

Market Development Soybean.

Trial ID: 14-21M-ME80 Location: Belleville Res. Center Trial Year: 2014
Investigator: Ronald F. Krausz

Trial Status: F one-year/final Initiation Date: 5-12-14 Completion Date: 10-26-14	
Trial Location	
City: Belleville State/Prov.: Illinois IL Postal Code: 62221	Country: USA

Objectives: Crop protection market development.

Study Director: Ronald F. Krausz Organization: Belleville Research Center - Southern Illinois Univ Carbondale Address: 2036 Charles Lane City+State/Prov: Belleville, IL Postal Code: 62221 Country: USA	Contacts Title: Researcher/Farm Manager Phone No.: 618-566-4761 E-mail: rkrausz@siu.edu
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Crop Description	
Crop 1: GLXMA Glycine max Variety: AG3832 Description: RR2Y	Soybean BBCH Scale: BSOY
Planting Rate, Unit: 140000 S/A Depth, Unit: 1 IN Row Spacing, Unit: 30 IN	Planting Date: 5-12-14 Planting Method: SEEDED

Pest Description	
Pest 1 Type: W Code: SETFA <i>Setaria faberi</i> Herrm. Common Name: foxtail, giant	
Pest 2 Type: W Code: XANST <i>Xanthium strumarium</i> L. Common Name: cocklebur, common	
Pest 3 Type: W Code: AMBTR <i>Ambrosia trifida</i> L. Common Name: ragweed, giant	
Pest 4 Type: W Code: IPOHE <i>Ipomoea hederacea</i> (L.) Jacq. Common Name: morningglory, ivyleaf	
Pest 5 Type: W Code: AMATA <i>Amaranthus rudis</i> Sauer Common Name: waterhemp, common	
Pest 6 Type: W Code: ABUTH <i>Abutilon theophrasti</i> Medik. Common Name: velvetleaf	

Site and Design							
Treated Plot Width: 7.5 FT Treated Plot Length: 30 FT	Total Plot Width: 10 FT Total Plot Length: 30 FT						
Site Type: FIELD Experimental Unit: 1 PLOT Tillage Type: REDTIL reduced-till Study Design: RACOB L Randomized Complete Block (RCB)							
Replications: 4 Untreated Arrangement: INCLUDED single control randomized in each block							
<table border="1"> <thead> <tr> <th>No.</th> <th>Previous Crop</th> <th>Year</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>ZEAMD</td> <td>2013</td> </tr> </tbody> </table>		No.	Previous Crop	Year	1.	ZEAMD	2013
No.	Previous Crop	Year					
1.	ZEAMD	2013					

Maintenance					
<table border="1"> <thead> <tr> <th>No.</th> <th>Maintenance Product Name</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A</td> </tr> </tbody> </table>	No.	Maintenance Product Name	1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A	
No.	Maintenance Product Name				
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A				

Soil Description										
% OM: 3.4 Texture: SIL silt loam pH: 6.5 Soil Name: Be halto CEC: 12										
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>71</td> <td>lb/A</td> </tr> <tr> <td>K</td> <td>297</td> <td>lb/A</td> </tr> </tbody> </table>		Element	Quantity	Unit	P1	71	lb/A	K	297	lb/A
Element	Quantity	Unit								
P1	71	lb/A								
K	297	lb/A								

