

Rosen's Adjuvant Effect on Acifluorfen.

Trial ID: 14-T1-N110 Location: Belleville Res. Center Trial Year: 2014
Investigator: Ronald F. Krausz

Trial Status: F one-year/final Initiation Date: 5-19-14 Completion Date: 10-27-14	
Trial Location	
City: Belleville State/Prov.: Illinois IL Postal Code: 62221	Country: USA

Objectives: Evaluate new Rosen's adjuvants in soybean rescue market.
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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: 5-19-14 Planting Method: SEEDED

Pest Description	
Pest 1 Type: W Code: IPOHE Ipomoea hederacea (L.) Jacq. Common Name: morningglory, ivyleaf	
Pest 2 Type: W Code: XANST Xanthium strumarium L. Common Name: cocklebur, common	
Pest 3 Type: W Code: AMATA Amaranthus rudis Sauer Common Name: waterhemp, common	

Site and Design	
Treated Plot Width: 7.5 FT Treated Plot Length: 27 FT	Total Plot Width: 10 FT Total Plot Length: 27 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	
No.	Previous Crop Year
1.	ZEAMD 2013

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

Soil Description		
% OM: 3 pH: 6.4 CEC: 9	Texture: SIL silt loam Soil Name: Be halto	
Additional Measured Elements		
Element	Quantity	Unit
P1	57	lb/A
K	369	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.	4-29-14					7	DAY	41	87	F
2.	5-6-14					7	DAY	56	86	F
3.	5-8-14	0.13	IN	RAIN	rain	2	DAY			
4.	5-12-14	0.88	IN	RAIN	rain	4	DAY			
5.	5-13-14					7	DAY	37	76	F
6.	5-20-14					7	DAY	55	87	F
7.	5-21-14	0.06	IN	RAIN	rain	1	DAY			
8.	5-25-14	0.49	IN	RAIN	rain	2	DAY			
9.	5-27-14	0.08	IN	RAIN	rain	2	DAY			
10.	5-27-14					7	DAY	60	86	F
11.	5-31-14	0.14	IN	RAIN	rain	1	DAY			
12.	6-1-14	0.13	IN	RAIN	rain	1	DAY			
13.	6-3-14					7	DAY	59	90	F
14.	6-4-14	0.67	IN	RAIN	rain	1	DAY			
15.	6-7-14	0.6	IN	RAIN	rain	1	DAY			
16.	6-9-14	1.38	IN	RAIN	rain	2	DAY			
17.	6-10-14					7	DAY	51	90	F
18.	6-12-14	0.07	IN	RAIN	rain	1	DAY			
19.	6-15-14	0.02	IN	RAIN	rain	1	DAY			
20.	6-17-14					7	DAY	67	92	F
21.	6-20-14	2.09	IN	RAIN	rain	5	DAY			
22.	6-24-14					7	DAY	65	91	F
23.	6-27-14	0.11	IN	RAIN	rain	2	DAY			
24.	7-1-14	0.01	IN	RAIN	rain	1	DAY			
25.	7-1-14					7	DAY	55	90	F
26.	7-7-14	0.79	IN	RAIN	rain	2	DAY			
27.	7-8-14					7	DAY	59	89	F
28.	7-12-14	0.49	IN	RAIN	rain	3	DAY			
29.	7-15-14					7	DAY	54	85	F
30.	7-22-14					7	DAY	57	98	F
31.	7-25-14	0.02	IN	RAIN	rain	1	DAY			
32.	7-29-14					7	DAY	52	89	F
33.	8-1-14	0.04	IN	RAIN	rain	1	DAY			
34.	8-5-14	4.04	IN	RAIN	rain	4	DAY			
35.	8-5-14					7	DAY	66	88	F
36.	8-12-14					7	DAY	57	84	F
37.	8-15-14	1.21	IN	RAIN	rain	3	DAY			
38.	8-19-14					7	DAY	67	95	F
39.	8-20-14	0.11	IN	RAIN	rain	1	DAY			
40.	8-26-14					7	DAY	68	95	F
41.	8-27-14	1.56	IN	RAIN	rain	2	DAY			
42.	9-1-14	2.21	IN	RAIN	rain	2	DAY			
43.	9-2-14					7	DAY	54	93	F
44.	9-5-14	0.24	IN	RAIN	rain	1	DAY			
45.	9-9-14					7	DAY	45	85	F
46.	9-10-14	1.06	IN	RAIN	rain	1	DAY			

Application Description

	A
Application Date:	6-19-14
Appl. Start Time:	13:50
Appl. Stop Time:	14:30
Application Method:	Spray
Application Timing:	8-10"W
Application Placement:	BROFOL
Applied By:	LXF
Air Temperature, Unit:	92 F
% Relative Humidity:	52
Wind Velocity, Unit:	6 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	77 F
Soil Moisture:	NORMAL
% Cloud Cover:	50
Next Moisture Occurred On:	6-20-14
Time to Next Moisture, Unit:	1 DAY

