.3	5.4
	CV									3.94	2.33	2.56	6.84
	Replicate F									1.249	1.876	9.762	19.285
	Replicate Prob(F)									0.3022	0.1720	0.0006	0.0001
	Treatment F									3.282	3.188	2.117	0.913
	Treatment Prob(F)									0.0036	0.0044	0.0444	0.5563

Sharpen with Experimental United Suppliers Adjuvants.

Trial ID: 13-FagerS-SharpenADJ Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	VERAR 5-10-13 Control Percent 3 DA-A	VERAR 5-14-13 Control Percent 7 DA-A	VERAR 5-21-13 Control Percent 14 DA-A
1	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	53 a	77 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
2	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	58 a	80 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	SUCCEED	100	SL	1	% v/v	1	gal/100 gal	6-8"MT	A			
3	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	60 a	78 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	TRANSLATE	100	SL	0.75	% v/v	3	qt/100 gal	6-8"MT	A			
4	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	55 a	78 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	AIRFORCE	100	SL	0.75	% v/v	3	qt/100 gal	6-8"MT	A			
5	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	58 a	80 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	DOWNDRAFT	100	SL	6	fl oz/a	6	fl oz/a	6-8"MT	A			
6	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	55 a	78 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	WETCIT	100	SL	0.39	% v/v	50	fl oz/100 gal	6-8"MT	A			
7	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	57 a	78 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	UAD-1331	100	SL	0.75	% v/v	3	qt/100 gal	6-8"MT	A			
8	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	58 a	78 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	UAD-1306	100	SL	1	% v/v	4	qt/100 gal	6-8"MT	A			
9	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	57 a	80 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	UAD-1316	100	SL	0.5	% v/v	2	qt/100 gal	6-8"MT	A			
10	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	57 a	78 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	UAD-1317	100	SL	0.5	% v/v	2	qt/100 gal	6-8"MT	A			
11	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	58 a	82 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	UAD-1316	100	SL	0.75	% v/v	3	qt/100 gal	6-8"MT	A			
12	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	57 a	78 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	UAD-1317	100	SL	0.75	% v/v	3	qt/100 gal	6-8"MT	A			
13	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	57 a	82 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	UAD-1344	100	SL	0.25	% v/v	1	qt/100 gal	6-8"MT	A			
14	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	53 a	75 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	UAD-1344	100	SL	0.5	% v/v	2	qt/100 gal	6-8"MT	A			

Sharpen with Experimental United Suppliers Adjuvants.

Trial ID: 13-FagerS-SharpenADJ Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	VERAR 5-10-13 Control Percent 3 DA-A	VERAR 5-14-13 Control Percent 7 DA-A	VERAR 5-21-13 Control Percent 14 DA-A
15	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A	55 a	77 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.385	lb ae/a	11	fl oz/a	6-8"MT	A			
	UAD-1348	100	SL	0.75	% v/v	3	qt/100 gal	6-8"MT	A			
LSD (P=.05)										4.8	5.1	0.0
Standard Deviation										2.9	3.0	0.0
CV										5.06	3.87	0.0
Replicate F										3.330	1.256	0.000
Replicate Prob(F)										0.0504	0.3002	1.0000
Treatment F										1.379	1.051	0.000
Treatment Prob(F)										0.2273	0.4369	1.0000

Southern Illinois University

Sharpen with Experimental United Suppliers Adjuvants.

Trial ID: 13-FagerS-SharpenADJ Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: United Suppliers (AD13001).
2. Ratings: CI/WC 3, 7, 14, and 28 DA-A. Target ERICA.
3. No yield (non-crop).
4. ERICA-HR = Herbicide-resistant marestail (glyphosate).
5. By 6-4-13, VERAR in the nontreated plots was senescing naturally and could no longer be evaluated.
6. Not harvested (non-crop).

Southern Illinois University

Adjuvants for Enhanced Roundup / Clarity Efficacy in Fall Burndown.

Trial ID: 13-YRC-ClarityADJ Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 11-15-13
Completion Date: 12-19-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Evaluate United Suppliers adjuvants for enhanced burndown control of marestail with Roundup plus Clarity.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: NONE - Non-crop

Pest Description

Pest 1 Type: W **Code:** ERICA Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	NON-CROP	2013

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.82 **Texture:** SIL silt loam
pH: 6.2 **Soil Name:** Alvin
CEC: 6.16

Additional Measured Elements

Element	Quantity	Unit
P1	154	lb/A
K	264	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Adjuvants for Enhanced Roundup / Clarity Efficacy in Fall Burndown.

