

Southern Illinois University

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:
Evaluate herbicide programs for Palmer amaranth control in soybean.

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		Contacts
---	--	-----------------

Crop 1: GLXMA Glycine max Soybean Variety: AG3832 BBCH Scale: BSOY Description: RR2Y		Crop Description
Planting Rate, Unit: 145000 S/A Planting Date: 6-5-13 Depth, Unit: 1.25 IN Planting Method: SEEDED Row Spacing, Unit: 30 IN		

Pest 1 Type: W Code: AMAPA Amaranthus palmeri S.Wats. Common Name: amaranth, Palmer Description: glyphosate-resistant Palmer amaranth		Pest Description
--	--	-------------------------

Treated Plot Width: 6.67 FT Total Plot Width: 10 FT Treated Plot Length: 30 FT Total Plot Length: 30 FT		Site and Design Site Type: FIELD Experimental Unit: 1 PLOT Tillage Type: REDTIL reduced-till Study Design: RACOB� Randomized Complete Block (RCB)
Replications: 3 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

% 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		Soil Description								
Additional Measured Elements										
<table border="1"> <thead> <tr> <th>Element</th> <th>Quantity</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>P1</td> <td>88</td> <td>lb/A</td> </tr> <tr> <td>K</td> <td>338</td> <td>lb/A</td> </tr> </tbody> </table>	Element		Quantity	Unit	P1	88	lb/A	K	338	lb/A
Element	Quantity	Unit								
P1	88	lb/A								
K	338	lb/A								

Overall Moisture Conditions: ABONOR Closest Weather Station: On-site Watch Dog Station		Moisture and Weather Conditions 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