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	A
Crop 1 Code, BBCH Scale:	GLXMA
Stage Scale Used:	DESC
Stage Majority, Percent:	V4
Stage Minimum, Percent:	V4
Stage Maximum, Percent:	V4
Height, Unit:	14 IN
Height Minimum, Maximum:	10 14

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	IPOHE W
Stage Majority, Percent:	12
Stage Minimum, Percent:	8
Stage Maximum, Percent:	16
Height, Unit:	10 IN
Height Minimum, Maximum:	8 12
Density, Unit:	3 FT2
Pest 2 Code, Type, Scale:	XANST W
Stage Majority, Percent:	14
Stage Minimum, Percent:	6
Stage Maximum, Percent:	16
Height, Unit:	10 IN
Height Minimum, Maximum:	8 12
Density, Unit:	0.5 FT2
Pest 3 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	18
Stage Minimum, Percent:	4
Stage Maximum, Percent:	28
Height, Unit:	10 IN
Height Minimum, Maximum:	2 12
Density, Unit:	5 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	40 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	GLXMA 10-27-14	GLXMA 10-27-14	GLXMA 10-27-14	GLXMA 7-3-14	GLXMA 7-17-14	GLXMA 8-14-14
Rating Type Rating Unit Rating Timing Trt-Eval Interval	Moisture Percent	Test wt. lb/bu	Yield bu/A	Injury Percent 14 DA-A	Injury Percent 28 DA-A	Injury Percent 56 DA-A
Trt Treatment No. Name	Form Form Conc Type Rate	Rate Unit	Other Other Rate Rate	Growth Unit Stage	Appl Code	
1 NONTREATED						
2 COBRA	2 EC	0.195 lb ai/a	12.5 fl oz/a	8-10"W A		
3 COBRA PLEXUS	2 EC 100 SL	0.195 lb ai/a 10 fl oz/a	12.5 fl oz/a 10 fl oz/a	8-10"W A 8-10"W A		
4 COBRA PLEXUS	2 EC 100 SL	0.195 lb ai/a 12 fl oz/a	12.5 fl oz/a 12 fl oz/a	8-10"W A 8-10"W A		
5 COBRA SUNDANCE II	2 EC 100 SL	0.195 lb ai/a 1 % v/v	12.5 fl oz/a 1 % v/v	8-10"W A 8-10"W A		
6 COBRA R-WAY	2 EC 100 SL	0.195 lb ai/a 1 % v/v	12.5 fl oz/a 1 % v/v	8-10"W A 8-10"W A		
7 COBRA DIPLOMAT	2 EC 100 SL	0.195 lb ai/a 0.5 % v/v	12.5 fl oz/a 0.5 % v/v	8-10"W A 8-10"W A		
8 ACIFLUROFEN II	2 SL	0.375 lb ai/a	24 fl oz/a	8-10"W A		
9 ACIFLUROFEN II PLEXUS	2 SL 100 SL	0.375 lb ai/a 10 fl oz/a	24 fl oz/a 10 fl oz/a	8-10"W A 8-10"W A		
10 ACIFLUROFEN II PLEXUS	2 SL 100 SL	0.375 lb ai/a 12 fl oz/a	24 fl oz/a 12 fl oz/a	8-10"W A 8-10"W A		
11 ACIFLUROFEN II SUNDANCE II	2 SL 100 SL	0.375 lb ai/a 1 % v/v	24 fl oz/a 1 % v/v	8-10"W A 8-10"W A		
12 ACIFLUROFEN II R-WAY	2 SL 100 SL	0.375 lb ai/a 1 % v/v	24 fl oz/a 1 % v/v	8-10"W A 8-10"W A		
13 ACIFLUROFEN II DIPLOMAT	2 SL 100 SL	0.375 lb ai/a 0.5 % v/v	24 fl oz/a 0.5 % v/v	8-10"W A 8-10"W A		
LSD (P=.05)	0.64	0.26	11.1	1.0	0.0	0.0
Standard Deviation	0.45	0.18	7.7	0.7	0.0	0.0
CV	3.15	0.32	13.64	7.14	0.0	0.0
Replicate F	0.979	1.589	8.550	1.000	0.000	0.000
Replicate Prob(F)	0.4133	0.2089	0.0002	0.4051	1.0000	1.0000
Treatment F	0.226	0.378	2.671	1.000	0.000	0.000
Treatment Prob(F)	0.9958	0.9629	0.0113	0.4671	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

