

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

Crop Description	
Crop 1: GLXMA Glycine max Soybean Variety: AG3832 Description: RR2Y Planting Rate, Unit: 170000 S/A Planting Date: 5-12-13 Depth, Unit: 1.5 IN Planting Method: SEEDED 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 Study Design: RAOBL Randomized Complete Block (RCB) Replications: 3 Untreated Arrangement: INCLUDED single control randomized in each block							
<table border="1" style="width: 100%;"> <tr> <th>No.</th> <th>Previous Crop</th> <th>Year</th> </tr> <tr> <td>1.</td> <td>NON-CROP</td> <td>2012</td> </tr> </table>		No.	Previous Crop	Year	1.	NON-CROP	2012
No.	Previous Crop	Year					
1.	NON-CROP	2012					

Maintenance					
<table border="1" style="width: 100%;"> <tr> <th>No.</th> <th>Maintenance Product Name</th> </tr> <tr> <td>1.</td> <td>N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A</td> </tr> </table>		No.	Maintenance Product Name	1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A
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										
<table border="1" style="width: 100%;"> <tr> <th>Element</th> <th>Quantity</th> <th>Unit</th> </tr> <tr> <td>P1</td> <td>172</td> <td>lb/A</td> </tr> <tr> <td>K</td> <td>446</td> <td>lb/A</td> </tr> </table>		Element	Quantity	Unit	P1	172	lb/A	K	446	lb/A
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
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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