Trial ID: 13-YRC-ClarityADJ Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	10-12-13	0.29	IN	RAIN	rain	1	DAY			
2.	10-14-13					7	DAY	38	68	F
3.	10-15-13	0.13	IN	RAIN	rain	2	DAY			
4.	10-19-13	0.3	IN	RAIN	rain	3	DAY			
5.	10-21-13					7	DAY	25	63	F
6.	10-22-13	0.04	IN	RAIN	rain	1	DAY			
7.	10-28-13					7	DAY	30	76	F
8.	10-31-13	2.44	IN	RAIN	rain	4	DAY			
9.	11-4-13					7	DAY	28	65	F
10.	11-6-13	0.51	IN	RAIN	rain	3	DAY			
11.	11-11-13					7	DAY	17	77	F
12.	11-17-13	1.32	IN	RAIN	rain	2	DAY			
13.	11-18-13					7	DAY	16	57	F
14.	11-21-13	1.08	IN	RAIN	rain	2	DAY			
15.	11-25-13					7	DAY	17	59	F
16.	12-2-13					7	DAY	6	67	F
17.	12-5-13	1.61	IN	RAIN	rain	2	DAY			
18.	12-9-13					7	DAY	0	38	F
19.	12-14-13	0.54	IN	RAIN	rain	2	DAY			
20.	12-16-13					7	DAY	21	64	F
21.	12-20-13	1.5	IN	RAIN	rain	2	DAY			
22.	12-23-13					7	DAY	12	52	F

Application Description

	A
Application Date:	11-15-13
Appl. Start Time:	11:00
Appl. Stop Time:	13:00
Application Method:	Spray
Application Timing:	FALL
Application Placement:	BROFOL
Applied By:	EJM
Air Temperature, Unit:	53 F
% Relative Humidity:	47
Wind Velocity, Unit:	2 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	45 F
Soil Moisture:	NORMAL
% Cloud Cover:	100
Next Moisture Occurred On:	11-16-13
Time to Next Moisture, Unit:	27 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ERICA W
Stage Majority, Percent:	30
Stage Minimum, Percent:	10
Stage Maximum, Percent:	40
Height, Unit:	1 IN
Height Minimum, Maximum:	0.5 1
Density, Unit:	0.05 FT2

Southern Illinois University

Adjuvants for Enhanced Roundup / Clarity Efficacy in Fall Burndown.

Trial ID: 13-YRC-ClarityADJ Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TTI
Nozzle Size:	110015
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

Adjuvants for Enhanced Roundup / Clarity Efficacy in Fall Burndown.

Trial ID: 13-YRC-ClarityADJ Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 11-22-13 Control Percent 7 DA-A	ERICA-HR 11-29-13 Control Percent 14 DA-A	ERICA-HR 12-19-13 Control Percent 34 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	30 bc	45 a-e	77 ab
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	FALL	A			
2	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	28 c	38 de	76 ab
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	FALL	A			
	SUCCEED	100	SL	1	pt/a	1	pt/a	FALL	A			
3	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	29 c	37 e	67 b
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	FALL	A			
	WO-03	100	SL	1	pt/a	1	pt/a	FALL	A			
4	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	28 c	43 b-e	74 ab
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	FALL	A			
	WO-06-02	100	SL	1	pt/a	1	pt/a	FALL	A			
5	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	34 abc	45 a-e	81 a
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	FALL	A			
	WO-09	100	SL	1	pt/a	1	pt/a	FALL	A			
6	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	30 bc	54 abc	77 ab
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	FALL	A			
	UAD-1362	100	SL	0.75	pt/a	0.75	pt/a	FALL	A			
7	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	33 abc	59 a	83 a
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	FALL	A			
	UAD-1365	100	SL	1	pt/a	1	pt/a	FALL	A			
8	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	36 ab	50 a-e	79 ab
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	FALL	A			
	UAD-1381	100	SL	1	pt/a	1	pt/a	FALL	A			
9	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	31 abc	40 cde	86 a
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	FALL	A			
	UAD-1384	100	SL	1	pt/a	1	pt/a	FALL	A			
10	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	38 a	53 a-d	81 a
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	FALL	A			
	UAD-1382	100	SL	0.5	pt/a	0.5	pt/a	FALL	A			
11	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	31 abc	39 cde	76 ab
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	FALL	A			
	UAD-1386	100	SL	0.75	pt/a	0.75	pt/a	FALL	A			
12	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	34 abc	56 ab	84 a
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	FALL	A			
	UAD-1387	100	SL	1	pt/a	1	pt/a	FALL	A			
13	NONTREATED									0 d	0 f	0 c
LSD (P=.05)										7.1	15.1	13.3
Standard Deviation										5.0	10.6	9.2
CV										17.08	24.69	12.75
Replicate F										2.212	2.660	3.982
Replicate Prob(F)										0.1035	0.0628	0.0153
Treatment F										13.900	7.847	23.358
Treatment Prob(F)										0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Average=7

Southern Illinois University

Adjuvants for Enhanced Roundup / Clarity Efficacy in Fall Burndown.

Trial ID: 13-YRC-ClarityADJ Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: United Suppliers (AD14005 Clarity).
2. Ratings: WC 7, 14 and 21 or 28 DA-A.
3. Target marestail.
4. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   Marestail stage at application was rosette, majority at 3 inches wide, ranging from 0.5 to 4 inches.
5. The planned 28 DA-A rating was delayed due to snow cover.
6. Not harvested (non-crop).

Southern Illinois University

Adjuvants for Enhanced Roundup / Sharpen Efficacy in Fall Burndown.