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

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No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-14	3.19	IN	RAIN	rain	4	DAY			
2.	4-1-14					7	DAY	34	66	F
3.	4-7-14	0.3	IN	RAIN	rain	2	DAY			
4.	4-8-14					7	DAY	34	83	F
5.	4-12-14	0.66	IN	RAIN	rain	3	DAY			
6.	4-15-14					7	DAY	31	79	F
7.	4-21-14	0.17	IN	RAIN	rain	2	DAY			
8.	4-22-14					7	DAY	44	78	F
9.	4-24-14	2.24	IN	RAIN	rain	5	DAY			
10.	4-29-14	0.09	IN	RAIN	rain	2	DAY			
11.	4-29-14					7	DAY	41	87	F
12.	5-6-14					7	DAY	56	86	F
13.	5-8-14	0.13	IN	RAIN	rain	2	DAY			
14.	5-12-14	0.88	IN	RAIN	rain	4	DAY			
15.	5-13-14					7	DAY	37	76	F
16.	5-20-14					7	DAY	55	87	F
17.	5-21-14	0.06	IN	RAIN	rain	1	DAY			
18.	5-25-14	0.49	IN	RAIN	rain	2	DAY			
19.	5-27-14	0.08	IN	RAIN	rain	2	DAY			
20.	5-27-14					7	DAY	60	86	F
21.	5-31-14	0.14	IN	RAIN	rain	1	DAY			
22.	6-1-14	0.13	IN	RAIN	rain	1	DAY			
23.	6-3-14					7	DAY	59	90	F
24.	6-4-14	0.67	IN	RAIN	rain	1	DAY			
25.	6-7-14	0.6	IN	RAIN	rain	1	DAY			
26.	6-9-14	1.38	IN	RAIN	rain	2	DAY			
27.	6-10-14					7	DAY	51	90	F
28.	6-12-14	0.07	IN	RAIN	rain	1	DAY			
29.	6-15-14	0.02	IN	RAIN	rain	1	DAY			
30.	6-17-14					7	DAY	67	92	F
31.	6-20-14	2.09	IN	RAIN	rain	5	DAY			
32.	6-24-14					7	DAY	65	91	F
33.	6-27-14	0.11	IN	RAIN	rain	2	DAY			
34.	7-1-14	0.01	IN	RAIN	rain	1	DAY			
35.	7-1-14					7	DAY	55	90	F
36.	7-7-14	0.79	IN	RAIN	rain	2	DAY			
37.	7-8-14					7	DAY	59	89	F
38.	7-12-14	0.49	IN	RAIN	rain	3	DAY			
39.	7-15-14					7	DAY	54	85	F
40.	7-22-14					7	DAY	57	98	F
41.	7-25-14	0.02	IN	RAIN	rain	1	DAY			
42.	7-29-14					7	DAY	52	89	F
43.	8-1-14	0.04	IN	RAIN	rain	1	DAY			
44.	8-5-14	4.04	IN	RAIN	rain	4	DAY			
45.	8-5-14					7	DAY	66	88	F
46.	8-12-14					7	DAY	57	84	F
47.	8-15-14	1.21	IN	RAIN	rain	3	DAY			
48.	8-19-14					7	DAY	67	95	F

Application Description

	A	B	C
Application Date:	5-13-14	6-3-14	6-25-14
Appl. Start Time:	14:00	8 00	12:40
Appl. Stop Time:	14:30	8:40	12:50
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	4"W	IF-NEED
Application Placement:	BROSOL	BROFOL	BROFOL
Applied By:	LXF	LXF	LXF
Air Temperature, Unit:	58 F	80 F	86 F
% Relative Humidity:	97	79	50
Wind Velocity, Unit:	4 MPH	5 MPH	2 MPH
Wind Direction:	W	W	W
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	65 F	74 F	78 F
Soil Moisture:	ABONOR	NORMAL	NORMAL
% Cloud Cover:	98	5	50
Next Moisture Occurred On:	5-13-14	6-7-14	7-1-14
Time to Next Moisture, Unit:	2 HR	3 DAY	6 DAY

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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	R1
Stage Minimum, Percent:		V1	R1
Stage Maximum, Percent:		V2	R1
Height, Unit:		5 IN	17 IN
Height Minimum, Maximum:		4 5	13 17

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SETFA W	SETFA W	SETFA W
Stage Majority, Percent:	NA	2	5
Stage Minimum, Percent:		1	3
Stage Maximum, Percent:		3	6
Height, Unit:		4 IN	6 IN
Height Minimum, Maximum:		0.5 6	6 8
Density, Unit:		15 FT2	3 FT2
Pest 2 Code, Type, Scale:	XANST W	XANST W	XANST W
Stage Majority, Percent:	NA	4	10
Stage Minimum, Percent:		2	2
Stage Maximum, Percent:		6	16
Height, Unit:		4 IN	8 IN
Height Minimum, Maximum:		2 6	6 10
Density, Unit:		0.5 FT2	1 FT2
Pest 3 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	4	8
Stage Minimum, Percent:		2	4
Stage Maximum, Percent:		6	10
Height, Unit:		6 IN	10 IN
Height Minimum, Maximum:		4 7	8 12
Density, Unit:		0.1 FT2	2 FT2
Pest 4 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W
Stage Majority, Percent:	NA	2	8
Stage Minimum, Percent:		1	1
Stage Maximum, Percent:		4	16
Height, Unit:		2 IN	6 IN
Height Minimum, Maximum:		0.5 3	4 8
Density, Unit:		0.1 FT2	4 FT2
Pest 5 Code, Type, Scale:	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	NA	8
Stage Minimum, Percent:			2
Stage Maximum, Percent:			10
Height, Unit:			4 IN
Height Minimum, Maximum:			1 6
Density, Unit:			10 FT2
Pest 6 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:	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

