

Weed Control Programs with Instigate in the North-East and Central Regions.

Trial ID: 14-21S-M40 Location: Belleville Res. Center Trial Year: 2014
Investigator: Ronald F. Krausz

Trial Status: F one-year/final Initiation Date: 5-11-14 Completion Date: 7-4-14		Trial Location
City: Belleville	Country: USA	
State/Prov.: Illinois IL		
Postal Code: 62221		

Objectives: Evaluate weed control and crop response with Instigate used in a program approach.
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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 1: ZEAMD Zea mays indentata Variety: DKC 63-33 Description: SS RIB Planting Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN Row Spacing, Unit: 30 IN	Dent corn BBCH Scale: BCOR Planting Date: 5-11-14 Planting Method: SEEDED	Crop Description
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Pest 1 Type: W Code: SETFA <i>Setaria faberi</i> Herrm. Common Name: foxtail, giant Pest 2 Type: W Code: AMBTR <i>Ambrosia trifida</i> L. Common Name: ragweed, giant Pest 3 Type: W Code: ABUTH <i>Abutilon theophrasti</i> Medik. Common Name: velvetleaf 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 Description
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Treated Plot Width: 7.5 FT Total Plot Width: 10 FT Treated Plot Length: 30 FT Total Plot Length: 30 FT Replications: 4 Untreated Arrangement: INCLUDED single control randomized in each block	Site and Design Site Type: FIELD Experimental Unit: 1 PLOT Tillage Type: REDTIL reduced-till Study Design: RACOB L Randomized Complete Block (RCB)
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No.	Previous Crop	Year
1.	GLXMA	2013

<table border="1"> <thead> <tr> <th>No.</th> <th>Maintenance Product Name</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A</td> </tr> <tr> <td>2.</td> <td></td> </tr> </tbody> </table>	No.	Maintenance Product Name	1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A	2.		Maintenance
No.	Maintenance Product Name						
1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A						
2.							

% OM: 3 Texture: SIL silt loam pH: 6.5 Soil Name: Be halto CEC: 12	Soil Description
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Element	Quantity	Unit
P1	40	lb/A
K	318	lb/A

Overall Moisture Conditions: NORMAL Closest Weather Station: ICN - Belleville IL	Moisture and Weather Conditions 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:	5-12-14	6-6-14
Appl. Start Time:	19:00	15:00
Appl. Stop Time:	19:30	15:20
Application Method:	Spray	Spray
Application Timing:	PRE	28DAP
Application Placement:	BROSOI	BROFOL
Applied By:	RJW	LXF
Air Temperature, Unit:	77 F	81 F
% Relative Humidity:	79	60
Wind Velocity, Unit:	10 MPH	3 MPH
Wind Direction:	S	E
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	68 F	72 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	0	90
Next Moisture Occurred On:	5-13-14	6-7-14
Time to Next Moisture, Unit:	6 HR	26 HR

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	A	B
Crop 1 Code, BBCH Scale:	ZEAMD	ZEAMD
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V5
Stage Minimum, Percent:		V5
Stage Maximum, Percent:		V5
Height, Unit:		18 IN
Height Minimum, Maximum:		16 18