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Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
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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						
1	GRAMOXONE 2 SL BOUNDARY COC (PRIME OIL) N-PAK AMS FLEXSTAR GT 3.5 MSO (MSO ULTRA) N-PAK AMS	2 SL 6.5 EC 100 SL 100 SL 2.82 SL 100 SL 100 SL		0.75 lb ai/a 1.42 lb ai/a 1 % v/v 5 % v/v 1.41 lb ai/a 1 % v/v 5 % v/v		3 pt/a 1.75 pt/a 1 % v/v 5 % v/v 4 pt/a 1 % v/v 5 % v/v		4-6"MT A 4-6"MT A 4-6"MT A 4-6"MT A POST B POST B POST B		18.2 a	30 a	0 a	0 a	16 a	0 a
2	GRAMOXONE 2 SL PREFIX COC (PRIME OIL) N-PAK AMS SEQUENCE N-PAK AMS	2 SL 5.29 EC 100 SL 100 SL 5.25 SL 100 SL		0.75 lb ai/a 1.32 lb ai/a 1 % v/v 5 % v/v 1.97 lb ai/a 5 % v/v		3 pt/a 2 pt/a 1 % v/v 5 % v/v 3 pt/a 5 % v/v		4-6"MT A 4-6"MT A 4-6"MT A 4-6"MT A POST B POST B		18.0 a	26 a	0 a	0 a	4 b	0 a
3	GRAMOXONE 2 SL BOUNDARY COC (PRIME OIL) N-PAK AMS PREFIX TOUCHDOWN TOTAL NIS (ACTIVATOR 90) N-PAK AMS	2 SL 6.5 EC 100 SL 100 SL 5.29 EC 4.17 SL 100 SL 100 SL		0.75 lb ai/a 1.42 lb ai/a 1 % v/v 5 % v/v 1.32 lb ai/a 0.78 lb ae/a 0.25 % v/v 5 % v/v		3 pt/a 1.75 pt/a 1 % v/v 5 % v/v 2 pt/a 24 fl oz/a 0.25 % v/v 5 % v/v		4-6"MT A 4-6"MT A 4-6"MT A 4-6"MT A POST B POST B POST B POST B		17.0 a	31 a	0 a	0 a	18 a	0 a
4	ROUNDUP POWERMAX VERDICT MSO (MSO ULTRA) N-PAK AMS WARRANT ROUNDUP POWERMAX N-PAK AMS	4.5 SL 5.57 EC 100 SL 100 SL 3 CS 4.5 SL 100 SL		0.77 lb ae/a 0.218 lb ai/a 1 % v/v 5 % v/v 0.94 lb ai/a 0.77 lb ae/a 5 % v/v		22 fl oz/a 5 fl oz/a 1 % v/v 5 % v/v 1.25 qt/a 22 fl oz/a 5 % v/v		4-6"MT A 4-6"MT A 4-6"MT A 4-6"MT A POST B POST B POST B		19.0 a	26 a	0 a	0 a	3 bc	0 a
5	ROUNDUP POWERMAX VALOR XLT N-PAK AMS WARRANT ROUNDUP POWERMAX N-PAK AMS	4.5 SL 40.3 WG 100 SL 3 CS 4.5 SL 100 SL		0.77 lb ae/a 0.101 lb ai/a 5 % v/v 0.94 lb ai/a 0.77 lb ae/a 5 % v/v		22 fl oz/a 4 oz/a 5 % v/v 1.25 qt/a 22 fl oz/a 5 % v/v		4-6"MT A 4-6"MT A 4-6"MT A POST B POST B POST B		19.6 a	27 a	0 a	0 a	1 bc	0 a
6	SHARPEN IMITATOR PLUS DRX 101 ROUNDUP POWERMAX N-PAK AMS	2.85 SC 4 SL 100 SL 4.5 SL 100 SL		0.0174 lb ai/a 1 lb ae/a 1 pt/a 0.77 lb ae/a 5 % v/v		0.78 fl oz/a 32 fl oz/a 1 pt/a 22 fl oz/a 5 % v/v		4-6"MT A 4-6"MT A 4-6"MT A POST B POST B		18.7 a	22 a	0 a	0 a	1 bc	0 a
7	SHARPEN IMITATOR PLUS DRX 102 ROUNDUP POWERMAX N-PAK AMS	2.85 SC 4 SL 100 SL 4.5 SL 100 SL		0.0174 lb ai/a 1 lb ae/a 0.5 pt/a 0.77 lb ae/a 5 % v/v		0.78 fl oz/a 32 fl oz/a 0.5 pt/a 22 fl oz/a 5 % v/v		4-6"MT A 4-6"MT A 4-6"MT A POST B POST B		17.4 a	28 a	0 a	0 a	0 c	0 a
8	SHARPEN IMITATOR PLUS MSO (MSO ULTRA) ROUNDUP POWERMAX N-PAK AMS	2.85 SC 4 SL 100 SL 4.5 SL 100 SL		0.0174 lb ai/a 1 lb ae/a 1 % v/v 0.77 lb ae/a 5 % v/v		0.78 fl oz/a 32 fl oz/a 1 % v/v 22 fl oz/a 5 % v/v		4-6"MT A 4-6"MT A 4-6"MT A POST B POST B		18.5 a	25 a	0 a	0 a	2 bc	0 a
9	SHARPEN IMITATOR PLUS MSO (MSO ULTRA) ROUNDUP POWERMAX N-PAK AMS	2.85 SC 4 SL 100 SL 4.5 SL 100 SL		0.0223 lb ai/a 1 lb ae/a 1 % v/v 0.77 lb ae/a 5 % v/v		1 fl oz/a 32 fl oz/a 1 % v/v 22 fl oz/a 5 % v/v		4-6"MT A 4-6"MT A 4-6"MT A POST B POST B		18.5 a	24 a	0 a	0 a	0 c	0 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.