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Pest Code	Crop Code	Rating Date	GLXMA 10-26-14	GLXMA 10-26-14	GLXMA 10-26-14	GLXMA 6-3-14	GLXMA 7-1-14	SETFA 6-3-14	SETFA 7-1-14
Rating Type	Rating Unit	Rating Timing	Moisture Percent	Test wt. lb/bu	Yield bu/A	Injury Percent 21 DA-A	Injury Percent 6 DA-C	Control Percent 21 DA-A	Control Percent 6 DA-C
Trt-Eval Interval						0 DA-B	28 DA-B	0 DA-B	28 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate	Growth Unit Stage	Appl Code	
1	ROUNDUP POWERMAX N-PAK AMS	4 5 SL		1.1 lb ae/a	0.98 qt/a		4"W B		
	ROUNDUP POWERMAX N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		4"W B		
	ROUNDUP POWERMAX N-PAK AMS	4 5 SL		1.1 lb ae/a	0.98 qt/a		IF-NEED C		
	ROUNDUP POWERMAX N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		IF-NEED C		
2	VALOR SX ROUNDUP POWERMAX	51 WG		0.064 lb ai/a	2 oz/a		PRE A		
	ROUNDUP POWERMAX	4 5 SL		1.1 lb ae/a	0.98 qt/a		4"W B		
	WARRANT	3 CS		1.13 lb ai/a	1.5 qt/a		4"W B		
	N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		4"W B		
3	VALOR SX ROUNDUP POWERMAX	51 WG		0.064 lb ai/a	2 oz/a		PRE A		
	ROUNDUP POWERMAX	4 5 SL		1.1 lb ae/a	0.98 qt/a		4"W B		
	WARRANT	3 CS		1.13 lb ai/a	1.5 qt/a		4"W B		
	COBRA	2 EC		0.125 lb ai/a	8 fl oz/a		4"W B		
	N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		4"W B		
4	VALOR XLT ROUNDUP POWERMAX	40 3 WG		0.0756 lb ai/a	3 oz/a		PRE A		
	ROUNDUP POWERMAX	4 5 SL		1.1 lb ae/a	0.98 qt/a		4"W B		
	WARRANT	3 CS		1.13 lb ai/a	1.5 qt/a		4"W B		
	N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		4"W B		
5	VERDICT ROUNDUP POWERMAX	5 57 EC		0.217 lb ai/a	5 fl oz/a		PRE A		
	ROUNDUP POWERMAX	4 5 SL		1.1 lb ae/a	0.98 qt/a		4"W B		
	N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		4"W B		
6	ZIDUA ROUNDUP POWERMAX	85 WG		0.16 lb ai/a	3 oz/a		PRE A		
	ROUNDUP POWERMAX	4 5 SL		1.1 lb ae/a	0.98 qt/a		4"W B		
	N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		4"W B		
7	VALOR SX ZIDUA	51 WG		0.064 lb ai/a	2 oz/a		PRE A		
	ZIDUA	85 WG		0.16 lb ai/a	3 oz/a		4"W B		
	ROUNDUP POWERMAX	4 5 SL		1.1 lb ae/a	0.98 qt/a		4"W B		
	N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		4"W B		
8	FIERCE ROUNDUP POWERMAX	76 WG		0.178 lb ai/a	3.75 oz/a		PRE A		
	ROUNDUP POWERMAX	4 5 SL		1.1 lb ae/a	0.98 qt/a		4"W B		
	N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		4"W B		
9	TRICOR DF ROUNDUP POWERMAX	75 WG		0.25 lb ai/a	5.33 oz/a		PRE A		
	ROUNDUP POWERMAX	4 5 SL		1.1 lb ae/a	0.98 qt/a		4"W B		
	N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		4"W B		
10	TRICOR DF WARRANT	75 WG		0.25 lb ai/a	5.33 oz/a		PRE A		
	WARRANT	3 CS		1.13 lb ai/a	1.5 qt/a		PRE A		
	ROUNDUP POWERMAX	4 5 SL		1.1 lb ae/a	0.98 qt/a		4"W B		
	N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		4"W B		
11	WARRANT VALOR SX	3 CS		1.125 lb ai/a	1.5 qt/a		PRE A		
	VALOR SX	51 WG		0.064 lb ai/a	2 oz/a		PRE A		
	ROUNDUP POWERMAX	4 5 SL		1.1 lb ae/a	0.98 qt/a		4"W B		
	N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		4"W B		
12	ANTHEM ROUNDUP POWERMAX	2.15 SE		0.168 lb ai/a	10 fl oz/a		PRE A		
	ROUNDUP POWERMAX	4 5 SL		1.1 lb ae/a	0.98 qt/a		4"W B		
	N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		4"W B		
13	WARRANT AUTHORITY MAXX	3 CS		1.125 lb ai/a	1.5 qt/a		PRE A		
	AUTHORITY MAXX	66 WG		0.29 lb ai/a	7 oz/a		PRE A		
	ROUNDUP POWERMAX	4 5 SL		1.1 lb ae/a	0.98 qt/a		4"W B		
	N-PAK AMS	100 SL		2.5 % v/v	2.5 % v/v		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.