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:	NA	5
Stage Minimum, Percent:		3
Stage Maximum, Percent:		6
Height, Unit:		3 IN
Height Minimum, Maximum:		2 4
Density, Unit:		0.1 FT2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		2
Stage Maximum, Percent:		6
Height, Unit:		4 IN
Height Minimum, Maximum:		2 6
Density, Unit:		0.1 FT2
Pest 3 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		2
Stage Maximum, Percent:		6
Height, Unit:		3 IN
Height Minimum, Maximum:		1 4
Density, Unit:		0.05 FT2
Pest 4 Code, Type, Scale:	IPOHE W	IPOHE W
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		0.5
Stage Maximum, Percent:		6
Height, Unit:		2 IN
Height Minimum, Maximum:		1 3
Density, Unit:		1 FT2
Pest 5 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							ZEAMD 5-25-14 Injury Percent 14 DAP 13 DA-A	ZEAMD 6-6-14 Injury Percen 26 DAP 0 DA-B	ZEAMD 7-4-14 Injury Percen 28 DA-B	SETFA 5-25-14 Control Percent 14 DAP 13 DA-A	SETFA 6-6-14 Control Percen 26 DAP 0 DA-B	SETFA 7-4-14 Control Percen 28 DA-B	
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1 INSTIGATE CINCH ATZ ABUNDIT EXTRA AMS	45.84 WG 5.5 SC 3 SL 100 SG		0.172 lb ai/a 2.06 lb ai/a 0.75 lb ae/a 2 lb/a	6 oz/a 3 pt/a 32 fl oz/a 2 lb/a		PRE A PRE A 28DAP B 28DAP B		0 a	0 a	0 a	99 a	92 bc	99 a
2 INSTIGATE CINCH ATZ AATREX 4L ABUNDIT EXTRA AMS	45.84 WG 5.5 SC 4 SC 3 SL 100 SG		0.172 lb ai/a 2.06 lb ai/a 1 lb ai/a 0.75 lb ae/a 2 lb/a	6 oz/a 3 pt/a 1 qt/a 32 fl oz/a 2 lb/a		PRE A PRE A 28DAP B 28DAP B 28DAP B		0 a	0 a	0 a	99 a	95 ab	99 a
3 INSTIGATE CINCH ATZ REALM Q ABUNDIT EXTRA AMS	45.84 WG 5.5 SC 38.75 WG 3 SL 100 SG		0.172 lb ai/a 2.06 lb ai/a 0.097 lb ai/a 0.75 lb ae/a 2 lb/a	6 oz/a 3 pt/a 4 oz/a 32 fl oz/a 2 lb/a		PRE A PRE A 28DAP B 28DAP B 28DAP B		0 a	0 a	0 a	99 a	90 c	99 a
4 INSTIGATE BREAKFREE NXT ATZ ABUNDIT EXTRA AMS	45.84 WG 5.6 SC 3 SL 100 SG		0.172 lb ai/a 2.1 lb ai/a 0.75 lb ae/a 2 lb/a	6 oz/a 3 pt/a 32 fl oz/a 2 lb/a		PRE A PRE A 28DAP B 28DAP B		0 a	0 a	0 a	99 a	98 a	99 a
5 INSTIGATE BREAKFREE NXT ATZ AATREX 4L ABUNDIT EXTRA AMS	45.84 WG 5.6 SC 4 SC 3 SL 100 SG		0.172 lb ai/a 2.1 lb ai/a 1 lb ai/a 0.75 lb ae/a 2 lb/a	6 oz/a 3 pt/a 1 qt/a 32 fl oz/a 2 lb/a		PRE A PRE A 28DAP B 28DAP B 28DAP B		0 a	0 a	0 a	99 a	98 a	99 a
6 INSTIGATE BREAKFREE NXT ATZ REALM Q ABUNDIT EXTRA AMS	45.84 WG 5.6 SC 38.75 WG 3 SL 100 SG		0.172 lb ai/a 2.1 lb ai/a 0.097 lb ai/a 0.75 lb ae/a 2 lb/a	6 oz/a 3 pt/a 4 oz/a 32 fl oz/a 2 lb/a		PRE A PRE A 28DAP B 28DAP B 28DAP B		0 a	0 a	0 a	99 a	98 a	99 a
7 LUMAX ABUNDIT EXTRA AMS	3.948 SE 3 SL 100 SG		2.96 lb ai/a 0.75 lb ae/a 2 lb/a	3 qt/a 32 fl oz/a 2 lb/a		PRE A 28DAP B 28DAP B		0 a	0 a	0 a	99 a	93 bc	99 a
8 NONTREATED								0	0	0	0	0	0
LSD (P=.05)								0.0	0.0	0.0	0.6	4.0	0.0
