

Plexus with Fomesafen Herbicides.

Trial ID: 15-51E-S60 Location: Belleville Res. Center Trial Year: 2015
Investigator: Ronald F. Krausz

Trial Status: F one-year/final
Initiation Date: 6-13-15
Completion Date: 10-20-15

Trial Location

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

Objectives:

Evaluate the effect of Plexus with fomesafen herbicides.

Contacts

Study Director: Ronald F. Krausz **Title:** Researcher/Farm Manager
Organization: Belleville Research Center - Southern Illinois Univ Carbondale
Address: 2036 Charles Lane **Phone No.:** 618-566-4761
City+State/Prov: Belleville, IL
Postal Code: 62221 **E-mail:** rkrausz@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **BBCH Scale:** BSOY
Description: RR2Y
Planting Date: 6-13-15
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:** AMBTR Ambrosia trifida L.
Common Name: ragweed, giant
Pest 2 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: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMD	2014

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

Description Name: 51E_2013
% 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

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No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-29-15					7	DAY	36	84	F
2.	5-6-15					7	DAY	49	85	F
3.	5-8-15	4.09	IN	RAIN	rain	4	DAY			
4.	5-13-15					7	DAY	45	83	F
5.	5-14-15	0.33	IN	RAIN	rain	4	DAY			
6.	5-20-15					7	DAY	44	85	F
7.	5-20-15	0.16	IN	RAIN	rain	1	DAY			
8.	5-24-15	0.89	IN	RAIN	rain	1	DAY			
9.	5-26-15	0.59	IN	RAIN	rain	2	DAY			
10.	5-27-15					7	DAY	55	84	F
11.	5-29-15	2.15	IN	RAIN	rain	2	DAY			
12.	6-3-15					7	DAY	53	89	F
13.	6-5-15	0.17	IN	RAIN	rain	1	DAY			
14.	6-8-15	0.66	IN	RAIN	rain	1	DAY			
15.	6-10-15					7	DAY	64	91	F
16.	6-14-15	0.16	IN	RAIN	rain	1	DAY			
17.	6-15-15	0.11	IN	RAIN	rain	1	DAY			
18.	6-16-15	2.25	IN	RAIN	rain	1	DAY			
19.	6-17-15					7	DAY	69	91	F
20.	6-17-15	0.09	IN	RAIN	rain	1	DAY			
21.	6-18-15	0.14	IN	RAIN	rain	1	DAY			
22.	6-19-15	3.29	IN	RAIN	rain	1	DAY			
23.	6-20-15	0.2	IN	RAIN	rain	2	DAY			
24.	6-24-15					7	DAY	62	93	F
25.	6-25-15	1.66	IN	RAIN	rain	2	DAY			
26.	6-28-15	0.6	IN	RAIN	rain	2	DAY			
27.	7-1-15					7	DAY	63	88	F
28.	7-1-15	0.64	IN	RAIN	rain	2	DAY			
29.	7-7-15	1.33	IN	RAIN	rain	2	DAY			
30.	7-8-15					7	DAY	59	97	F
31.	7-10-15	0.26	IN	RAIN	rain	1	DAY			
32.	7-15-15					7	DAY	69	93	F
33.	7-19-15	0.35	IN	RAIN	rain	2	DAY			
34.	7-22-15					7	DAY	65	95	F
35.	7-26-15	1.21	IN	RAIN	rain	3	DAY			
36.	7-29-15					7	DAY	65	93	F
37.	8-5-15					7	DAY	64	88	F
38.	8-5-15	2.25	IN	RAIN	rain	1	DAY			
39.	8-9-15	0.47	IN	RAIN	rain	1	DAY			
40.	8-12-15					7	DAY	63	89	F
41.	8-18-15	2.23	IN	RAIN	rain	2	DAY			
42.	8-19-15					7	DAY	52	82	F
43.	8-22-15	0.18	IN	RAIN	rain	1	DAY			
44.	8-26-15					7	DAY	54	91	F
45.	9-2-15					7	DAY	68	94	F
46.	9-8-15	1.93	IN	RAIN	rain	2	DAY			
47.	9-9-15					7	DAY	47	83	F
48.	9-11-15	0.4	IN	RAIN	rain	1	DAY			
49.	9-16-15					7	DAY	51	90	F
50.	9-19-15	0.14	IN	RAIN	rain	1	DAY			
51.	9-23-15					7	DAY	54	85	F
52.	9-28-15	0.13	IN	RAIN	rain	1	DAY			

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Application Description

	A
Application Date:	7-19-15
Appl. Start Time:	12:00
Appl. Stop Time:	12:30
Application Method:	Spray
Application Timing:	V5
Application Placement:	BROFOL
Applied By:	MEJ
Air Temperature, Unit:	80 F
% Relative Humidity:	82
Wind Velocity, Unit:	7 MPH
Wind Direction:	W
Dew Presence (Y/N):	N
Soil Temperature, Unit:	80 F
Soil Moisture:	NORMAL
% Cloud Cover:	100
Next Moisture Occurred On:	7-19-15
Time to Next Moisture, Unit:	8 HR

