

Southern Illinois University

Instigate Evaluation in Corn.

Trial ID: 12-2A-ME50

Location: Belleville Res. Center

Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-16-12

Trial Location

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

Objectives:

Evaluate the performance of Instigate weed control programs in corn.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-16-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** XANST - Xanthium strumarium L.
Common Name: cocklebur, common

Pest 3 Type: W **Code:** AMBEL - Ambrosia artemisiifolia L.
Common Name: ragweed, common

Pest 4 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P205 50 LB/A, K20 150 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 5.9 **Soil Name:** PIERRON
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	41	LB/A
K	257	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

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Application Description				
	A		B	
Application Date:	5-17-12		6-13-12	
Time of Day:	17:30		9:45	
Application Method:	Spray		Spray	
Application Timing:	PRE		28DAP	
Application Placement:	BROFOL		BROFOL	
Applied By:	LAH		JRK	
Air Temperature, Unit:	80	F	73	F
% Relative Humidity:	28		41	
Wind Velocity, Unit:	6	MPH	4	MPH
Wind Direction:	E		E	
Dew Presence (Y/N):	N no		N no	
Soil Temperature, Unit:	61	F	72	F
Soil Moisture:	BELNOR		NORMAL	
% Cloud Cover:	30		15	
Next Rain Occurred On:	5-20-12		6-16-12	

Crop Stage At Each Application				
	A		B	
Crop 1 Code, BBCH Scale:	ZEAMD BCOR		ZEAMD BCOR	
Stage Scale Used:	DESC		DESC	
Stage Majority, Percent:	NA		V6	
Stage Minimum, Percent:			V5	
Stage Maximum, Percent:			V6	
Height, Unit:			22	IN
Height Minimum, Maximum:			17	22

Pest Stage At Each Application				
	A		B	
Pest 1 Code, Type, Scale:	SETFA	W DESC	SETFA	W DESC
Stage Majority, Percent:	NA		6	
Stage Minimum, Percent:			1	
Stage Maximum, Percent:			10	
Height, Unit:			4	IN
Height Minimum, Maximum:			1	6
Density, Unit:			1	FT2
Pest 2 Code, Type, Scale:	XANST	W DESC	XANST	W DESC
Stage Majority, Percent:	NA		6	
Stage Minimum, Percent:			2	
Stage Maximum, Percent:			12	
Height, Unit:			4	IN
Height Minimum, Maximum:			1	5
Density, Unit:			0.1	FT2
Pest 3 Code, Type, Scale:	AMBEL	W DESC	AMBEL	W DESC
Stage Majority, Percent:	NA		4	
Stage Minimum, Percent:			2	
Stage Maximum, Percent:			10	
Height, Unit:			3	IN
Height Minimum, Maximum:			1	6
Density, Unit:			0.3	FT2
Pest 4 Code, Type, Scale:	AMATA	W DESC	AMATA	W DESC
Stage Majority, Percent:	NA		6	
Stage Minimum, Percent:			2	
Stage Maximum, Percent:			10	
Height, Unit:			4	IN
Height Minimum, Maximum:			1	7
Density, Unit:			0.1	FT2

