

Trivence Applied Preemergence to Soybeans.

Trial ID: 14-21M-W90 Location: Belleville Res. Center Trial Year: 2014
Investigator: Ronald F. Krausz

Trial Status: One-year/final Initiation Date: 5-12-14 Completion Date: 7-7-14	
Trial Location	
City: Belleville State/Prov.: Illinois IL Postal Code: 62221	Country: USA

Objectives: Evaluate preemergence applications of DPXR5W13 for crop response and weed control as compared to Envive and Canopy.

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: ABUTH <i>Abutilon theophrasti</i> Medik. Common Name: velvetleaf	
Pest 6 Type: W Code: AMATA <i>Amaranthus rudis</i> Sauer Common Name: waterhemp, common	

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: 3 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

Application Description

	A	B
Application Date:	5-13-14	6-9-14
Appl. Start Time:	12:00	13:30
Appl. Stop Time:	12:30	13:45
Application Method:	Spray	Spray
Application Timing:	PRE	30DAP
Application Placement:	BROSOI	BROFOL
Applied By:	RFK	RJW
Air Temperature, Unit:	60 F	73 F
% Relative Humidity:	97	71
Wind Velocity, Unit:	4 MPH	6 MPH
Wind Direction:	N	E
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	67 F	71 F
Soil Moisture:	ABONOR	ABONOR
% Cloud Cover:	100	98
Next Moisture Occurred On:	5-13-14	6-9-14
Time to Next Moisture, Unit:	30 MIN	6 HR

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Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V3
Stage Minimum, Percent:		V3
Stage Maximum, Percent:		V3
Height, Unit:		6 IN
Height Minimum, Maximum:		4 6

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:	NA	6
Stage Minimum, Percent:		4
Stage Maximum, Percent:		7
Height, Unit:		6 IN
Height Minimum, Maximum:		3 8
Density, Unit:		5 FT2
Pest 2 Code, Type, Scale:	XANST W	XANST W
Stage Majority, Percent:	NA	12
Stage Minimum, Percent:		4
Stage Maximum, Percent:		16
Height, Unit:		8 IN
Height Minimum, Maximum:		2 14
Density, Unit:		5 FT2
Pest 3 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	10
Stage Minimum, Percent:		4
Stage Maximum, Percent:		12
Height, Unit:		12 IN
Height Minimum, Maximum:		4 16
Density, Unit:		1 FT2
Pest 4 Code, Type, Scale:	IPOHE W	IPOHE W
Stage Majority, Percent:	NA	8
Stage Minimum, Percent:		4
Stage Maximum, Percent:		10
Height, Unit:		4 IN
Height Minimum, Maximum:		2 5
Density, Unit:		0.1 FT2
Pest 5 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	NA
Pest 6 Code, Type, Scale:	AMATA W	AMATA W
Stage Majority, Percent:	NA	NA