Trial ID: 13-YRC-SharpenADJ Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final
Initiation Date: 11-15-13

Trial Location

City: Murphysboro **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62966

Objectives:
Evaluate United Suppliers adjuvants for enhanced burndown control of marestail with Roundup plus Sharpen.

Contacts

Study Director: Bryan Young **Title:** Professor
Organization: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415 **Phone No.:** 618-453-7679
City+State/Prov: Carbondale IL **Mobile No.:** 618-713-6471
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Country: USA

Crop Description

Crop 1: NONE - Non-crop

Pest Description

Pest 1 Type: W **Code:** ERICA Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT
Tillage Type: NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	NON-CROP	2013

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.82 **Texture:** SIL silt loam
pH: 6.2 **Soil Name:** Alvin
CEC: 6.16

Additional Measured Elements

Element	Quantity	Unit
P1	154	lb/A
K	264	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Adjuvants for Enhanced Roundup / Sharpen Efficacy in Fall Burndown.

Trial ID: 13-YRC-SharpenADJ Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	10-12-13	0.29	IN	RAIN	rain	1	DAY			
2.	10-14-13					7	DAY	38	68	F
3.	10-15-13	0.13	IN	RAIN	rain	2	DAY			
4.	10-19-13	0.3	IN	RAIN	rain	3	DAY			
5.	10-21-13					7	DAY	25	63	F
6.	10-22-13	0.04	IN	RAIN	rain	1	DAY			
7.	10-28-13					7	DAY	30	76	F
8.	10-31-13	2.44	IN	RAIN	rain	4	DAY			
9.	11-4-13					7	DAY	28	65	F
10.	11-6-13	0.51	IN	RAIN	rain	3	DAY			
11.	11-11-13					7	DAY	17	77	F
12.	11-17-13	1.32	IN	RAIN	rain	2	DAY			
13.	11-18-13					7	DAY	16	57	F
14.	11-21-13	1.08	IN	RAIN	rain	2	DAY			
15.	11-25-13					7	DAY	17	59	F
16.	12-2-13					7	DAY	6	67	F
17.	12-5-13	1.61	IN	RAIN	rain	2	DAY			
18.	12-9-13					7	DAY	0	38	F
19.	12-14-13	0.54	IN	RAIN	rain	2	DAY			
20.	12-16-13					7	DAY	21	64	F
21.	12-20-13	1.5	IN	RAIN	rain	2	DAY			
22.	12-23-13					7	DAY	12	52	F

Application Description

	A
Application Date:	11-15-13
Appl. Start Time:	10:15
Appl. Stop Time:	11:00
Application Method:	Spray
Application Timing:	FALL
Application Placement:	BROFOL
Applied By:	EJM
Air Temperature, Unit:	53 F
% Relative Humidity:	47
Wind Velocity, Unit:	2 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	45 F
Soil Moisture:	NORMAL
% Cloud Cover:	100
Next Moisture Occurred On:	11-16-13
Time to Next Moisture, Unit:	27 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ERICA W
Stage Majority, Percent:	30
Stage Minimum, Percent:	10
Stage Maximum, Percent:	40
Height, Unit:	1 IN
Height Minimum, Maximum:	0.5 1
Density, Unit:	0.05 FT2

Southern Illinois University

Adjuvants for Enhanced Roundup / Sharpen Efficacy in Fall Burndown.

Trial ID: 13-YRC-SharpenADJ Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TTI
Nozzle Size:	110015
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

Adjuvants for Enhanced Roundup / Sharpen Efficacy in Fall Burndown.

Trial ID: 13-YRC-SharpenADJ Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 11-22-13 Control Percent 7 DA-A	ERICA-HR 11-29-13 Control Percent 14 DA-A	ERICA-HR 12-19-13 Control Percent 34 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	40 ab	69 c	62 c
	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	FALL	A			
2	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	48 ab	87 a	90 ab
	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	FALL	A			
	SUCCEED	100	SL	1	pt/a	1	pt/a	FALL	A			
3	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	50 a	79 abc	88 ab
	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	FALL	A			
	WO-03	100	SL	1	pt/a	1	pt/a	FALL	A			
4	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	46 ab	75 abc	86 ab
	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	FALL	A			
	WO-06-02	100	SL	1	pt/a	1	pt/a	FALL	A			
5	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	45 ab	74 bc	84 ab
	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	FALL	A			
	WO-09	100	SL	1	pt/a	1	pt/a	FALL	A			
6	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	43 ab	75 abc	88 ab
	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	FALL	A			
	UAD-1362	100	SL	0.75	pt/a	0.75	pt/a	FALL	A			
7	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	48 ab	75 abc	94 a
	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	FALL	A			
	UAD-1365	100	SL	1	pt/a	1	pt/a	FALL	A			
8	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	41 ab	83 ab	95 a
	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	FALL	A			
	UAD-1381	100	SL	1	pt/a	1	pt/a	FALL	A			
9	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	39 b	78 abc	81 b
	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	FALL	A			
	UAD-1384	100	SL	1	pt/a	1	pt/a	FALL	A			
10	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	41 ab	74 bc	86 ab
	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	FALL	A			
	UAD-1382	100	SL	0.5	pt/a	0.5	pt/a	FALL	A			
11	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	40 ab	83 ab	94 a
	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	FALL	A			
	UAD-1386	100	SL	0.75	pt/a	0.75	pt/a	FALL	A			
12	ROUNDUP POWERMAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	FALL	A	45 ab	81 ab	86 ab
	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	FALL	A			
	UAD-1387	100	SL	1	pt/a	1	pt/a	FALL	A			
13	NONTREATED									0 c	0 d	0 d
	LSD (P=.05)									10.1	12.4	11.5
	Standard Deviation									7.1	8.7	8.1
	CV									17.47	12.1	10.15
	Replicate F									0.386	1.796	2.817
	Replicate Prob(F)									0.7635	0.1655	0.0528
	Treatment F									12.792	25.899	39.396
	Treatment Prob(F)									0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Adjuvants for Enhanced Roundup / Sharpen Efficacy in Fall Burndown.