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval										GLXMA 10-10-13 Yield bu/A Estimated
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	
1	NONTREATED									33 c
2	BOUNDARY FLEXSTAR GT 3.5 MSO (MSO ULTRA) N-PAK AMS	6.5 2.82 100 100	EC SL SL SL	1.42 1.41 1 % 5 %	lb ai/a lb ae/a v/v v/v	1.75 4 1 % 5 %	pt/a pt/a v/v v/v	PRE POST1 POST1 POST1	A C C C	55 ab
3	PREFIX SEQUENCE N-PAK AMS	5.29 5.25 100	EC SL SL	1.32 1.97 5 %	lb ai/a lb ae/a v/v	2 3 5 %	pt/a pt/a v/v	PRE POST1 POST1	A C C	59 ab
4	BOUNDARY PREFIX TOUCHDOWN TOTAL N-PAK AMS	6.5 5.29 4.17 100	EC EC SL SL	1.42 1.32 0.78 5 %	lb ai/a lb ai/a lb ae/a v/v	1.75 2 24 5 %	pt/a pt/a fl oz/a v/v	PRE POST1 POST1 POST1	A C C C	71 ab
5	VERDICT WARRANT ROUNDUP POWERMAX N-PAK AMS	5.57 3 4.5 100	EC CS SL SL	0.218 0.94 0.77 5 %	lb ai/a lb ai/a lb ae/a v/v	5 1.25 22 5 %	fl oz/a qt/a fl oz/a v/v	PRE POST1 POST1 POST1	A C C C	52 b
6	VALOR XLT WARRANT ROUNDUP POWERMAX N-PAK AMS	40.3 3 4.5 100	WG CS SL SL	0.101 0.94 0.77 5 %	lb ai/a lb ai/a lb ae/a v/v	4 1.25 22 5 %	oz/a qt/a fl oz/a v/v	PRE POST1 POST1 POST1	A C C C	65 ab
7	BOUNDARY SEQUENCE FLEXSTAR GT 3.5 MSO (MSO ULTRA) N-PAK AMS	6.5 5.25 2.82 100 100	EC SL SL SL SL	1.22 1.64 1.41 1 % 5 %	lb ai/a lb ae/a lb ae/a v/v v/v	1.5 2.5 4 1 % 5 %	pt/a pt/a pt/a v/v v/v	PRE V2-V3 POST2 POST2 POST2	A B D D D	65 ab
8	VERDICT ZIDUA ROUNDUP POWERMAX ULTRA BLAZER 2 EC N-PAK AMS	5.57 85 4.5 2 100	EC WG SL EC SL	0.218 0.106 0.77 0.375 5 %	lb ai/a lb ai/a lb ae/a lb ai/a v/v	5 2 22 24 5 %	fl oz/a oz/a fl oz/a fl oz/a v/v	PRE PRE POST2 POST2 POST2	A A D D D	73 a
9	ENVIVE ZIDUA ABUNDIT EXTRA ULTRA BLAZER 2 EC N-PAK AMS	41.3 85 3 2 100	WG WG SL EC SL	0.09 0.08 0.75 0.375 5 %	lb ai/a lb ai/a lb ae/a lb ai/a v/v	3.5 1.5 32 24 5 %	oz/a oz/a fl oz/a fl oz/a v/v	PRE PRE POST2 POST2 POST2	A A D D D	68 ab
10	AUTHORITY ELITE ROUNDUP POWERMAX ANTHEM N-PAK AMS	7 4.5 2.15 100	SC SL SE SL	1.75 0.77 0.151 5 %	lb ai/a lb ae/a lb ai/a v/v	32 22 9 5 %	fl oz/a fl oz/a fl oz/a v/v	PRE POST1 POST1 POST1	A C C C	67 ab
11	AUTHORITY FIRST ROUNDUP POWERMAX WARRANT FLEXSTAR N-PAK AMS	70 4.5 3 1.88 100	WG SL CS EC SL	0.28 0.77 1.13 0.353 5 %	lb ai/a lb ae/a lb ai/a lb ai/a v/v	6.4 22 48 24 5 %	oz/a fl oz/a fl oz/a fl oz/a v/v	PRE POST1 POST1 POST1 POST1	A C C C C	66 ab
12	FIERCE ROUNDUP POWERMAX COBRA WARRANT COC (PRIME OIL) N-PAK AMS	76 4.5 2 3 100 100	WG SL EC CS SL SL	0.178 0.77 0.195 1.13 1 % 5 %	lb ai/a lb ae/a lb ai/a lb ai/a v/v v/v	3.75 22 12.5 48 1 % 5 %	oz/a fl oz/a fl oz/a fl oz/a v/v v/v	PRE POST1 POST1 POST1 POST1 POST1	A C C C C C	66 ab

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

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval										GLXMA 10-10-13 Yield bu/A Estimated
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	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