Standard Deviation								0.0	0.0	0.0	0.4	2.7	0.0
CV								0.0	0.0	0.0	0.4	2.82	0.0
Replicate F								0.000	0.000	0.000	1.538	2.178	0.000
Replicate Prob(F)								1.0000	1.0000	1.0000	0.2389	0.1259	1.0000
Treatment F								0.000	0.000	0.000	1.308	5.713	0.000
Treatment Prob(F)								1.0000	1.0000	1.0000	0.3036	0.0018	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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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval			AMBTR	AMBTR	AMBTR	ABUTH	ABUTH	ABUTH
			5-25-14 Control Percent 14 DAP 13 DA-A	6-6-14 Control Percent 26 DAP 0 DA-B	7-4-14 Control Percent 28 DA-B	5-25-14 Control Percent 14 DAP 13 DA-A	6-6-14 Control Percent 26 DAP 0 DA-B	7-4-14 Control Percent 28 DA-B
Trt Treatment No. Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
1 INSTIGATE CINCH ATZ ABUNDIT EXTRA AMS	45.84 WG 5.5 SC 3 SL 100 SG		0.172 lb ai/a 2.06 lb ai/a 0.75 lb ae/a 2 lb/a	6 oz/a 3 pt/a 32 fl oz/a 2 lb/a		PRE A PRE A 28DAP B 28DAP B		99 a 99 a 99 a 99 a
2 INSTIGATE CINCH ATZ AATREX 4L ABUNDIT EXTRA AMS	45.84 WG 5.5 SC 4 SC 3 SL 100 SG		0.172 lb ai/a 2.06 lb ai/a 1 lb ai/a 0.75 lb ae/a 2 lb/a	6 oz/a 3 pt/a 1 qt/a 32 fl oz/a 2 lb/a		PRE A PRE A 28DAP B 28DAP B 28DAP B		99 a 98 a 99 a 99 a 99 a
3 INSTIGATE CINCH ATZ REALM Q ABUNDIT EXTRA AMS	45.84 WG 5.5 SC 38.75 WG 3 SL 100 SG		0.172 lb ai/a 2.06 lb ai/a 0.097 lb ai/a 0.75 lb ae/a 2 lb/a	6 oz/a 3 pt/a 4 oz/a 32 fl oz/a 2 lb/a		PRE A PRE A 28DAP B 28DAP B 28DAP B		99 a 99 a 99 a 99 a 99 a
4 INSTIGATE BREAKFREE NXT ATZ ABUNDIT EXTRA AMS	45.84 WG 5.6 SC 3 SL 100 SG		0.172 lb ai/a 2.1 lb ai/a 0.75 lb ae/a 2 lb/a	6 oz/a 3 pt/a 32 fl oz/a 2 lb/a		PRE A PRE A 28DAP B 28DAP B		99 a 99 a 99 a 99 a
5 INSTIGATE BREAKFREE NXT ATZ AATREX 4L ABUNDIT EXTRA AMS	45.84 WG 5.6 SC 4 SC 3 SL 100 SG		0.172 lb ai/a 2.1 lb ai/a 1 lb ai/a 0.75 lb ae/a 2 lb/a	6 oz/a 3 pt/a 1 qt/a 32 fl oz/a 2 lb/a		PRE A PRE A 28DAP B 28DAP B 28DAP B		99 a 99 a 99 a 99 a 99 a
6 INSTIGATE BREAKFREE NXT ATZ REALM Q ABUNDIT EXTRA AMS	45.84 WG 5.6 SC 38.75 WG 3 SL 100 SG		0.172 lb ai/a 2.1 lb ai/a 0.097 lb ai/a 0.75 lb ae/a 2 lb/a	6 oz/a 3 pt/a 4 oz/a 32 fl oz/a 2 lb/a		PRE A PRE A 28DAP B 28DAP B 28DAP B		99 a 99 a 99 a 99 a 99 a
7 LUMAX ABUNDIT EXTRA AMS	3.948 SE 3 SL 100 SG		2.96 lb ai/a 0.75 lb ae/a 2 lb/a	3 qt/a 32 fl oz/a 2 lb/a		PRE A 28DAP B 28DAP B		95 b 93 a 99 a 99 b 99 a 99 a
8 NONTREATED								0 0 0 0 0 0
LSD (P=.05)								2.9 3.9 0.0 0.3 0.3 0.0
Standard Deviation								2.0 2.6 0.0 0.2 0.2 0.0
CV								1.99 2.69 0.0 0.22 0.19 0.0
Replicate F								1.131 1.528 0.000 1.000 1.000 0.000
Replicate Prob(F)								0.3631 0.2413 1.0000 0.4155 0.4155 1.0000
Treatment F								2.981 2.647 0.000 3.000 1.000 0.000
Treatment Prob(F)								0.0335 0.0509 1.0000 0.0327 0.4552 1.0000