Trial ID: 13-YRC-SharpenADJ Location: Young Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: United Suppliers (AD14004 Sharpen).
2. Ratings: WC 7, 14 and 21 or 28 DA-A.
3. Target marestail.
4. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   Marestail stage at application was rosette, majority at 3 inches wide, ranging from 0.5 to 4 inches.
5. The planned 28 DA-A ratings was delayed due to snow cover.
6. Not harvested (non-crop).

Indexes

Index of Weeds by Common Name

amaranth, Palmer (AMAPA) 441, 446, 559, 565, 575, 580, 585
amaranth, Palmer (AMAPA) glyphosate-resistant 441, 446, 559, 565, 575, 580, 585
barley, little (HORPU) 40, 62, 70, 79, 85, 93
bittercress, smallflowered (CARPA) 351
bluegrass, annual (POAAN) 358
buttercup, smallflower (RANAB) 40, 70, 351
chickweed, common (STEME) 40, 62, 70, 79, 85, 93, 286, 363, 373, 390
cocklebur, common (XANST) 26, 33, 70, 85, 99, 140, 241
corn, volunteer (ZEAMX) 33
foxtail, giant (SETFA) 1, 7, 20, 33, 79, 169, 241, 258, 271
garlic, wild (ALLVI) 40
geranium, Carolina (GERCA) 85, 93
grasses, annual (GGGAN) 40, 130, 183, 191, 199, 206
grasses (GGGGG) 40, 130, 183, 191, 199, 206
groundsel, cressleaf (SENGL) 40, 62
henbit (LAMAM) 286, 363, 373, 390
horseweed (ERICA) 79, 363, 373, 390, 400, 409, 414, 422, 458, 617, 625, 630
horseweed (ERICA) glyphosate-resistant 363, 373, 390, 400, 409, 414, 422, 458, 617, 625, 630
morningglory, ivyleaf (IPOHE) 1, 7, 20, 26, 33, 99, 122, 130, 140, 147, 214, 226, 233, 271
morningglory, species (IPOSS) 14, 40
nutsedge, yellow (CYPES) 40, 62, 214
panicum, fall (PANDI) 26, 62, 70, 85, 99, 122, 140, 155, 520
pansy, field (VIORA) 363, 373, 414, 458
ragweed, common (AMBEL) 99, 130, 206, 241
ragweed, giant (AMBTR) 26, 33, 40, 62, 122, 140, 147, 155, 169, 183, 191, 199, 206, 214, 233, 241, 258, 271
shepherdspurse (CAPBP) 85, 93, 351, 458
speedwell, corn (VERAR) 390, 409, 414, 617
velvetleaf (ABUTH) 1, 7, 14, 20, 40, 99, 122, 130, 147, 155, 169, 183, 191, 199, 206, 214, 226, 271
waterhemp, common (AMATA) 1, 7, 14, 20, 26, 33, 40, 70, 79, 85, 93, 147, 155, 169, 183, 191, 199, 206, 214, 226, 233, 241, 258, 271, 363, 373, 390, 400, 414, 422, 430, 436, 458, 470, 482, 490, 504, 510, 520, 531, 537, 547, 553, 592, 597, 603, 609
waterhemp, common (AMATA) glyphosate-resistant 363, 373, 390, 400, 414, 422, 430, 436, 458, 470, 482, 490, 504, 510, 520, 531, 537, 547, 553, 592, 597, 603, 609