Pest Code										GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Code										10-18-13	10-18-13	5-26-13	5-31-13	6-9-13	6-21-13
Rating Date										Moisture	Yield	Injury	Injury	Injury	Injury
Rating Type										Percent	bu/A	Percent	Percent	Percent	Percent
Rating Unit															
Rating Timing															
Trt-Eval Interval												14 DAP	32 DA-E 0 DA-B	28 DAP	21 DA-B
Trt Treatment	Form	Form	Rate	Other	Other	Growth	Appl								
No. Name	Conc	Type	Rate	Unit	Rate	Rate	Unit	Stage	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

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Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval							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			
Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	GRAMOXONE 2 SL	2 SL		0.75 lb ai/a	ai/a	3 pt/a	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	ai/a	1.75 pt/a	pt/a	4-6"MT A						
	COC (PRIME OIL)	100 SL		1 % v/v	v/v	1 % v/v	v/v	4-6"MT A						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	4-6"MT A						
	FLEXSTAR GT 3.5	2.82 SL		1.41 lb ai/a	ai/a	4 pt/a	pt/a	POST B						
	MSO (MSO ULTRA)	100 SL		1 % v/v	v/v	1 % v/v	v/v	POST B						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	POST B						
2	GRAMOXONE 2 SL	2 SL		0.75 lb ai/a	ai/a	3 pt/a	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	ai/a	2 pt/a	pt/a	4-6"MT A						
	COC (PRIME OIL)	100 SL		1 % v/v	v/v	1 % v/v	v/v	4-6"MT A						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	4-6"MT A						
	SEQUENCE	5.25 SL		1.97 lb ai/a	ai/a	3 pt/a	pt/a	POST B						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	POST B						
3	GRAMOXONE 2 SL	2 SL		0.75 lb ai/a	ai/a	3 pt/a	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	ai/a	1.75 pt/a	pt/a	4-6"MT A						
	COC (PRIME OIL)	100 SL		1 % v/v	v/v	1 % v/v	v/v	4-6"MT A						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	4-6"MT A						
	PREFIX	5.29 EC		1.32 lb ai/a	ai/a	2 pt/a	pt/a	POST B						
	TOUCHDOWN TOTAL	4.17 SL		0.78 lb ae/a	ae/a	24 fl oz/a	oz/a	POST B						
	NIS (ACTIVATOR 90)	100 SL		0.25 % v/v	v/v	0.25 % v/v	v/v	POST B						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	POST B						
4	ROUNDUP POWERMAX	4.5 SL		0.77 lb ae/a	ae/a	22 fl oz/a	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	ai/a	5 fl oz/a	oz/a	4-6"MT A						
	MSO (MSO ULTRA)	100 SL		1 % v/v	v/v	1 % v/v	v/v	4-6"MT A						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	4-6"MT A						
	WARRANT	3 CS		0.94 lb ai/a	ai/a	1.25 qt/a	qt/a	POST B						
	ROUNDUP POWERMAX	4.5 SL		0.77 lb ae/a	ae/a	22 fl oz/a	oz/a	POST B						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	POST B						
5	ROUNDUP POWERMAX	4.5 SL		0.77 lb ae/a	ae/a	22 fl oz/a	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	ai/a	4 oz/a	oz/a	4-6"MT A						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	4-6"MT A						
	WARRANT	3 CS		0.94 lb ai/a	ai/a	1.25 qt/a	qt/a	POST B						
	ROUNDUP POWERMAX	4.5 SL		0.77 lb ae/a	ae/a	22 fl oz/a	oz/a	POST B						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	POST B						
6	SHARPEN	2.85 SC		0.0174 lb ai/a	ai/a	0.78 fl oz/a	oz/a	4-6"MT A		62 c	73 bc	97 a	90 a	75 ab
	IMITATOR PLUS	4 SL		1 lb ae/a	ae/a	32 fl oz/a	oz/a	4-6"MT A						
	DRX 101	100 SL		1 pt/a	pt/a	1 pt/a	pt/a	4-6"MT A						
	ROUNDUP POWERMAX	4.5 SL		0.77 lb ae/a	ae/a	22 fl oz/a	oz/a	POST B						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	POST B						
7	SHARPEN	2.85 SC		0.0174 lb ai/a	ai/a	0.78 fl oz/a	oz/a	4-6"MT A		62 c	74 bc	96 a	91 a	83 a
	IMITATOR PLUS	4 SL		1 lb ae/a	ae/a	32 fl oz/a	oz/a	4-6"MT A						
	DRX 102	100 SL		0.5 pt/a	pt/a	0.5 pt/a	pt/a	4-6"MT A						
	ROUNDUP POWERMAX	4.5 SL		0.77 lb ae/a	ae/a	22 fl oz/a	oz/a	POST B						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	POST B						
8	SHARPEN	2.85 SC		0.0174 lb ai/a	ai/a	0.78 fl oz/a	oz/a	4-6"MT A		65 c	75 bc	97 a	94 a	87 a
	IMITATOR PLUS	4 SL		1 lb ae/a	ae/a	32 fl oz/a	oz/a	4-6"MT A						
	MSO (MSO ULTRA)	100 SL		1 % v/v	v/v	1 % v/v	v/v	4-6"MT A						
	ROUNDUP POWERMAX	4.5 SL		0.77 lb ae/a	ae/a	22 fl oz/a	oz/a	POST B						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	POST B						
9	SHARPEN	2.85 SC		0.0223 lb ai/a	ai/a	1 fl oz/a	oz/a	4-6"MT A		64 c	71 c	97 a	91 a	80 a
	IMITATOR PLUS	4 SL		1 lb ae/a	ae/a	32 fl oz/a	oz/a	4-6"MT A						
	MSO (MSO ULTRA)	100 SL		1 % v/v	v/v	1 % v/v	v/v	4-6"MT A						
	ROUNDUP POWERMAX	4.5 SL		0.77 lb ae/a	ae/a	22 fl oz/a	oz/a	POST B						
	N-PAK AMS	100 SL		5 % v/v	v/v	5 % v/v	v/v	POST B						