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Pest Code Crop Code Rating Date								GLXMA 10-26-14	GLXMA 10-26-14	GLXMA 10-26-14	GLXMA 6-3-14	GLXMA 7-1-14	SETFA 6-3-14	SETFA 7-1-14	
Rating Type Rating Unit Rating Timing								Moisture Percent	Test wt. lb/bu	Yield bu/A	Injury Percent 21 DA-A	Injury Percent 6 DA-C	Control Percen 21 DA-A	Control Percen 6 DA-C	
Trt-Eval Interval											0 DA-B	28 DA-B	0 DA-B	28 DA-B	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate	Growth Unit Stage	Appl Code							
14	AUTHORITY MAXX WARRANT ROUNDUP POWERMAX N-PAK AMS	66 WG 3 CS 4.5 SL 100 SL		0.29 lb ai/a 1.125 lb ai/a 1.1 lb ae/a 2.5 % v/v	7 oz/a 1.5 qt/a 0.98 qt/a 2.5 % v/v		PRE 4"W 4"W 4"W	A B B B	13.1 a	57.0 a	56 abc	0 a	0 a	85 abc	99 a
15	PREFIX TOUCHDOWN TOTAL N-PAK AMS	5.29 EC 4.17 SL 100 SL		1.32 lb ai/a 1.1 lb ae/a 2.5 % v/v	1 qt/a 1.06 qt/a 2.5 % v/v		PRE 4"W 4"W	A B B	13.0 a	57.1 a	55 abc	0 a	0 a	98 ab	99 a
16	DUAL II MAGNUM FLEXSTAR GT 3.5 MSO (MSO ULTRA) N-PAK AMS	7.64 EC 2.82 SL 100 SL 100 SL		0.955 lb ai/a 1.23 lb ae/a 1 % v/v 2.5 % v/v	0.5 qt/a 3.5 pt/a 1 % v/v 2.5 % v/v		PRE 4"W 4"W 4"W	A B B B	12.9 a	57.1 a	50 a-d	0 a	0 a	99 a	99 a
17 NONTREATED										1 g	0	0	0	0	
LSD (P=.05)								0.80	0.43	14.7	0.0	0.0	16.1	2.9	
Standard Deviation								0.56	0.30	10.3	0.0	0.0	11.3	2.0	
CV								4.3	0.53	22.44	0.0	0.0	19.04	2.06	
Replicate F								3.191	3.663	2.240	0.000	0.000	0.581	0.562	
Replicate Prob(F)								0.0325	0.0191	0.0956	1.0000	1.0000	0.6309	0.6430	
Treatment F								0.614	0.605	8.078	0.000	0.000	50.739	1.459	
Treatment Prob(F)								0.8482	0.8555	0.0001	1.0000	1.0000	0.0001	0.1626	