Index of Weeds by Five-Letter Code

ABUTH (velvetleaf) 1, 7, 14, 20, 40, 99, 122, 130, 147, 155, 169, 183, 191, 199, 206, 214, 226, 271
ALLVI (garlic, wild) 40
AMAPA (amaranth, Palmer) 441, 446, 559, 565, 575, 580, 585
AMAPA (amaranth, Palmer) glyphosate-resistant 441, 446, 559, 565, 575, 580, 585
AMATA (waterhemp, common) 1, 7, 14, 20, 26, 33, 40, 70, 79, 85, 93, 147, 155, 169, 183, 191, 199, 206, 214, 226, 233, 241, 258, 271, 363, 373, 390, 400, 414, 422, 430, 436, 458, 470, 482, 490, 504, 510, 520, 531, 537, 547, 553, 592, 597, 603, 609
AMATA (waterhemp, common) glyphosate-resistant 363, 373, 390, 400, 414, 422, 430, 436, 458, 470, 482, 490, 504, 510, 520, 531, 537, 547, 553, 592, 597, 603, 609
AMBEL (ragweed, common) 99, 130, 206, 241
AMBTR (ragweed, giant) 26, 33, 40, 62, 122, 140, 147, 155, 169, 183, 191, 199, 206, 214, 233, 241, 258, 271
CAPBP (shepherdspurse) 85, 93, 351, 458
CARPA (bittercress, smallflowered) 351
CYPES (nutsedge, yellow) 40, 62, 214
ERICA (horseweed) 79, 363, 373, 390, 400, 409, 414, 422, 458, 617, 625, 630
ERICA (horseweed) glyphosate-resistant 363, 373, 390, 400, 409, 414, 422, 458, 617, 625, 630
GERCA (geranium, Carolina) 85, 93
GGGAN (grasses, annual) 40, 130, 183, 191, 199, 206
HORPU (barley, little) 40, 62, 70, 79, 85, 93
IPOHE (morningglory, ivyleaf) 1, 7, 20, 26, 33, 99, 122, 130, 140, 147, 214, 226, 233, 271
IPOSS (morningglory, species) 14, 40
LAMAM (henbit) 286, 363, 373, 390
PANDI (panicum, fall) 26, 62, 70, 85, 99, 122, 140, 155, 520
POAAN (bluegrass, annual) 358
RANAB (buttercup, smallflower) 40, 70, 351
SENGL (groundsel, cressleaf) 40, 62
SETFA (foxtail, giant) 1, 7, 20, 33, 79, 169, 241, 258, 271
STEME (chickweed, common) 40, 62, 70, 79, 85, 93, 286, 363, 373, 390
VERAR (speedwell, corn) 390, 409, 414, 617
VIORA (pansy, field) 363, 373, 414, 458
XANST (cocklebur, common) 26, 33, 70, 85, 99, 140, 241
ZEAMX (corn, volunteer) 33

Index of Herbicides, Fungicides, Insecticides, Foliar Nutrients and Soil Amendments

2,4-D AMINE 4 3.8 SL 504
2,4-D LV ESTER 3.8 EC 40, 70, 85, 363, 373, 390, 400, 422, 559
AATREX 4L 4 SC 40, 70, 99, 122, 130, 140, 147, 510, 520, 531, 537, 547, 559
AATREX NINE-O 90 WG 62
ABUNDIT EXTRA 3 SL 40, 85, 140, 214, 233, 363, 390, 446
AGH 11021 100 SL 409
AIM EC 2 EC 400
ALLY XP 60 WG 286, 351
ANTHEM 2.15 SE 446, 470, 520, 537
ANTHEM ATZ 4.5 SE 99, 520, 537, 547
APROACH 2.08 SC 117, 339, 344
ARMEZON 2.8 SL 547
ARROW 2 EC 33
ASANA XL 0.66 EC 117, 339
AUTHORITY ASSIST 4 SC 206, 271
AUTHORITY ELITE 7 SC 446, 470
AUTHORITY FIRST 70 WG 79, 155, 400, 446, 470
AUTHORITY MAXX 66 WG 169, 400, 470
AUTHORITY MTZ 45 WG 400
AUTHORITY XL 70 WG 183, 226, 373, 400, 470, 482, 575
AVALANCHE ULTRA 2 EC 597, 609
AXIOM 68 WG 358
BALANCE PRO 4 SC 504, 559
BASE CAMP AMINE 4 3.8 EC 62
BASIS 75 WG 70
BASIS BLEND 30 WG 390
BICEP II MAGNUM 5.5 SC 520
BOUNDARY 6.5 EC 85, 155, 183, 226, 271, 436, 441, 446, 458
BREAKFREE ATZ 5.25 SC 140
CADET 0.91 EC 301, 320, 490, 537
CALLISTO 4 SC 147, 510, 520, 537, 559
CANOPY 75 WG 85, 214, 233, 363
CANOPY EX 29.5 WG 85, 363
CAPRENO 3.45 SC 40, 122, 547
CINCH 7.64 SC 85, 214, 233
CINCH ATZ 5.5 SC 40, 140, 390
CLARITY 4 SL 183, 414, 504, 559, 592, 625
CLASSIC 25 WG 286, 436, 441, 575
COBRA 2 EC 169, 226, 258, 301, 320, 446, 490, 553, 580
CORVUS 2.63 SC 99, 510, 520, 547
CRUSHER 50 WG 93
DAWN 2 AS 585
DEGREE XTRA 4.04 CS 130, 520
DMA 4 3.8 EC 414
DPX-R5W13 61.3 WG 85, 214, 233
DUAL II MAGNUM 7.64 EC 580
DUAL MAGNUM 7.62 EC 183
DURANGO DMA 4 SL 99, 226, 446, 510
ENLITE 47.86 WG 575
ENVIVE 41.3 WG 85, 155, 214, 233, 286, 363, 436, 441, 446
ENVOKE 75 WG 363
EXPRESS 50 SG 351
EXTREME 2.17 SL 258
F9387-1 4 SC 147, 537
F9387 100 SC 520
FIERCE 76 WG 70, 79, 85, 99, 183, 206, 233, 414, 422, 436, 441, 446, 470, 575
FIERCE XLT 55.68 WG 436, 441, 470, 482