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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 Treatment	Form	Form	Rate	Other	Other	Growth	Appl							
No. Name	Conc	Type	Rate	Unit	Rate	Rate	Unit	Stage	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

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Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

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Investigator: Bryan Young

Pest Code	CAPBP	CAPBP	CAPBP	VIORA	VIORA	VIORA
Crop Code	5-2-13	5-6-13	5-13-13	5-2-13	5-6-13	5-13-13
Rating Date	Control	Control	Control	Control	Control	Control
Rating Type	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit						
Rating Timing						
Trt-Eval Interval	3 DA-A	7 DA-A	14 DA-A	3 DA-A	7 DA-A	14 DA-A
Trt Treatment No. Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate Unit	Growth Stage Appl Code
1 GRAMOXONE 2 SL BOUNDARY	2 SL		0.75 lb ai/a	3 pt/a		4-6"MT A
COC (PRIME OIL)	6.5 EC		1.42 lb ai/a	1.75 pt/a		4-6"MT A
N-PAK AMS	100 SL		1 % v/v	1 % v/v		4-6"MT A
FLEXSTAR GT 3.5	100 SL		5 % v/v	5 % v/v		4-6"MT A
MSO (MSO ULTRA)	2.82 SL		1.41 lb ai/a	4 pt/a		POST B
N-PAK AMS	100 SL		1 % v/v	1 % v/v		POST B
	100 SL		5 % v/v	5 % v/v		POST B
2 GRAMOXONE 2 SL PREFIX	2 SL		0.75 lb ai/a	3 pt/a		4-6"MT A
COC (PRIME OIL)	5.29 EC		1.32 lb ai/a	2 pt/a		4-6"MT A
N-PAK AMS	100 SL		1 % v/v	1 % v/v		4-6"MT A
SEQUENCE	100 SL		5 % v/v	5 % v/v		4-6"MT A
N-PAK AMS	5.25 SL		1.97 lb ai/a	3 pt/a		POST B
	100 SL		5 % v/v	5 % v/v		POST B
3 GRAMOXONE 2 SL BOUNDARY	2 SL		0.75 lb ai/a	3 pt/a		4-6"MT A
COC (PRIME OIL)	6.5 EC		1.42 lb ai/a	1.75 pt/a		4-6"MT A
N-PAK AMS	100 SL		1 % v/v	1 % v/v		4-6"MT A
PREFIX	100 SL		5 % v/v	5 % v/v		4-6"MT A
TOUCHDOWN TOTAL	5.29 EC		1.32 lb ai/a	2 pt/a		POST B
NIS (ACTIVATOR 90)	4.17 SL		0.78 lb ae/a	24 fl oz/a		POST B
N-PAK AMS	100 SL		0.25 % v/v	0.25 % v/v		POST B
	100 SL		5 % v/v	5 % v/v		POST B
4 ROUNDUP POWERMAX VERDICT	4.5 SL		0.77 lb ae/a	22 fl oz/a		4-6"MT A