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	5-25-14 Control Percent 14 DAP 13 DA-A		6-6-14 Control Percent 26 DAP 0 DA-B		7-4-14 Control Percen 28 DA-B		5-25-14 Control Percen 14 DAP 13 DA-A	6-6-14 Control Percent 26 DAP 0 DA-B	7-4-14 Control Percent 28 DA-B
Trt Treatment No. Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate	Growth Unit	Appl Stage	Code	
1 INSTIGATE CINCH ATZ ABUNDIT EXTRA AMS	45.84 WG 5.5 SC 3 SL 100 SG		0.172 lb ai/a 2.06 lb ai/a 0.75 lb ae/a 2 lb/a		6 oz/a 3 pt/a 32 fl oz/a 2 lb/a	PRE PRE 28DAP 28DAP	A A B B		99 a 99 a 99 a 99 a
2 INSTIGATE CINCH ATZ AATREX 4L ABUNDIT EXTRA AMS	45.84 WG 5.5 SC 4 SC 3 SL 100 SG		0.172 lb ai/a 2.06 lb ai/a 1 lb ai/a 0.75 lb ae/a 2 lb/a		6 oz/a 3 pt/a 1 qt/a 32 fl oz/a 2 lb/a	PRE PRE 28DAP 28DAP 28DAP	A A B B B		99 a 89 b 99 a 99 a 99 a
3 INSTIGATE CINCH ATZ REALM Q ABUNDIT EXTRA AMS	45.84 WG 5.5 SC 38.75 WG 3 SL 100 SG		0.172 lb ai/a 2.06 lb ai/a 0.097 lb ai/a 0.75 lb ae/a 2 lb/a		6 oz/a 3 pt/a 4 oz/a 32 fl oz/a 2 lb/a	PRE PRE 28DAP 28DAP 28DAP	A A B B B		99 a 89 b 99 a 99 a 99 a
4 INSTIGATE BREAKFREE NXT ATZ ABUNDIT EXTRA AMS	45.84 WG 5.6 SC 3 SL 100 SG		0.172 lb ai/a 2.1 lb ai/a 0.75 lb ae/a 2 lb/a		6 oz/a 3 pt/a 32 fl oz/a 2 lb/a	PRE PRE 28DAP 28DAP	A A B B		99 a 90 ab 99 a 99 a 99 a
5 INSTIGATE BREAKFREE NXT ATZ AATREX 4L ABUNDIT EXTRA AMS	45.84 WG 5.6 SC 4 SC 3 SL 100 SG		0.172 lb ai/a 2.1 lb ai/a 1 lb ai/a 0.75 lb ae/a 2 lb/a		6 oz/a 3 pt/a 1 qt/a 32 fl oz/a 2 lb/a	PRE PRE 28DAP 28DAP 28DAP	A A B B B		99 a 95 a 99 a 99 a 99 a
6 INSTIGATE BREAKFREE NXT ATZ REALM Q ABUNDIT EXTRA AMS	45.84 WG 5.6 SC 38.75 WG 3 SL 100 SG		0.172 lb ai/a 2.1 lb ai/a 0.097 lb ai/a 0.75 lb ae/a 2 lb/a		6 oz/a 3 pt/a 4 oz/a 32 fl oz/a 2 lb/a	PRE PRE 28DAP 28DAP 28DAP	A A B B B		99 a 93 ab 99 a 99 a 99 a
7 LUMAX ABUNDIT EXTRA AMS	3.948 SE 3 SL 100 SG		2.96 lb ai/a 0.75 lb ae/a 2 lb/a		3 qt/a 32 fl oz/a 2 lb/a	PRE 28DAP 28DAP	A B B		89 b 78 c 95 a 99 a 99 a 99 a
8 NONTREATED									0 0 0 0 0 0
LSD (P=.05)			1.4		5.3	0.0	0.0	0.0	0.0
Standard Deviation			0.9		3.5	0.0	0.0	0.0	0.0
CV			0.94		3.98	0.0	0.0	0.0	0.0
Replicate F			2.100		0.079	0.000	0.000	0.000	0.000
Replicate Prob(F)			0.1360		0.9706	1.0000	1.0000	1.0000	1.0000
Treatment F			70.943		9.567	0.000	0.000	0.000	0.000
Treatment Prob(F)			0.0001		0.0001	1.0000	1.0000	1.0000	1.0000

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Trial Comments

1. Protocol: DuPont (USA-14-009).
2. Ratings: CI 14 and 28 DAP, WC 14 and 28 DAP (but before POST application), and 28 DA-B.
3. Yield not requested.
4. Report data in early September.
5. Following the PRE application the first rainfall event was 0.88 inch within 4 days.
Following the 28DAP application the first significant rainfall event was 2.05 inch over the next 6 days.
6. Not harvested.