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Pest Code	Crop Code	Rating Date	Rating Type	Rating Unit	Rating Timing	Trt-Eval Interval	XANST	XANST	AMBTR	AMBTR	IPOHE	IPOHE
							6-3-14 Control Percent 21 DA-A	7-1-14 Control Percent 6 DA-C	6-3-14 Control Percent 21 DA-A	7-1-14 Control Percent 6 DA-C	6-3-14 Control Percent 21 DA-A	7-1-14 Control Percent 6 DA-C
							0 DA-B	28 DA-B	0 DA-B	28 DA-B	0 DA-B	28 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	ROUNDUP POWERMAX N-PAK AMS ROUNDUP POWERMAX N-PAK AMS	4.5 SL 100 SL 4.5 SL 100 SL		1.1 lb ae/a 2.5 % v/v 1.1 lb ae/a 2.5 % v/v	0.98 qt/a 2.5 % v/v 0.98 qt/a 2.5 % v/v		4"W B 4"W B IF-NEED C IF-NEED C		99 a		99 a	99 a
2	VALOR SX ROUNDUP POWERMAX WARRANT N-PAK AMS	51 WG 4.5 SL 3 CS 100 SL		0.064 lb ai/a 1.1 lb ae/a 1.13 lb ai/a 2.5 % v/v	2 oz/a 0.98 qt/a 1.5 qt/a 2.5 % v/v		PRE 4"W B 4"W B 4"W B		45 bc	92 a	21 cd	91 b-e 68 a 94 abc
3	VALOR SX ROUNDUP POWERMAX WARRANT COBRA N-PAK AMS	51 WG 4.5 SL 3 CS 2 EC 100 SL		0.064 lb ai/a 1.1 lb ae/a 1.13 lb ai/a 0.125 lb ai/a 2.5 % v/v	2 oz/a 0.98 qt/a 1.5 qt/a 8 fl oz/a 2.5 % v/v		PRE 4"W B 4"W B 4"W B		0 d	91 a	0 d	90 cde 23 b 84 d
4	VALOR XLT ROUNDUP POWERMAX WARRANT N-PAK AMS	40.3 WG 4.5 SL 3 CS 100 SL		0.0756 lb ai/a 1.1 lb ae/a 1.13 lb ai/a 2.5 % v/v	3 oz/a 0.98 qt/a 1.5 qt/a 2.5 % v/v		PRE 4"W B 4"W B 4"W B		92 a	95 a	85 a	96 abc 99 a 97 ab
5	VERDICT ROUNDUP POWERMAX N-PAK AMS	5.57 EC 4.5 SL 100 SL		0.217 lb ai/a 1.1 lb ae/a 2.5 % v/v	5 fl oz/a 0.98 qt/a 2.5 % v/v		PRE 4"W B 4"W B		95 a	93 a	85 a	91 cde 88 a 92 a-d
6	ZIDUA ROUNDUP POWERMAX N-PAK AMS	85 WG 4.5 SL 100 SL		0.16 lb ai/a 1.1 lb ae/a 2.5 % v/v	3 oz/a 0.98 qt/a 2.5 % v/v		PRE 4"W B 4"W B		0 d	94 a	0 d	85 ef 0 b 89 bcd
7	VALOR SX ZIDUA ROUNDUP POWERMAX N-PAK AMS	51 WG 85 WG 4.5 SL 100 SL		0.064 lb ai/a 0.16 lb ai/a 1.1 lb ae/a 2.5 % v/v	2 oz/a 3 oz/a 0.98 qt/a 2.5 % v/v		PRE 4"W B 4"W B 4"W B		58 abc	89 a	31 cd	95 a-d 68 a 93 a-d
8	FIERCE ROUNDUP POWERMAX N-PAK AMS	76 WG 4.5 SL 100 SL		0.178 lb ai/a 1.1 lb ae/a 2.5 % v/v	3.75 oz/a 0.98 qt/a 2.5 % v/v		PRE 4"W B 4"W B		68 ab	92 a	85 a	94 a-d 80 a 92 a-d
9	TRICOR DF ROUNDUP POWERMAX N-PAK AMS	75 WG 4.5 SL 100 SL		0.25 lb ai/a 1.1 lb ae/a 2.5 % v/v	5.33 oz/a 0.98 qt/a 2.5 % v/v		PRE 4"W B 4"W B		0 d	97 a	0 d	83 f 0 b 86 cd
10	TRICOR DF WARRANT ROUNDUP POWERMAX N-PAK AMS	75 WG 3 CS 4.5 SL 100 SL		0.25 lb ai/a 1.13 lb ai/a 1.1 lb ae/a 2.5 % v/v	5.33 oz/a 1.5 qt/a 0.98 qt/a 2.5 % v/v		PRE A PRE A 4"W B 4"W B		0 d	91 a	0 d	86 ef 0 b 85 cd
11	WARRANT VALOR SX ROUNDUP POWERMAX N-PAK AMS	3 CS 51 WG 4.5 SL 100 SL		1.125 lb ai/a 0.064 lb ai/a 1.1 lb ae/a 2.5 % v/v	1.5 qt/a 2 oz/a 0.98 qt/a 2.5 % v/v		PRE A PRE A 4"W B 4"W B		23 cd	95 a	19 cd	89 c-f 19 b 91 a-d
12	ANTHEM ROUNDUP POWERMAX N-PAK AMS	2.15 SE 4.5 SL 100 SL		0.168 lb ai/a 1.1 lb ae/a 2.5 % v/v	10 fl oz/a 0.98 qt/a 2.5 % v/v		PRE A 4"W B 4"W B		25 cd	90 a	13 cd	88 def 23 b 87 bcd
13	WARRANT AUTHORITY MAXX ROUNDUP POWERMAX N-PAK AMS	3 CS 66 WG 4.5 SL 100 SL		1.125 lb ai/a 0.29 lb ai/a 1.1 lb ae/a 2.5 % v/v	1.5 qt/a 7 oz/a 0.98 qt/a 2.5 % v/v		PRE A PRE A 4"W B 4"W B		90 a	99 a	45 bc	91 b-e 95 a 99 a