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	V5
Stage Minimum, Percent:	V5
Stage Maximum, Percent:	V5
Height, Unit:	11 IN
Height Minimum, Maximum:	8 11

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBTR W
Stage Majority, Percent:	6
Stage Minimum, Percent:	4
Stage Maximum, Percent:	10
Height, Unit:	6 IN
Height Minimum, Maximum:	1 12
Density, Unit:	0.01 FT2
Pest 2 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	6
Stage Minimum, Percent:	2
Stage Maximum, Percent:	15+
Height, Unit:	8 IN
Height Minimum, Maximum:	0.5 14
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

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								GLXMA 10-20-15 Moisture Percent	GLXMA 10-20-15 Test wt. lb/bu	GLXMA 10-20-15 Yield bu/A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		
1	NONTREATED								9.7 a	58.4 a
2	BATTLE STAR R-WAY COC	1.88 EC 100 SL		0.176 lb ai/a 1 % v/v	12 fl oz/a 1 % v/v		V5 V5	A A	9.2 a	58.7 a
3	BATTLE STAR GT R-WAY COC	2.81 SL 100 SL		1.23 lb ae/a 1 % v/v	3.5 pt/a 1 % v/v		V5 V5	A A	9.1 a	58.8 a
4	BATTLE STAR PLEXUS	1.88 EC 100 SL		0.176 lb ai/a 12 fl oz/a	12 fl oz/a 12 fl oz/a		V5 V5	A A	9.4 a	58.7 a
5	BATTLE STAR GT PLEXUS	2.81 SL 100 SL		1.23 lb ae/a 12 fl oz/a	3.5 pt/a 12 fl oz/a		V5 V5	A A	9.2 a	58.6 a
6	ACIFLUROFEN II R-WAY COC	2 SL 100 SL		0.25 lb ai/a 1 % v/v	1 pt/a 1 % v/v		V5 V5	A A	9.3 a	58.7 a
7	ACIFLUROFEN II PLEXUS	2 SL 100 SL		0.25 lb ai/a 12 fl oz/a	1 pt/a 12 fl oz/a		V5 V5	A A	9.1 a	58.8 a
LSD P=.05								0.70	0.37	11.0
Standard Deviation								0.45	0.24	7.2
CV								4.87	0.41	17.48
Replicate F								0.329	1.005	1.962
Replicate Prob(F)								0.8043	0.4241	0.1736
Treatment F								0.868	1.045	6.132
Treatment Prob(F)								0.5453	0.4442	0.0039

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=6,7,9,10,13,16,19,22,25,11,14,17,20,23,26,12,15,18,21,24,27

Could not calculate LSD (% mean diff) for columns 16,19,22,25,11,12 because error mean square = 0.

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval							GLXMA 7-26-15 Injury Percent	GLXMA 8-2-15 Injury Percent	GLXMA 8-9-15 Injury Percent	GLXMA 8-16-15 Injury Percent	GLXMA 8-23-15 Injury Percent	GLXMA 9-27-15 Injury Percent
							7 DA-A	14 DA-A	21 DA-A	28 DA-A	35 DA-A	70 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	NONTREATED								0	0	0	0
2	BATTLE STAR R-WAY COC	1.88 EC 100 SL		0.176 lb ai/a 1 % v/v	12 fl oz/a 1 % v/v		V5 V5	A A	8 d	0 d	0 a	0 a
3	BATTLE STAR GT R-WAY COC	2.81 SL 100 SL		1.23 lb ae/a 1 % v/v	3.5 pt/a 1 % v/v		V5 V5	A A	18 bc	7 bc	0 a	0 a
4	BATTLE STAR PLEXUS	1.88 EC 100 SL		0.176 lb ai/a 12 fl oz/a	12 fl oz/a 12 fl oz/a		V5 V5	A A	15 c	5 c	0 a	0 a
5	BATTLE STAR GT PLEXUS	2.81 SL 100 SL		1.23 lb ae/a 12 fl oz/a	3.5 pt/a 12 fl oz/a		V5 V5	A A	25 a	10 a	0 a	0 a
6	ACIFLUROFEN II R-WAY COC	2 SL 100 SL		0.25 lb ai/a 1 % v/v	1 pt/a 1 % v/v		V5 V5	A A	17 bc	8 ab	0 a	0 a
7	ACIFLUROFEN II PLEXUS	2 SL 100 SL		0.25 lb ai/a 12 fl oz/a	1 pt/a 12 fl oz/a		V5 V5	A A	22 ab	10 a	0 a	0 a
LSD P=.05							6.4	2.5				
Standard Deviation							4.1	1.6	0.0	0.0	0.0	0.0
CV							23.42	23.72	0.0	0.0	0.0	0.0
Replicate F							1.204	1.111	0.000	0.000	0.000	0.000
Replicate Prob(F)							0.3577	0.3899	1.0000	1.0000	1.0000	1.0000
Treatment F							8.768	23.111	0.000	0.000	0.000	0.000
Treatment Prob(F)							0.0020	0.0001	1.0000	1.0000	1.0000	1.0000