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval									IPOHE 7-3-14 Control Percent 14 DA-A	IPOHE 7-17-14 Control Percent 28 DA-A	IPOHE 8-14-14 Control Percent 56 DA-A	XANST 7-3-14 Control Percent 14 DA-A	XANST 7-17-14 Control Percent 28 DA-A	XANST 8-14-14 Control Percent 56 DA-A	AMATA 7-3-14 Control Percen 14 DA-A	AMATA 7-17-14 Control Percen 28 DA-A	AMATA 8-14-14 Control Percent 56 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Unit	Growth Stage	Appl Code									
1	NONTREATED								0	0	0	0	0	0	0	0	0
2	COBRA	2 EC	0.195 lb ai/a	12.5 fl oz/a	8-10"W A				50 a	50 a	50 a	99 a	95 a	95 a	90 a	91 a	91 a
3	COBRA PLEXUS	2 EC 100 SL	0.195 lb ai/a 10 fl oz/a	12.5 fl oz/a 10 fl oz/a	8-10"W A 8-10"W A				25 abc	25 abc	25 abc	99 a	95 a	95 a	88 a	89 a	89 a
4	COBRA PLEXUS	2 EC 100 SL	0.195 lb ai/a 12 fl oz/a	12.5 fl oz/a 12 fl oz/a	8-10"W A 8-10"W A				13 bc	13 bc	13 bc	95 b	92 a	92 a	90 a	88 a	88 a
5	COBRA SUNDANCE II	2 EC 100 SL	0.195 lb ai/a 1 % v/v	12.5 fl oz/a 1 % v/v	8-10"W A 8-10"W A				50 a	38 ab	38 ab	99 a	97 a	97 a	89 a	85 a	85 a
6	COBRA R-WAY	2 EC 100 SL	0.195 lb ai/a 1 % v/v	12.5 fl oz/a 1 % v/v	8-10"W A 8-10"W A				38 ab	38 ab	38 ab	99 a	94 a	94 a	88 a	88 a	88 a
7	COBRA DIPLOMAT	2 EC 100 SL	0.195 lb ai/a 0.5 % v/v	12.5 fl oz/a 0.5 % v/v	8-10"W A 8-10"W A				50 a	38 ab	38 ab	99 a	92 a	92 a	88 a	86 a	86 a
8	ACIFLUROFEN II	2 SL	0.375 lb ai/a	24 fl oz/a	8-10"W A				0 c	0 c	0 c	95 b	95 a	95 a	90 a	90 a	90 a
9	ACIFLUROFEN II PLEXUS	2 SL 100 SL	0.375 lb ai/a 10 fl oz/a	24 fl oz/a 10 fl oz/a	8-10"W A 8-10"W A				25 abc	13 bc	13 bc	95 b	92 a	92 a	85 a	81 a	81 a
10	ACIFLUROFEN II PLEXUS	2 SL 100 SL	0.375 lb ai/a 12 fl oz/a	24 fl oz/a 12 fl oz/a	8-10"W A 8-10"W A				25 abc	25 abc	25 abc	92 b	85 a	85 a	90 a	90 a	90 a
11	ACIFLUROFEN II SUNDANCE II	2 SL 100 SL	0.375 lb ai/a 1 % v/v	24 fl oz/a 1 % v/v	8-10"W A 8-10"W A				50 a	50 a	50 a	95 b	92 a	92 a	89 a	90 a	90 a
12	ACIFLUROFEN II R-WAY	2 SL 100 SL	0.375 lb ai/a 1 % v/v	24 fl oz/a 1 % v/v	8-10"W A 8-10"W A				50 a	50 a	50 a	92 b	92 a	92 a	90 a	90 a	90 a
13	ACIFLUROFEN II DIPLOMAT	2 SL 100 SL	0.375 lb ai/a 0.5 % v/v	24 fl oz/a 0.5 % v/v	8-10"W A 8-10"W A				38 ab	38 ab	38 ab	92 b	91 a	91 a	89 a	89 a	89 a
LSD (P=.05)									25.2	27.4	27.4	4.4	8.9	8.9	4.4	5.6	5.6
Standard Deviation									17.5	19.0	19.0	3.1	6.2	6.2	3.0	3.9	3.9
CV									50.77	60.7	60.7	3.21	6.65	6.65	3.43	4.41	4.41
Replicate F									3.363	4.053	4.053	6.838	4.571	4.571	0.959	1.433	1.433
Replicate Prob(F)									0.0302	0.0148	0.0148	0.0010	0.0088	0.0088	0.4236	0.2509	0.2509
Treatment F									3.777	3.000	3.000	3.681	0.921	0.921	1.041	1.999	1.999
Treatment Prob(F)									0.0015	0.0071	0.0071	0.0018	0.5324	0.5324	0.4350	0.0613	0.0613

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Trial Comments

1. Protocol: Rosen's (New Adjuvants).
2. Ratings: CI 14 and 28 DA-A; WC 14, 28, and 56 DA-A.
3. Yield.
4. Blanket POST at V2 Select Max (1 pt/A) plus COC (1%), 10 ft wide to all plots to control grasses.
5. Application A uses 40 PSI (large weeds).
6. Photos?
7. Following the 8-10"W application the first significant rainfall event was 2.09 inch beginning the next day.
8. Harvested 10-27-14, (2) 30 inch rows by 24 ft.