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:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval		GLXMA 5-27-14 Injury Percent	GLXMA 6-10-14 Injury Percent	GLXMA 7-7-14 Injury Percent	SETFA 5-27-14 Control Percen	SETFA 6-10-14 Control Percen	SETFA 7-7-14 Control Percen							
		14 DA-A	28 DA-A	28 DA-B	14 DA-A	28 DA-A	28 DA-B							
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	ENVIVE ABUNDIT EXTRA AMS	41.3 WG 3 SL 100 SG		0.09 lb ai/a 0.75 lb ae/a 2 lb/a	3.5 oz/a 32 fl oz/a 2 lb/a		PRE A 30DAP B 30DAP B		2 cd	0 a	0 a	87 a	80 a	99 a
2	ENVIVE ZIDUA ABUNDIT EXTRA AMS	41.3 WG 85 WG 3 SL 100 SG		0.09 lb ai/a 0.08 lb ai/a 0.75 lb ae/a 2 lb/a	3.5 oz/a 1.5 oz/a 32 fl oz/a 2 lb/a		PRE A PRE A 30DAP B 30DAP B		3 bc	0 a	0 a	96 a	85 a	99 a
3	CANOPY CINCH ABUNDIT EXTRA AMS	75 WG 7.64 SC 3 SL 100 SG		0.188 lb ai/a 0.955 lb ai/a 0.75 lb ae/a 2 lb/a	4 oz/a 1 pt/a 32 fl oz/a 2 lb/a		PRE A PRE A 30DAP B 30DAP B		2 cd	0 a	0 a	99 a	87 a	99 a
4	CANOPY CINCH ABUNDIT EXTRA AMS	75 WG 7.64 SC 3 SL 100 SG		0.188 lb ai/a 0.955 lb ai/a 0.75 lb ae/a 2 lb/a	4 oz/a 1 pt/a 32 fl oz/a 2 lb/a		PRE A 30DAP B 30DAP B 30DAP B		0 d	0 a	0 a	60 a	47 b	99 a
5	TRIVENCE ABUNDIT EXTRA AMS	61.3 WG 3 SL 100 SG		0.307 lb ai/a 0.75 lb ae/a 2 lb/a	8 oz/a 32 fl oz/a 2 lb/a		PRE A 30DAP B 30DAP B		5 b	0 a	0 a	93 a	75 a	99 a
6	TRIVENCE ZIDUA ABUNDIT EXTRA AMS	61.3 WG 85 WG 3 SL 100 SG		0.307 lb ai/a 0.08 lb ai/a 0.75 lb ae/a 2 lb/a	8 oz/a 1.5 oz/a 32 fl oz/a 2 lb/a		PRE A PRE A 30DAP B 30DAP B		5 b	0 a	0 a	96 a	90 a	99 a
7	BOUNDARY ABUNDIT EXTRA AMS	6.5 EC 3 SL 100 SG		1.22 lb ai/a 0.75 lb ae/a 2 lb/a	1.5 pt/a 32 fl oz/a 2 lb/a		PRE A 30DAP B 30DAP B		0 d	0 a	0 a	96 a	96 a	99 a
8	FIERCE ABUNDIT EXTRA AMS	76 WG 3 SL 100 SG		0.143 lb ai/a 0.75 lb ae/a 2 lb/a	3 oz/a 32 fl oz/a 2 lb/a		PRE A 30DAP B 30DAP B		8 a	0 a	0 a	96 a	93 a	99 a
9 NONTREATED									0	0	0	0	0	0
LSD (P=.05)									3.0	0.0	0.0	31.1	26.8	0.0
Standard Deviation									1.7	0.0	0.0	17.7	15.3	0.0
CV									55.21	0.0	0.0	19.66	18.78	0.0
Replicate F									4.200	0.000	0.000	2.101	2.754	0.000
Replicate Prob(F)									0.0373	1.0000	1.0000	0.1592	0.0980	1.0000
Treatment F									8.350	0.000	0.000	1.544	3.120	0.000
Treatment Prob(F)									0.0004	1.0000	1.0000	0.2313	0.0333	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.

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							5-27-14 Control Percent	6-10-14 Control Percent	7-7-14 Control Percent	5-27-14 Control Percent	6-10-14 Control Percent	7-7-14 Control Percent
							14 DA-A	28 DA-A	28 DA-B	14 DA-A	28 DA-A	28 DA-B
Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl				
No.	Name	Conc	Type	Unit	Rate	Rate	Unit	Stage	Code			
1	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	61 a	61 a	96 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	30DAP	B			
	AMS	100	SG	2	lb/a	2	lb/a	30DAP	B			
2	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	80 a	78 a	96 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	30DAP	B			
	AMS	100	SG	2	lb/a	2	lb/a	30DAP	B			
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	91 a	88 a	96 a
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	30DAP	B			
	AMS	100	SG	2	lb/a	2	lb/a	30DAP	B			
4	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	90 a	88 a	93 a
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	30DAP	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	30DAP	B			
	AMS	100	SG	2	lb/a	2	lb/a	30DAP	B			
5	TRIVENCE	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	A	96 a	90 a	96 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	30DAP	B			
	AMS	100	SG	2	lb/a	2	lb/a	30DAP	B			
6	TRIVENCE	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	A	95 a	91 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	30DAP	B			
	AMS	100	SG	2	lb/a	2	lb/a	30DAP	B			
7	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	57 a	30 a	90 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	30DAP	B			
	AMS	100	SG	2	lb/a	2	lb/a	30DAP	B			
8	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	80 a	60 a	95 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	30DAP	B			
	AMS	100	SG	2	lb/a	2	lb/a	30DAP	B			
9	NONTREATED									0	0	0
LSD (P=.05)							34.4	41.3	5.5	41.4	38.0	6.0
Standard Deviation							19.6	23.6	3.1	23.6	21.7	3.4
CV							24.2	32.17	3.3	31.2	35.97	3.6
Replicate F							10.905	9.927	27.579	4.070	6.322	2.707
Replicate Prob(F)							0.0014	0.0021	0.0001	0.0404	0.0111	0.1014
Treatment F							1.752	2.509	1.902	4.521	6.344	2.797
Treatment Prob(F)							0.1761	0.0678	0.1450	0.0079	0.0017	0.0481