FINESSE 75 WG 358
FIRSTRATE 84 WG 575
FLEXSTAR 1.88 EC 169, 258, 301, 320, 422, 446, 490, 504, 553, 559, 603
FLEXSTAR GT 3.5 2.82 SL 183, 226, 446, 458, 553, 609
GANGSTER (CO-PACK) 575
GANGSTER FR 84 WG 575
GANGSTER V 51 WG 575
GLORY 75 WG 241, 271, 565
GLYFOS X-TRA 3 SL 70, 93, 99
GRAMOXONE 2 SL 79, 363, 373, 390, 400, 458, 559
GUARDSMAN MAX 5 SE 547
HALEX GT 4.389 CS 99, 122, 130, 504, 510, 520, 531, 547
HARMONY EXTRA SG 50 SG 286, 344, 351
HARNESS XTRA 5.6L 5.6 EC 122
HARROW 75 WG 70, 99
HEADLINE SC 2.08 SC 344
HORNET WDG 68.5 WG 99
IMITATOR PLUS 3 SL 33, 458
IMPACT 2.8 SC 130, 531
INSTIGATE 45.84 WG 40, 140
INTIMIDATOR 4.81 SL 214, 436, 441, 470
KEYSTONE NXT 5.6 SE 99
KOCIDE 3000 46.1 WG 344
LANNATE LV 2.4 SL 339
LAUDIS 3.5 SC 26, 130, 520
LEADOFF 33.4 WG 93
LEXAR 3.7 SC 547
LEXAR EZ 3.7 SC 70, 99, 122, 390
LI-6464 100 SL 122
LI-6465 100 SL 122
LIBERTY 280 2.34 EC 155, 504, 537, 559, 585
LINEX 4 SC 436, 441
LUMAX 3.948 SE 140
LUMAX EZ 3.764 SE 62, 520
MAKAZE 3 SL 122
MANA 25337 100 WG 271
MARVEL 3 SL 169, 470, 553
MATADOR 4.7 SC 214
MATADOR S 100 SC 436, 441
OPTILL 68 WG 155, 271, 422, 470, 482
OPTILL PRO (CO-PACK) 155, 422, 470, 482
OUTFLANK 51 WG 241, 271, 565
OUTLOOK 6 EC 155, 422, 436, 441, 470, 482
PARALLEL 7.8 EC 241, 565
PARAZONE 3 SL 271
POWERFLEX HL 13.13 WG 351
PREFIX 5.29 EC 155, 183, 191, 206, 214, 226, 258, 271, 363, 422, 436, 441, 446, 458, 470, 482, 504, 553, 580, 585
PREQUEL 45 WG 40, 140
PREVATHON 0.43 SC 117, 339
PRINCEP 4L 4 SC 99, 390
PRINCEP CALIBER 90 90 WG 40
PROSARO 421 SC 3.52 SC 344
PROWL H2O 3.8 CS 422
PUMMEL 100 SL 241, 258, 271, 565
PURSUIT 2 SL 258, 271, 559
PZX74 280 SC 344
QUIK-QUAT 3 SL 390
RAPTOR 1 SL 559
REALM Q 38.75 WG 40, 140
RESOURCE 0.86 EC 553

RHYTHM 1.88 ME 585
ROUNDUP POWERMAX 4.5 SL 1, 26, 62, 70, 130, 147, 169, 206, 226, 241, 258, 271, 301, 320, 373, 400, 414, 422, 446, 458, 470, 482, 490, 504, 520, 531, 537, 547, 553, 559, 565, 580, 617, 625, 630
RUGGED 3.49 EC 20
RUMBLE 1.88 EC 241, 258, 565
SA-0070115 100 SL 199, 430
SA-0070116 100 SL 199, 430
SA-0330101 100 SL 199, 430
SA-0370102 100 SL 199, 430
SA-0370103 100 SL 199, 430
SA-0400101 100 WG 199, 430
SCEPTER 70 WG 214
SELECT MAX 0.97 EC 33
SENCOR 75 WG 183, 214, 436, 441, 504
SEQUENCE 5.25 SL 226, 446, 458
SHARPEN 2.85 SC 79, 271, 414, 458, 617, 630
SIMAZAT 4L 4 SC 390
SIMAZINE 4L 4 SC 140
SOLIDA 25 WG 99
SONIC 70 WG 183, 226, 436, 441, 446, 504, 575
STALWART 8 EC 199, 430
STATEMENT 5.25 EC 191, 436, 441, 585
STATUS 56 WG 130, 147, 520, 537
STERLING BLUE 4 SL 14
SURESTART 4.25 SE 99, 510
TAILWIND 6.5 SC 241, 271, 565
TORMENT 2.5 SL 241, 258, 271, 565
TOUCHDOWN HI-TECH 5 SL 7, 14, 20, 409, 609
TOUCHDOWN TOTAL 4.17 SL 226, 363, 390, 446, 458, 553
TRIFLUREX HFP 4 EC 241, 565
TRIPLEFLEX 4.25 EC 40
TRIZMET II 5.5 SC 390
ULTRA BLAZER 2 EC 2 EC 446, 482
V-10206 85 WG 553, 580
VALOR SX 51 WG 155, 183, 206, 358, 436, 441, 553, 575, 580
VALOR XLT 40.3 WG 155, 169, 206, 226, 271, 373, 400, 422, 446, 458, 470, 482, 504, 575
VERDICT 5.57 EC 183, 400, 422, 436, 441, 446, 458, 482, 547
VISE 5.4 EC 241, 258, 271, 565
WARRANT 3 CS 130, 155, 258, 271, 446, 458, 470, 482, 504, 531, 553, 580
WEEDAR 64 3.8 SL 183
ZEMAX 3.67 SC 504
ZIDUA 85 WG 99, 155, 214, 233, 358, 422, 436, 441, 446, 482, 504