MSO (MSO ULTRA)	5.57 EC		0.218 lb ai/a	5 fl oz/a		4-6"MT A
N-PAK AMS	100 SL		1 % v/v	1 % v/v		4-6"MT A
WARRANT	100 SL		5 % v/v	5 % v/v		4-6"MT A
ROUNDUP POWERMAX	3 CS		0.94 lb ai/a	1.25 qt/a		POST B
N-PAK AMS	4.5 SL		0.77 lb ae/a	22 fl oz/a		POST B
	100 SL		5 % v/v	5 % v/v		POST B
5 ROUNDUP POWERMAX VALOR XLT	4.5 SL		0.77 lb ae/a	22 fl oz/a		4-6"MT A
N-PAK AMS	40.3 WG		0.101 lb ai/a	4 oz/a		4-6"MT A
WARRANT	100 SL		5 % v/v	5 % v/v		4-6"MT A
ROUNDUP POWERMAX	3 CS		0.94 lb ai/a	1.25 qt/a		POST B
N-PAK AMS	4.5 SL		0.77 lb ae/a	22 fl oz/a		POST B
	100 SL		5 % v/v	5 % v/v		POST B
6 SHARPEN IMITATOR PLUS	2.85 SC		0.0174 lb ai/a	0.78 fl oz/a		4-6"MT A
DRX 101	4 SL		1 lb ae/a	32 fl oz/a		4-6"MT A
ROUNDUP POWERMAX	100 SL		1 pt/a	1 pt/a		4-6"MT A
N-PAK AMS	4.5 SL		0.77 lb ae/a	22 fl oz/a		POST B
	100 SL		5 % v/v	5 % v/v		POST B
7 SHARPEN IMITATOR PLUS	2.85 SC		0.0174 lb ai/a	0.78 fl oz/a		4-6"MT A
DRX 102	4 SL		1 lb ae/a	32 fl oz/a		4-6"MT A
ROUNDUP POWERMAX	100 SL		0.5 pt/a	0.5 pt/a		4-6"MT A
N-PAK AMS	4.5 SL		0.77 lb ae/a	22 fl oz/a		POST B
	100 SL		5 % v/v	5 % v/v		POST B
8 SHARPEN IMITATOR PLUS	2.85 SC		0.0174 lb ai/a	0.78 fl oz/a		4-6"MT A
MSO (MSO ULTRA)	4 SL		1 lb ae/a	32 fl oz/a		4-6"MT A
ROUNDUP POWERMAX	100 SL		1 % v/v	1 % v/v		4-6"MT A
N-PAK AMS	4.5 SL		0.77 lb ae/a	22 fl oz/a		POST B
	100 SL		5 % v/v	5 % v/v		POST B
9 SHARPEN IMITATOR PLUS	2.85 SC		0.0223 lb ai/a	1 fl oz/a		4-6"MT A
MSO (MSO ULTRA)	4 SL		1 lb ae/a	32 fl oz/a		4-6"MT A
ROUNDUP POWERMAX	100 SL		1 % v/v	1 % v/v		4-6"MT A
N-PAK AMS	4.5 SL		0.77 lb ae/a	22 fl oz/a		POST B
	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									5-2-13	5-6-13	5-13-13	5-2-13	5-6-13	5-13-13
Rating Date									Control	Control	Control	Control	Control	Control
Rating Type									Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit														
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 Rate	Other Rate	Other Rate	Growth Unit	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