Market Development Soybean.

Trial ID: 14-21M-ME80 Location: Belleville Res. Center Trial Year: 2014
Investigator: Ronald F. Krausz

Pest Code								XANST	XANST	AMBTR	AMBTR	IPOHE	IPOHE
Crop Code													
Rating Date								6-3-14	7-1-14	6-3-14	7-1-14	6-3-14	7-1-14
Rating Type								Control	Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing								21 DA-A	6 DA-C	21 DA-A	6 DA-C	21 DA-A	6 DA-C
Trt-Eval Interval								0 DA-B	28 DA-B	0 DA-B	28 DA-B	0 DA-B	28 DA-B
Trt Treatment No. Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate	Growth Unit Stage	Appl Code					
14 AUTHORITY MAXX	66 WG		0.29 lb ai/a		7 oz/a		PRE	A	91 a	98 a	76 ab	95 abc	94 a
WARRANT	3 CS		1.125 lb ai/a		1.5 qt/a		4"W	B					99 a
ROUNDUP POWERMAX	4.5 SL		1.1 lb ae/a		0.98 qt/a		4"W	B					
N-PAK AMS	100 SL		2.5 % v/v		2.5 % v/v		4"W	B					
15 PREFIX	5.29 EC		1.32 lb ai/a		1 qt/a		PRE	A	23 cd	95 a	21 cd	98 ab	20 b
TOUCHDOWN TOTAL	4.17 SL		1.1 lb ae/a		1.06 qt/a		4"W	B					86 cd
N-PAK AMS	100 SL		2.5 % v/v		2.5 % v/v		4"W	B					
16 DUAL II MAGNUM	7.64 EC		0.955 lb ai/a		0.5 qt/a		PRE	A	0 d	95 a	0 d	98 ab	0 b
FLEXSTAR GT 3.5	2.82 SL		1.23 lb ae/a		3.5 pt/a		4"W	B					86 cd
MSO (MSO ULTRA)	100 SL		1 % v/v		1 % v/v		4"W	B					
N-PAK AMS	100 SL		2.5 % v/v		2.5 % v/v		4"W	B					
17 NONTREATED									0	0	0	0	0
LSD (P=.05)									42.5	8.6	32.9	7.1	36.4
Standard Deviation									29.8	6.0	23.0	5.0	25.5
CV									73.46	6.44	71.79	5.42	56.8
Replicate F									0.794	2.577	2.126	2.461	1.323
Replicate Prob(F)									0.5044	0.0654	0.1112	0.0748	0.2796
Treatment F									6.695	1.037	8.864	3.865	9.753
Treatment Prob(F)									0.0001	0.4376	0.0001	0.0002	0.0001

Market Development Soybean.