Southern Illinois University

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval							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
Trt Treatment No. Name	Form Form Conc Type	Rate Unit	Other Other Rate Rate	Unit	Growth Appl Stage Code							
1 NONTREATED						0 h	0 f	0 d	0 f	0 c	0 a	
2 BOUNDARY FLEXSTAR GT 3.5 MSO (MSO ULTRA) N-PAK AMS	6.5 EC 2.82 SL 100 SL 100 SL	1.42 lb ai/a 1.41 lb ae/a 1 % v/v 5 % v/v	1.75 pt/a 4 pt/a 1 % v/v 5 % v/v		PRE A POST1 C POST1 C POST1 C	2 gh	0 f	5 bc	2 ef	0 c	0 a	
3 PREFIX SEQUENCE N-PAK AMS	5.29 EC 5.25 SL 100 SL	1.32 lb ai/a 1.97 lb ae/a 5 % v/v	2 pt/a 3 pt/a 5 % v/v		PRE A POST1 C POST1 C	0 h	0 f	5 bc	3 def	2 c	0 a	
4 BOUNDARY PREFIX TOUCHDOWN TOTAL N-PAK AMS	6.5 EC 5.29 EC 4.17 SL 100 SL	1.42 lb ai/a 1.32 lb ai/a 0.78 lb ae/a 5 % v/v	1.75 pt/a 2 pt/a 24 fl oz/a 5 % v/v		PRE A POST1 C POST1 C POST1 C	3 gh	2 ef	7 b	3 def	2 bc	0 a	
5 VERDICT WARRANT ROUNDUP POWERMAX N-PAK AMS	5.57 EC 3 CS 4.5 SL 100 SL	0.218 lb ai/a 0.94 lb ai/a 0.77 lb ae/a 5 % v/v	5 fl oz/a 1.25 qt/a 22 fl oz/a 5 % v/v		PRE A POST1 C POST1 C POST1 C	12 ef	7 cde	3 cd	0 f	0 c	0 a	
6 VALOR XLT WARRANT ROUNDUP POWERMAX N-PAK AMS	40.3 WG 3 CS 4.5 SL 100 SL	0.101 lb ai/a 0.94 lb ai/a 0.77 lb ae/a 5 % v/v	4 oz/a 1.25 qt/a 22 fl oz/a 5 % v/v		PRE A POST1 C POST1 C POST1 C	23 bc	15 a	7 b	6 cd	1 c	0 a	
7 BOUNDARY SEQUENCE FLEXSTAR GT 3.5 MSO (MSO ULTRA) N-PAK AMS	6.5 EC 5.25 SL 2.82 SL 100 SL 100 SL	1.22 lb ai/a 1.64 lb ae/a 1.41 lb ae/a 1 % v/v 5 % v/v	1.5 pt/a 2.5 pt/a 4 pt/a 1 % v/v 5 % v/v		PRE A V2-V3 B POST2 D POST2 D POST2 D	7 fg	3 def	0 d	9 bc	7 a	0 a	
8 VERDICT ZIDUA ROUNDUP POWERMAX ULTRA BLAZER 2 EC N-PAK AMS	5.57 EC 85 WG 4.5 SL 2 EC 100 SL	0.218 lb ai/a 0.106 lb ai/a 0.77 lb ae/a 0.375 lb ai/a 5 % v/v	5 fl oz/a 2 oz/a 22 fl oz/a 24 fl oz/a 5 % v/v		PRE A PRE A POST2 D POST2 D POST2 D	23 bc	8 bcd	0 d	10 b	9 a	0 a	
9 ENVIVE ZIDUA ABUNDIT EXTRA ULTRA BLAZER 2 EC N-PAK AMS	41.3 WG 85 WG 3 SL 2 EC 100 SL	0.09 lb ai/a 0.08 lb ai/a 0.75 lb ae/a 0.375 lb ai/a 5 % v/v	3.5 oz/a 1.5 oz/a 32 fl oz/a 24 fl oz/a 5 % v/v		PRE A PRE A POST2 D POST2 D POST2 D	28 ab	14 a	2 d	10 b	8 a	0 a	
10 AUTHORITY ELITE ROUNDUP POWERMAX ANTHEM N-PAK AMS	7 SC 4.5 SL 2.15 SE 100 SL	1.75 lb ai/a 0.77 lb ae/a 0.151 lb ai/a 5 % v/v	32 fl oz/a 22 fl oz/a 9 fl oz/a 5 % v/v		PRE A POST1 C POST1 C POST1 C	13 de	6 de	6 bc	4 de	0 c	0 a	
11 AUTHORITY FIRST ROUNDUP POWERMAX WARRANT FLEXSTAR N-PAK AMS	70 WG 4.5 SL 3 CS 1.88 EC 100 SL	0.28 lb ai/a 0.77 lb ae/a 1.13 lb ai/a 0.353 lb ai/a 5 % v/v	6.4 oz/a 22 fl oz/a 48 fl oz/a 24 fl oz/a 5 % v/v		PRE A POST1 C POST1 C POST1 C POST1 C	18 cd	13 ab	6 b	4 de	1 c	0 a	
12 FIERCE ROUNDUP POWERMAX COBRA WARRANT COC (PRIME OIL) N-PAK AMS	76 WG 4.5 SL 2 EC 3 CS 100 SL 100 SL	0.178 lb ai/a 0.77 lb ae/a 0.195 lb ai/a 1.13 lb ai/a 1 % v/v 5 % v/v	3.75 oz/a 22 fl oz/a 12.5 fl oz/a 48 fl oz/a 1 % v/v 5 % v/v		PRE A POST1 C POST1 C POST1 C POST1 C POST1 C	30 a	12 abc	22 a	18 a	6 ab	0 a	