Index of Adjuvants

28% UAN 100 SL 130, 531
AG 02013 100 SL 409, 592, 597, 603
AG 07043 100 SL 7, 14, 20
AG 08034 100 SL 7, 14, 20, 609
AG 11011 100 SL 7, 14, 20, 609
AG 13061 100 SL 7, 14, 20
AG 13062 100 SL 7, 14, 20
AG 13063 100 SL 7, 14, 20
AIRFORCE 100 SL 617
AMS 100 SG 62, 70, 79, 85, 155, 169, 206, 233, 286, 363, 390, 414, 422, 504, 537, 580
AMS 100 SL 1, 214, 226, 258, 271, 301, 320
BEANOIL 100 SL 390
BETWEEN 100 SL 26
CLASS ACT NG 100 SL 7, 14, 20, 409, 597, 603, 609
COC (PRIME OIL) 100 SL 33, 147, 226, 373, 400, 446, 458, 553, 559, 580, 609
DESTINY HC 100 SL 409, 609
DOWNDRAFT 100 SL 617
DRX 101 100 SL 33, 458, 609
DRX 102 100 SL 33, 458, 609
HSOC (DESTINY HC) 100 SL 547
INTERLOCK 100 SL 609
MSO (MSO ULTRA) 100 SL 130, 226, 414, 422, 446, 458, 482, 531, 547, 609
NIS 100 SL 1
NIS (ACTIVATOR 90) 100 SL 70, 93, 99, 130, 147, 241, 258, 271, 286, 344, 351, 363, 390, 458, 470, 504, 520, 531, 547, 553, 565
N-PAK AMS 100 SL 7, 14, 20, 99, 130, 140, 147, 214, 226, 258, 271, 301, 320, 373, 400, 446, 458, 470, 482, 490, 510, 520, 531, 547, 553, 559, 585, 609
PREFERENCE 100 SL 510
SUCCEED 100 SL 26, 617, 625, 630
SUPERB HC 100 SL 409, 609
TRANSLATE 100 SL 26, 617
UAD-1305 100 SL 26
UAD-1306 100 SL 26, 617
UAD-1307 100 SL 26
UAD-1308 100 SL 26
UAD-1309 100 SL 1
UAD-1313 100 SL 1
UAD-1314 100 SL 26
UAD-1316 100 SL 26, 617
UAD-1317 100 SL 26, 617
UAD-1318 100 SL 1
UAD-1326 100 SL 1
UAD-1331 100 SL 617
UAD-1344 100 SL 617
UAD-1348 100 SL 26, 617
UAD-1349 100 SL 1
UAD-1350 100 SL 1
UAD-1352 100 SL 1
UAD-1353 100 SL 26
UAD-1355 100 SL 1
UAD-1362 100 SL 625, 630
UAD-1365 100 SL 625, 630
UAD-1381 100 SL 625, 630
UAD-1382 100 SL 625, 630
UAD-1384 100 SL 625, 630
UAD-1386 100 SL 625, 630

UAD-1387 100 SL 625, 630
WE1095-1 100 SL 62
WE1177-1 100 SL 62
WE1258-1 100 SL 62, 79
WE1279-2 100 SL 62, 79
WE1442-1 100 SL 62, 79
WEATHER GARD COMPLETE 100 SL 122
WETCIT 100 SL 617
WO-03 100 SL 625, 630
WO-06-02 100 SL 625, 630
WO-09 100 SL 625, 630