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval							AMBTR	AMBTR	AMBTR	AMBTR	AMBTR	AMBTR
							7-26-15 Control Percent	8-2-15 Control Percent	8-9-15 Control Percent	8-16-15 Control Percent	8-23-15 Control Percent	9-27-15 Control Percent
							7 DA-A	14 DA-A	21 DA-A	28 DA-A	35 DA-A	70 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	NONTREATED								0	0	0	0
2	BATTLE STAR R-WAY COC	1.88 EC 100 SL		0.176 lb ai/a 1 % v/v	12 fl oz/a 1 % v/v		V5 V5	A A	50 b	80 b	88 b	88 b
3	BATTLE STAR GT R-WAY COC	2.81 SL 100 SL		1.23 lb ae/a 1 % v/v	3.5 pt/a 1 % v/v		V5 V5	A A	90 a	99 a	99 a	99 a
4	BATTLE STAR PLEXUS	1.88 EC 100 SL		0.176 lb ai/a 12 fl oz/a	12 fl oz/a 12 fl oz/a		V5 V5	A A	50 b	50 c	86 b	86 b
5	BATTLE STAR GT PLEXUS	2.81 SL 100 SL		1.23 lb ae/a 12 fl oz/a	3.5 pt/a 12 fl oz/a		V5 V5	A A	90 a	99 a	99 a	99 a
6	ACIFLUROFEN II R-WAY COC	2 SL 100 SL		0.25 lb ai/a 1 % v/v	1 pt/a 1 % v/v		V5 V5	A A	50 b	0 d	0 c	0 c
7	ACIFLUROFEN II PLEXUS	2 SL 100 SL		0.25 lb ai/a 12 fl oz/a	1 pt/a 12 fl oz/a		V5 V5	A A	50 b	0 d	0 c	0 c
LSD P=.05							.	15.8	8.1	8.1	8.1	8.1
Standard Deviation							0.0	10.0	5.1	5.1	5.1	5.1
CV							0.0	18.32	8.28	8.28	8.28	8.28
Replicate F							0.000	0.667	0.667	0.667	0.667	0.667
Replicate Prob(F)							1.0000	0.5914	0.5914	0.5914	0.5914	0.5914
Treatment F							0.000	84.288	354.856	354.856	354.856	354.856
Treatment Prob(F)							1.0000	0.0001	0.0001	0.0001	0.0001	0.0001

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Pest Code								AMATA	AMATA	AMATA	AMATA	AMATA	AMATA
Crop Code													
Rating Date								7-26-15	8-2-15	8-9-15	8-16-15	8-23-15	9-27-15
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	21 DA-A	28 DA-A	35 DA-A	70 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	0	0	0
2	BATTLE STAR R-WAY COC	1.88 EC 100 SL		0.176 lb ai/a 1 % v/v		12 fl oz/a 1 % v/v		V5 V5	A A	50 b	70 ab	70 a	70 a
3	BATTLE STAR GT R-WAY COC	2.81 SL 100 SL		1.23 lb ae/a 1 % v/v		3.5 pt/a 1 % v/v		V5 V5	A A	90 a	98 a	98 a	98 a
4	BATTLE STAR PLEXUS	1.88 EC 100 SL		0.176 lb ai/a 12 fl oz/a		12 fl oz/a 12 fl oz/a		V5 V5	A A	50 b	50 b	63 a	63 a
5	BATTLE STAR GT PLEXUS	2.81 SL 100 SL		1.23 lb ae/a 12 fl oz/a		3.5 pt/a 12 fl oz/a		V5 V5	A A	90 a	99 a	99 a	99 a
6	ACIFLUROFEN II R-WAY COC	2 SL 100 SL		0.25 lb ai/a 1 % v/v		1 pt/a 1 % v/v		V5 V5	A A	50 b	33 b	33 a	33 a
7	ACIFLUROFEN II PLEXUS	2 SL 100 SL		0.25 lb ai/a 12 fl oz/a		1 pt/a 12 fl oz/a		V5 V5	A A	50 b	50 b	50 a	50 a
LSD P=.05										.	41.1	51.5	51.5
Standard Deviation										0.0	26.1	32.7	32.7
CV										0.0	39.19	47.53	47.53
Replicate F										0.000	0.685	1.098	1.098
Replicate Prob(F)										1.0000	0.5812	0.3945	0.3945
Treatment F										0.000	4.322	2.538	2.538
Treatment Prob(F)										1.0000	0.0235	0.0985	0.0985

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Trial Comments

1. Protocol: Rosen's (Plexus/Fomesafen).
2. Ratings:
CI at 7, 14, 21, and 28 DA-A or until no injury is observable.
WC at 7, 14, 21, 28, 35 and 70 DA-A.
3. Yield.
4. Blanket application of Slect Max (1 pt/A) plus COC (1%) to entire area at V1 and as needed to control grass was applied on 7-1-15.
5. Rainfall following the V5 application was 0.35 inch over 1 day beginning 8 hours later.
6. Missing data due to flooding in some plots.
7. Harvested 10-20-15, (2) 30 inch rows by 24 ft.