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval							IPOHE	IPOHE	IPOHE	ABUTH	ABUTH	ABUTH	AMATA	AMATA
							5-27-14 Control Percent	6-10-14 Control Percent	7-7-14 Control Percent	5-27-14 Control Percent	6-10-14 Control Percent	7-7-14 Control Percent	6-10-14 Control Percent	7-7-14 Control Percent
							14 DA-A	28 DA-A	28 DA-B	14 DA-A	28 DA-A	28 DA-B	28 DA-A	28 DA-B
Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl						
No.	Name	Conc	Type	Unit	Rate	Rate	Unit	Stage	Code					
1	ENVIVE ABUNDIT EXTRA AMS	41.3 WG 3 SL 100 SG		0.09 lb ai/a 0.75 lb ae/a 2 lb/a	3.5 oz/a 32 fl oz/a 2 lb/a		PRE A 30DAP B 30DAP B			99 a	99 a	99 a	96 a	99 a
2	ENVIVE ZIDUA ABUNDIT EXTRA AMS	41.3 WG 85 WG 3 SL 100 SG		0.09 lb ai/a 0.08 lb ai/a 0.75 lb ae/a 2 lb/a	3.5 oz/a 1.5 oz/a 32 fl oz/a 2 lb/a		PRE A PRE A 30DAP B 30DAP B			99 a	90 a	99 a	99 a	99 a
3	CANOPY CINCH ABUNDIT EXTRA AMS	75 WG 7.64 SC 3 SL 100 SG		0.188 lb ai/a 0.955 lb ai/a 0.75 lb ae/a 2 lb/a	4 oz/a 1 pt/a 32 fl oz/a 2 lb/a		PRE A PRE A 30DAP B 30DAP B			96 a	87 a	99 a	99 a	99 a
4	CANOPY CINCH ABUNDIT EXTRA AMS	75 WG 7.64 SC 3 SL 100 SG		0.188 lb ai/a 0.955 lb ai/a 0.75 lb ae/a 2 lb/a	4 oz/a 1 pt/a 32 fl oz/a 2 lb/a		PRE A 30DAP B 30DAP B 30DAP B			98 a	96 a	99 a	99 a	99 a
5	TRIVENCE ABUNDIT EXTRA AMS	61.3 WG 3 SL 100 SG		0.307 lb ai/a 0.75 lb ae/a 2 lb/a	8 oz/a 32 fl oz/a 2 lb/a		PRE A 30DAP B 30DAP B			99 a	93 a	99 a	99 a	99 a
6	TRIVENCE ZIDUA ABUNDIT EXTRA AMS	61.3 WG 85 WG 3 SL 100 SG		0.307 lb ai/a 0.08 lb ai/a 0.75 lb ae/a 2 lb/a	8 oz/a 1.5 oz/a 32 fl oz/a 2 lb/a		PRE A PRE A 30DAP B 30DAP B			98 a	91 a	99 a	99 a	99 a
7	BOUNDARY ABUNDIT EXTRA AMS	6.5 EC 3 SL 100 SG		1.22 lb ai/a 0.75 lb ae/a 2 lb/a	1.5 pt/a 32 fl oz/a 2 lb/a		PRE A 30DAP B 30DAP B			60 a	30 b	82 b	98 a	99 a
8	FIERCE ABUNDIT EXTRA AMS	76 WG 3 SL 100 SG		0.143 lb ai/a 0.75 lb ae/a 2 lb/a	3 oz/a 32 fl oz/a 2 lb/a		PRE A 30DAP B 30DAP B			98 a	96 a	96 a	99 a	99 a
9	NONTREATED									0	0	0	0	0
LSD (P=.05)							33.0	35.5	5.2	1.4	3.2	0.4	7.7	0.0
Standard Deviation							18.8	20.3	3.0	0.8	1.8	0.2	4.4	0.0
CV							20.18	24.16	3.09	0.83	1.87	0.21	4.51	0.0
Replicate F							0.744	0.450	0.655	1.000	1.000	1.000	0.581	0.000
Replicate Prob(F)							0.4930	0.6467	0.5345	0.3927	0.3927	0.3927	0.5723	1.0000
Treatment F							1.538	3.542	11.992	1.000	4.000	1.000	0.843	0.000
Treatment Prob(F)							0.2333	0.0210	0.0001	0.4706	0.0131	0.4706	0.5708	1.0000

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Trial Comments

1. Protocol: DuPont (USA-14-114).
2. Ratings: CI 14 and 28 DA-A, CI 28 DA-B; WC 14 and 28 DA-A, WC 28 DA-B.
3. Yield not requested.
4. Following the PRE application the first significant rainfall event was 0.49 inch the next day.
Following the 30DAP application the first significant rainfall event was 1.38 inch beginning the same day.
5. Not harvested.