Index of Other Experimental Details

10 GPA - EXTRA COARSE 592, 597, 603
10 GPA - FINE 592, 597, 603
10 GPA - MEDIUM 592, 597, 603
10 GPA - ULTRA COARSE 592, 597, 603
10 GPA - VERY COARSE 592, 597, 603
AI 11004 at 50 PSI - 13.3 MPH 592, 597, 603
AIXR 11004 at 50 PSI - 13.3 MPH 592, 597, 603
BURNDOWN ONLY 40
DEIONIZED WATER 1
HARD WATER (1000 PPM) 1
NO FUNGICIDE 117, 339
NO INSECTICIDE 117, 339
NONTREATED 1, 7, 14, 20, 26, 33, 62, 70, 79, 85, 93, 99, 130, 140, 147, 155, 169, 183, 191, 199, 206, 214, 226, 233, 241, 258, 271, 286, 301, 320, 344, 351, 358, 363, 390, 400, 409, 414, 430, 436, 441, 446, 458, 470, 482, 490, 504, 510, 520, 531, 537, 547, 559, 565, 575, 585, 592, 597, 603, 609, 625, 630
NO POST HERBICIDE 553, 580
NO PRE HERBICIDE 122, 241, 271, 565
TTI 11004 at 50 PSI - 13.3 MPH 592, 597, 603
XR 11003 at 43.5 PSI - 9 MPH 592, 597, 603
XR 11004 at 40 PSI - 12 MPH 592, 597, 603

Index of Crops

AG3832 1, 7, 79, 85, 93, 169, 191, 199, 206, 214, 226, 233, 241, 258, 271, 286, 339, 373, 400, 414, 422, 430, 436, 441, 446, 458, 470, 482, 553, 565, 575, 580, 609
AG3833 286
AG4005 301, 320, 490
AG4232 363
Dent corn 26, 33, 40, 62, 70, 99, 117, 122, 130, 140, 147, 390, 510, 520, 531, 537, 547
DKC 63-33 26, 33, 62, 70, 99, 117, 122, 130, 140, 147, 390, 510, 520, 531, 537, 547
HS 42L02 155, 585
Non-crop 14, 20, 183, 409, 504, 559, 592, 617, 625, 630
P25R40 358
P25R62 286, 344, 351
P94Y70 597, 603
P1221 AMX 40
Soybean 1, 7, 79, 85, 93, 155, 169, 191, 199, 206, 214, 226, 233, 241, 258, 271, 286, 301, 320, 339, 363, 373, 400, 414, 422, 430, 436, 441, 446, 458, 470, 482, 490, 553, 565, 575, 580, 585, 597, 603, 609
Winter wheat 286, 344, 351, 358

Index of Trial ID

13-1-E60 155
13-1-ME50 183
13-1-MME30 191
13-1-MMW40 169
13-1-MW40 199
13-1-W70 206
13-2A-E165-S 241
13-2A-M110 258
13-2A-W150 271
13-2C-ME90 99
13-2C-MME60 130
13-2C-MMW70 122
13-2C-MW60 140
13-5A 79
13-5B-N60 117
13-5C 70
13-10A-E100 7
13-10B 1
13-10C-E100 14
13-10C-M100 20
13-11A-E120 62
13-11B-E70 40
13-11C-M40 344
13-11C-M40-DC-SOY 339
13-11C-W50 351
13-21M-EE50 147
13-21M-M120 26
13-21M-MME30 33
13-23E-N140 286
13-24B 214
13-26C-N70 93
13-26C-S100 85
13-51E-M80 226
13-51E-S70 233
13-ARC-9 358
13-COL-CobraTM 580
13-COL-FierceTM 575
13-COL-MANAprograms 565
13-COL-Residual 441
13-COL-Screen 559
13-COL-SOYprog 446
13-COL-StatementPOST 585
13-DSO-AnthemCN 520
13-DSO-Authority 470
13-DSO-Bayer-BL9 504
13-DSO-Cobra6402 553
13-DSO-F9387tankmix 537
13-DSO-H001 510
13-DSO-Impact 531
13-DSO-ISApostTM 490
13-DSO-PPOadj 609
13-DSO-Residual 436
13-DSO-Sipcam 430
13-FagerS-AGH11021 409
13-FagerS-BASF-BD 422
13-FagerS-BASF-corn 547
13-FagerS-BASF-programs 482
13-FagerS-GenFallSoy 363
13-FagerS-ISA-Fall 373
13-FagerS-SharpenADJ 617
13-FagerS-SynPrograms 458
13-FagerS-Valent-BD 414
13-FagerS-WinATVdica 592
13-KRC-1-WinATVacif 597
13-KRC-1-WinATVfome 603
13-NF-S-M110 320
13-NF-S-N120 301
13-YRC-ClarityADJ 625
13-YRC-FMC-ERICA 400
13-YRC-FP-GenFallCorn 390
13-YRC-SharpenADJ 630

Index of Company Submitted Protocols

Amvac 130, 531
BASF 422, 482, 547
Bayer 155, 504
Cheminova 70, 93, 99, 191, 436, 441, 585
Dow 99, 226, 510
Drexel 33, 390, 458, 609
DuPont 40, 85, 117, 140, 214, 233, 286, 339, 344, 351, 358, 363, 390
FMC 147, 169, 400, 470, 520, 537
ISA 301, 320, 373, 490
Loveland 122, 436, 441
MANA 241, 258, 271, 565
NDSU 458
Sipcam 199, 430
SIU 301, 320, 436, 441, 446, 559
Syngenta 99, 183, 226, 363, 390, 446, 458
United Suppliers 1, 26, 617, 625, 630
Valent 70, 206, 414, 436, 441, 553, 575, 580
Wilbur-Ellis 62, 79
Winfield Solutions 7, 14, 20, 409, 592, 597, 603, 609