Southern Illinois University

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval										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
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Other Rate	Other Rate	Unit Unit	Growth Stage	Appl Code					
13	SONIC DURANGO DMA N-PAK AMS	70 4 100	WG SL SL	0.28 0.75 5	lb ai/a lb ae/a % v/v	6.4 24 5	oz/a fl oz/a % v/v		PRE POST2 POST2	A D D	22 c	12 abc	2 d	1 ef	0 c 0 a
LSD (P=.05)											5.0	5.4	3.1	3.6	3.8
Standard Deviation											3.0	3.2	1.9	2.1	2.3
CV											21.47	45.24	37.47	38.38	81.38
Replicate F											2.694	0.282	1.574	0.435	2.241
Replicate Prob(F)											0.0880	0.7566	0.2279	0.6521	0.1281
Treatment F											39.495	9.678	28.615	18.028	6.994
Treatment Prob(F)											0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								AMAPA-HR	AMAPA-HR	AMAPA-HR	AMAPA-HR	AMAPA-HR
								6-19-13 Control Percent	7-3-13 Control Percent	7-18-13 Control Percent	8-1-13 Control Percent	8-15-13 Control Percent
								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			
1	NONTREATED									0 c	0 d	0 d
2	BOUNDARY FLEXSTAR GT 3.5 MSO (MSO ULTRA) N-PAK AMS	6.5 EC 2.82 SL 100 SL 100 SL		1.42 lb ai/a 1.41 lb ae/a 1 % v/v 5 % v/v		1.75 pt/a 4 pt/a 1 % v/v 5 % v/v		PRE POST1 POST1 POST1	A C C C	99 a	96 b	99 a
3	PREFIX SEQUENCE N-PAK AMS	5.29 EC 5.25 SL 100 SL		1.32 lb ai/a 1.97 lb ae/a 5 % v/v		2 pt/a 3 pt/a 5 % v/v		PRE POST1 POST1	A C C	99 a	97 ab	96 a
4	BOUNDARY PREFIX TOUCHDOWN TOTAL N-PAK AMS	6.5 EC 5.29 EC 4.17 SL 100 SL		1.42 lb ai/a 1.32 lb ai/a 0.78 lb ae/a 5 % v/v		1.75 pt/a 2 pt/a 24 fl oz/a 5 % v/v		PRE POST1 POST1 POST1	A C C C	98 a	96 b	98 a
5	VERDICT WARRANT ROUNDUP POWERMAX N-PAK AMS	5.57 EC 3 CS 4.5 SL 100 SL		0.218 lb ai/a 0.94 lb ai/a 0.77 lb ae/a 5 % v/v		5 fl oz/a 1.25 qt/a 22 fl oz/a 5 % v/v		PRE POST1 POST1 POST1	A C C C	89 b	75 c	58 c
6	VALOR XLT WARRANT ROUNDUP POWERMAX N-PAK AMS	40.3 WG 3 CS 4.5 SL 100 SL		0.101 lb ai/a 0.94 lb ai/a 0.77 lb ae/a 5 % v/v		4 oz/a 1.25 qt/a 22 fl oz/a 5 % v/v		PRE POST1 POST1 POST1	A C C C	99 a	97 ab	96 a
7	BOUNDARY SEQUENCE FLEXSTAR GT 3.5 MSO (MSO ULTRA) N-PAK AMS	6.5 EC 5.25 SL 2.82 SL 100 SL 100 SL		1.22 lb ai/a 1.64 lb ae/a 1.41 lb ae/a 1 % v/v 5 % v/v		1.5 pt/a 2.5 pt/a 4 pt/a 1 % v/v 5 % v/v		PRE V2-V3 POST2 POST2 POST2	A B D D D	99 a	97 ab	97 a