Trial ID: 14-21M-ME80 Location: Belleville Res. Center Trial Year: 2014
Investigator: Ronald F. Krausz

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								AMATA	AMATA	ABUTH	ABUTH
								6-3-14 Control Percent 21 DA-A 0 DA-B	7-1-14 Control Percent 6 DA-C 28 DA-B	6-3-14 Control Percent 21 DA-A 0 DA-B	7-1-14 Control Percent 6 DA-C 28 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Other Rate	Other Rate	Growth Unit Stage	Appl Code		
1	ROUNDUP POWERMAX N-PAK AMS	4.5 SL		1.1 lb ae/a	0.98 qt/a	2.5 % v/v	2.5 % v/v	4"W B	B	99 a	99 a
	ROUNDUP POWERMAX N-PAK AMS	4.5 SL		1.1 lb ae/a	0.98 qt/a	2.5 % v/v	2.5 % v/v	4"W B	B		
2	VALOR SX ROUNDUP POWERMAX WARRANT N-PAK AMS	51 WG 4.5 SL 3 CS 100 SL		0.064 lb ai/a 1.1 lb ae/a 1.13 lb ai/a 2.5 % v/v	2 oz/a 0.98 qt/a 1.5 qt/a 2.5 % v/v			PRE 4"W 4"W 4"W	A B B B	99 a 99 a 98 a	99 a
3	VALOR SX ROUNDUP POWERMAX WARRANT COBRA N-PAK AMS	51 WG 4.5 SL 3 CS 2 EC 100 SL		0.064 lb ai/a 1.1 lb ae/a 1.13 lb ai/a 0.125 lb ai/a 2.5 % v/v	2 oz/a 0.98 qt/a 1.5 qt/a 8 fl oz/a 2.5 % v/v			PRE 4"W 4"W 4"W 4"W	A B B B B	99 a 99 a 99 a	99 a
4	VALOR XLT ROUNDUP POWERMAX WARRANT N-PAK AMS	40.3 WG 4.5 SL 3 CS 100 SL		0.0756 lb ai/a 1.1 lb ae/a 1.13 lb ai/a 2.5 % v/v	3 oz/a 0.98 qt/a 1.5 qt/a 2.5 % v/v			PRE 4"W 4"W 4"W	A B B B	99 a 98 a 99 a	99 a
5	VERDICT ROUNDUP POWERMAX N-PAK AMS	5.57 EC 4.5 SL 100 SL		0.217 lb ai/a 1.1 lb ae/a 2.5 % v/v	5 fl oz/a 0.98 qt/a 2.5 % v/v			PRE 4"W 4"W	A B B	99 a 96 a 97 a	99 a
6	ZIDUA ROUNDUP POWERMAX N-PAK AMS	85 WG 4.5 SL 100 SL		0.16 lb ai/a 1.1 lb ae/a 2.5 % v/v	3 oz/a 0.98 qt/a 2.5 % v/v			PRE 4"W 4"W	A B B	99 a 99 a 23 b	99 a
7	VALOR SX ZIDUA ROUNDUP POWERMAX N-PAK AMS	51 WG 85 WG 4.5 SL 100 SL		0.064 lb ai/a 0.16 lb ai/a 1.1 lb ae/a 2.5 % v/v	2 oz/a 3 oz/a 0.98 qt/a 2.5 % v/v			PRE 4"W 4"W 4"W	A B B B	99 a 99 a 99 a	99 a
8	FIERCE ROUNDUP POWERMAX N-PAK AMS	76 WG 4.5 SL 100 SL		0.178 lb ai/a 1.1 lb ae/a 2.5 % v/v	3.75 oz/a 0.98 qt/a 2.5 % v/v			PRE 4"W 4"W	A B B	99 a 99 a 99 a	99 a
9	TRICOR DF ROUNDUP POWERMAX N-PAK AMS	75 WG 4.5 SL 100 SL		0.25 lb ai/a 1.1 lb ae/a 2.5 % v/v	5.33 oz/a 0.98 qt/a 2.5 % v/v			PRE 4"W 4"W	A B B	99 a 96 a 99 a	99 a
10	TRICOR DF WARRANT ROUNDUP POWERMAX N-PAK AMS	75 WG 3 CS 4.5 SL 100 SL		0.25 lb ai/a 1.13 lb ai/a 1.1 lb ae/a 2.5 % v/v	5.33 oz/a 1.5 qt/a 0.98 qt/a 2.5 % v/v			PRE PRE 4"W 4"W	A A B B	99 a 97 a 99 a	99 a
11	WARRANT VALOR SX ROUNDUP POWERMAX N-PAK AMS	3 CS 51 WG 4.5 SL 100 SL		1.125 lb ai/a 0.064 lb ai/a 1.1 lb ae/a 2.5 % v/v	1.5 qt/a 2 oz/a 0.98 qt/a 2.5 % v/v			PRE PRE 4"W 4"W	A A B B	99 a 99 a 97 a	99 a
12	ANTHEM ROUNDUP POWERMAX N-PAK AMS	2.15 SE 4.5 SL 100 SL		0.168 lb ai/a 1.1 lb ae/a 2.5 % v/v	10 fl oz/a 0.98 qt/a 2.5 % v/v			PRE 4"W 4"W	A B B	99 a 99 a 95 a	99 a
13	WARRANT AUTHORITY MAXX ROUNDUP POWERMAX N-PAK AMS	3 CS 66 WG 4.5 SL 100 SL		1.125 lb ai/a 0.29 lb ai/a 1.1 lb ae/a 2.5 % v/v	1.5 qt/a 7 oz/a 0.98 qt/a 2.5 % v/v			PRE PRE 4"W 4"W	A A B B	99 a 99 a 99 a	99 a