Southern Illinois University

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										AMATA-HR 5-31-13 Control Percent 32 DA-E 0 DA-B	AMATA-HR 6-21-13 Control Percent 21 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		
1	GRAMOXONE 2 SL BOUNDARY COC (PRIME OIL) N-PAK AMS FLEXSTAR GT 3.5 MSO (MSO ULTRA) N-PAK AMS	2 SL 6.5 EC 100 SL 100 SL 2.82 SL 100 SL 100 SL		0.75 lb ai/a 1.42 lb ai/a 1 % v/v 5 % v/v 1.41 lb ai/a 1 % v/v 5 % v/v	ai/a ai/a v/v v/v ai/a v/v v/v	3 pt/a 1.75 pt/a 1 % v/v 5 % v/v 4 pt/a 1 % v/v 5 % v/v	pt/a pt/a v/v v/v pt/a v/v v/v	4-6"MT A 4-6"MT A 4-6"MT A 4-6"MT A POST B POST B POST B		13 bc	89 a
2	GRAMOXONE 2 SL PREFIX COC (PRIME OIL) N-PAK AMS SEQUENCE N-PAK AMS	2 SL 5.29 EC 100 SL 100 SL 5.25 SL 100 SL		0.75 lb ai/a 1.32 lb ai/a 1 % v/v 5 % v/v 1.97 lb ai/a 5 % v/v	ai/a ai/a v/v v/v ai/a v/v	3 pt/a 2 pt/a 1 % v/v 5 % v/v 3 pt/a 5 % v/v	pt/a pt/a v/v v/v pt/a v/v	4-6"MT A 4-6"MT A 4-6"MT A 4-6"MT A POST B POST B		63 a	63 a
3	GRAMOXONE 2 SL BOUNDARY COC (PRIME OIL) N-PAK AMS PREFIX TOUCHDOWN TOTAL NIS (ACTIVATOR 90) N-PAK AMS	2 SL 6.5 EC 100 SL 100 SL 5.29 EC 4.17 SL 100 SL 100 SL		0.75 lb ai/a 1.42 lb ai/a 1 % v/v 5 % v/v 1.32 lb ai/a 0.78 lb ae/a 0.25 % v/v 5 % v/v	ai/a ai/a v/v v/v ai/a ae/a v/v v/v	3 pt/a 1.75 pt/a 1 % v/v 5 % v/v 2 pt/a 24 fl oz/a 0.25 % v/v 5 % v/v	pt/a pt/a v/v v/v pt/a oz/a v/v v/v	4-6"MT A 4-6"MT A 4-6"MT A 4-6"MT A POST B POST B POST B POST B		17 b	58 ab
4	ROUNDUP POWERMAX VERDICT MSO (MSO ULTRA) N-PAK AMS WARRANT ROUNDUP POWERMAX N-PAK AMS	4.5 SL 5.57 EC 100 SL 100 SL 3 CS 4.5 SL 100 SL		0.77 lb ae/a 0.218 lb ai/a 1 % v/v 5 % v/v 0.94 lb ai/a 0.77 lb ae/a 5 % v/v	ae/a ai/a v/v v/v ai/a ae/a v/v	22 fl oz/a 5 fl oz/a 1 % v/v 5 % v/v 1.25 qt/a 22 fl oz/a 5 % v/v	oz/a oz/a v/v v/v qt/a oz/a v/v	4-6"MT A 4-6"MT A 4-6"MT A 4-6"MT A POST B POST B POST B		13 bc	13 c
5	ROUNDUP POWERMAX VALOR XLT N-PAK AMS WARRANT ROUNDUP POWERMAX N-PAK AMS	4.5 SL 40.3 WG 100 SL 3 CS 4.5 SL 100 SL		0.77 lb ae/a 0.101 lb ai/a 5 % v/v 0.94 lb ai/a 0.77 lb ae/a 5 % v/v	ae/a ai/a v/v ai/a ae/a v/v	22 fl oz/a 4 oz/a 5 % v/v 1.25 qt/a 22 fl oz/a 5 % v/v	oz/a oz/a v/v qt/a oz/a v/v	4-6"MT A 4-6"MT A 4-6"MT A POST B POST B POST B		59 a	30 bc