8	VERDICT ZIDUA ROUNDUP POWERMAX ULTRA BLAZER 2 EC N-PAK AMS	5.57 EC 85 WG 4.5 SL 2 EC 100 SL		0.218 lb ai/a 0.106 lb ai/a 0.77 lb ae/a 0.375 lb ai/a 5 % v/v		5 fl oz/a 2 oz/a 22 fl oz/a 24 fl oz/a 5 % v/v		PRE PRE POST2 POST2 POST2	A A D D D	99 a	97 ab	97 a
9	ENVIVE ZIDUA ABUNDIT EXTRA ULTRA BLAZER 2 EC N-PAK AMS	41.3 WG 85 WG 3 SL 2 EC 100 SL		0.09 lb ai/a 0.08 lb ai/a 0.75 lb ae/a 0.375 lb ai/a 5 % v/v		3.5 oz/a 1.5 oz/a 32 fl oz/a 24 fl oz/a 5 % v/v		PRE PRE POST2 POST2 POST2	A A D D D	99 a	99 a	99 a
10	AUTHORITY ELITE ROUNDUP POWERMAX ANTHEM N-PAK AMS	7 SC 4.5 SL 2.15 SE 100 SL		1.75 lb ai/a 0.77 lb ae/a 0.151 lb ai/a 5 % v/v		32 fl oz/a 22 fl oz/a 9 fl oz/a 5 % v/v		PRE POST1 POST1 POST1	A C C C	99 a	97 ab	98 a
11	AUTHORITY FIRST ROUNDUP POWERMAX WARRANT FLEXSTAR N-PAK AMS	70 WG 4.5 SL 3 CS 1.88 EC 100 SL		0.28 lb ai/a 0.77 lb ae/a 1.13 lb ai/a 0.353 lb ai/a 5 % v/v		6.4 oz/a 22 fl oz/a 48 fl oz/a 24 fl oz/a 5 % v/v		PRE POST1 POST1 POST1 POST1	A C C C C	99 a	96 b	99 a
12	FIERCE ROUNDUP POWERMAX COBRA WARRANT COC (PRIME OIL) N-PAK AMS	76 WG 4.5 SL 2 EC 3 CS 100 SL 100 SL		0.178 lb ai/a 0.77 lb ae/a 0.195 lb ai/a 1.13 lb ai/a 1 % v/v 5 % v/v		3.75 oz/a 22 fl oz/a 12.5 fl oz/a 48 fl oz/a 1 % v/v 5 % v/v		PRE POST1 POST1 POST1 POST1 POST1	A C C C C C	99 a	98 ab	99 a

Southern Illinois University

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										6-19-13	7-3-13	7-18-13	8-1-13	8-15-13
Rating Date										Control	Control	Control	Control	Control
Rating Type										Percent	Percent	Percent	Percent	Percent
Rating Unit														
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 Unit	Other Rate	Other Rate	Growth Unit	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
	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

Southern Illinois University

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval										AMAPA-HR
										8-31-13 Control Percent
										42 DA-D
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
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		

Southern Illinois University

General Soybean Programs.

Trial ID: 13-COL-SOYprog Location: Collinsville, IL Trial Year: 2013
Investigator: Bryan Young

Pest Code										AMAPA-HR
Crop Code										8-31-13
Rating Date										Control
Rating Type										Percent
Rating Unit										
Rating Timing										
Trt-Eval Interval										42 DA-D
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
	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

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.