Market Development Soybean.

Trial ID: 14-21M-ME80 Location: Belleville Res. Center Trial Year: 2014
Investigator: Ronald F. Krausz

Pest Code								AMATA	AMATA	ABUTH	ABUTH
Crop Code								6-3-14	7-1-14	6-3-14	7-1-14
Rating Date								Control	Control	Control	Control
Rating Type								Percent	Percent	Percent	Percent
Rating Unit								21 DA-A	6 DA-C	21 DA-A	6 DA-C
Rating Timing								0 DA-B	28 DA-B	0 DA-B	28 DA-B
Trt-Eval Interval											
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate Unit	Growth Unit Stage	Appl Code			
14	AUTHORITY MAXX	66	WG	0.29 lb ai/a	7 oz/a		PRE	A	98 a	99 a	99 a
	WARRANT	3	CS	1.125 lb ai/a	1.5 qt/a		4"W	B			
	ROUNDUP POWERMAX	4.5	SL	1.1 lb ae/a	0.98 qt/a		4"W	B			
	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v		4"W	B			
15	PREFIX	5.29	EC	1.32 lb ai/a	1 qt/a		PRE	A	99 a	99 a	94 a
	TOUCHDOWN TOTAL	4.17	SL	1.1 lb ae/a	1.06 qt/a		4"W	B			99 a
	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v		4"W	B			
16	DUAL II MAGNUM	7.64	EC	0.955 lb ai/a	0.5 qt/a		PRE	A	99 a	99 a	0 c
	FLEXSTAR GT 3.5	2.82	SL	1.23 lb ae/a	3.5 pt/a		4"W	B			
	MSO (MSO ULTRA)	100	SL	1 % v/v	1 % v/v		4"W	B			
	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v		4"W	B			
17	NONTREATED								0	0	0
LSD (P=.05)								0.7	3.2	17.0	0.2
Standard Deviation								0.5	2.2	11.9	0.1
CV								0.52	2.25	13.79	0.13
Replicate F								1.000	0.615	1.430	1.000
Replicate Prob(F)								0.4023	0.6089	0.2476	0.4016
Treatment F								1.000	1.189	26.801	1.000
Treatment Prob(F)								0.4708	0.3144	0.0001	0.4718

Market Development Soybean.

Trial ID: 14-21M-ME80 Location: Belleville Res. Center Trial Year: 2014
Investigator: Ronald F. Krausz

Trial Comments

1. Protocol: Monsanto (Market development 24-27).
2. Ratings: CI 0 DA-B; WC 0 and 28 DA-B.
Rate PREs before spraying application B.
3. Yield.
4. Following the PRE application the first significant rainfall event was 0.49 inch the next day.
Following the 4"W application the first significant rainfall event was 0.67 inch the next day.
5. Harvested 10-26-14, (2) 30 inch rows by 27 ft.