6	SHARPEN IMITATOR PLUS DRX 101 ROUNDUP POWERMAX N-PAK AMS	2.85 SC 4 SL 100 SL 4.5 SL 100 SL		0.0174 lb ai/a 1 lb ae/a 1 pt/a 0.77 lb ae/a 5 % v/v	ai/a ae/a pt/a ae/a v/v	0.78 fl oz/a 32 fl oz/a 1 pt/a 22 fl oz/a 5 % v/v	fl oz/a fl oz/a pt/a fl oz/a v/v	4-6"MT A 4-6"MT A 4-6"MT A POST B POST B		10 bc	17 c
7	SHARPEN IMITATOR PLUS DRX 102 ROUNDUP POWERMAX N-PAK AMS	2.85 SC 4 SL 100 SL 4.5 SL 100 SL		0.0174 lb ai/a 1 lb ae/a 0.5 pt/a 0.77 lb ae/a 5 % v/v	ai/a ae/a pt/a ae/a v/v	0.78 fl oz/a 32 fl oz/a 0.5 pt/a 22 fl oz/a 5 % v/v	fl oz/a fl oz/a pt/a fl oz/a v/v	4-6"MT A 4-6"MT A 4-6"MT A POST B POST B		13 bc	13 c
8	SHARPEN IMITATOR PLUS MSO (MSO ULTRA) ROUNDUP POWERMAX N-PAK AMS	2.85 SC 4 SL 100 SL 4.5 SL 100 SL		0.0174 lb ai/a 1 lb ae/a 1 % v/v 0.77 lb ae/a 5 % v/v	ai/a ae/a v/v ae/a v/v	0.78 fl oz/a 32 fl oz/a 1 % v/v 22 fl oz/a 5 % v/v	fl oz/a fl oz/a v/v fl oz/a v/v	4-6"MT A 4-6"MT A 4-6"MT A POST B POST B		13 bc	10 c
9	SHARPEN IMITATOR PLUS MSO (MSO ULTRA) ROUNDUP POWERMAX N-PAK AMS	2.85 SC 4 SL 100 SL 4.5 SL 100 SL		0.0223 lb ai/a 1 lb ae/a 1 % v/v 0.77 lb ae/a 5 % v/v	ai/a ae/a v/v ae/a v/v	1 fl oz/a 32 fl oz/a 1 % v/v 22 fl oz/a 5 % v/v	fl oz/a fl oz/a v/v fl oz/a v/v	4-6"MT A 4-6"MT A 4-6"MT A POST B POST B		10 bc	17 c

Glyphosate-Resistant Weed Programs in Soybean - Syngenta.

Trial ID: 13-FagerS-SynPrograms Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code										AMATA-HR	AMATA-HR
Crop Code										5-31-13	6-21-13
Rating Date										Control	Control
Rating Type										Percent	Percent
Rating Unit										32 DA-E	
Rating Timing										0 DA-B	21 DA-B
Trt-Eval Interval											
Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl			
No.	Name	Conc	Type	Rate	Unit	Rate	Rate	Unit	Stage	Code	
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

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.