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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 5-30-12 Injury Percent 14 DAP 13 DA-A	ZEAMD 6-13-12 Injury Percent 28 DAP 0 DA-B	ZEAMD 6-20-12 Injury Percent 7 DA-B	ZEAMD 7-11-12 Injury Percent 28 DA-B	SETFA 5-30-12 Control Percent 14 DAP 13 DA-A	SETFA 6-13-12 Control Percent 28 DAP 0 DA-B	SETFA 7-11-12 Control Percent 28 DA-B	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 b	0 a	
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B					
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B					
2	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	8 a	0 a	
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	28DAP	B					
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B					
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B					
3	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 b	0 a	
	CINCH ATZ	5.5	SC	1.38	lb ai/a	2	pt/a	PRE	A					
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B					
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B					
4	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 b	0 a	
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A					
5	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 b	0 a	
	CINCH ATZ	5.5	SC	2.75	lb ai/a	4	pt/a	PRE	A					
6	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	9 a	0 a	
	CINCH	7.64	SC	1.91	lb ai/a	2	pt/a	PRE	A					
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	28DAP	B					
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B					
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B					
7	LUMAX	3.95	SE	2.96	lb ai/a	3	qt/a	PRE	A	0 a	0 a	0 b	0 a	
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B					
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B					
8	NONTREATED										0 a	0 a	0 b	0 a
9	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 b	0 a	
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B					
	AATREX	4	SC	1	lb ai/a	1	qt/a	28DAP	B					
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B					
10	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 b	0 a	
	CINCH ATZ	5.5	SC	1.38	lb ai/a	2	pt/a	PRE	A					
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B					
	AATREX	4	SC	1	lb ai/a	1	qt/a	28DAP	B					
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B					
LSD (P=.05)							0.0	0.0	1.4	0.0	10.5	30.6	20.2	
Standard Deviation							0.0	0.0	0.8	0.0	6.1	17.8	11.8	
CV							0.0	0.0	48.03	0.0	8.15	25.62	14.22	
Replicate F							0.000	0.000	0.000	0.000	5.521	0.968	0.274	
Replicate Prob(F)							1.0000	1.0000	1.0000	1.0000	0.0135	0.3986	0.7632	
Treatment F							0.000	0.000	58.050	0.000	61.360	7.681	22.015	
Treatment Prob(F)							1.0000	1.0000	0.0001	1.0000	0.0001	0.0001	0.0001	

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	XANST	XANST	XANST	AMBEL	AMBEL	AMBEL								
Crop Code														
Rating Date	5-30-12	6-13-12	7-11-12	5-30-12	6-13-12	7-11-12								
Rating Type	Control	Control	Control	Control	Control	Control								
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent								
Rating Timing	14 DAP	28 DAP	14 DAP	14 DAP	28 DAP	28 DAP								
Trt-Eval Interval	13 DA-A	0 DA-B	28 DA-B	13 DA-A	0 DA-B	28 DA-B								
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Rate	Growth Stage	Appl Code						
1	INSTIGATE	45.84	WG	0.172	lb ai/a	6 oz/a	PRE	A	77 a-d	72 a	99 a	95 a	95 a	99 a
	AATREX	4	SC	1	lb ai/a	1 qt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32 fl oz/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92 % v/v	28DAP	B						
2	INSTIGATE	45.84	WG	0.172	lb ai/a	6 oz/a	PRE	A	63 bcd	67 a	99 a	95 a	93 a	99 a
	AATREX	4	SC	1	lb ai/a	1 qt/a	PRE	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4 oz/a	28DAP	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32 fl oz/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92 % v/v	28DAP	B						
3	INSTIGATE	45.84	WG	0.172	lb ai/a	6 oz/a	PRE	A	67 a-d	58 a	99 a	95 a	95 a	99 a
	CINCH ATZ	5.5	SC	1.38	lb ai/a	2 pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32 fl oz/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92 % v/v	28DAP	B						
4	INSTIGATE	45.84	WG	0.172	lb ai/a	6 oz/a	PRE	A	82 ab	83 a	60 b	91 a	91 a	60 c
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3 pt/a	PRE	A						
5	INSTIGATE	45.84	WG	0.172	lb ai/a	6 oz/a	PRE	A	87 a	86 a	65 b	98 a	96 a	83 b
	CINCH ATZ	5.5	SC	2.75	lb ai/a	4 pt/a	PRE	A						
6	INSTIGATE	45.84	WG	0.172	lb ai/a	6 oz/a	PRE	A	80 abc	80 a	99 a	63 b	71 b	98 a
	CINCH	7.64	SC	1.91	lb ai/a	2 pt/a	PRE	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4 oz/a	28DAP	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32 fl oz/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92 % v/v	28DAP	B						
7	LUMAX	3.95	SE	2.96	lb ai/a	3 qt/a	PRE	A	84 ab	86 a	99 a	96 a	97 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32 fl oz/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92 % v/v	28DAP	B						
8	NONTREATED								0 e	0 b	0 c	0 c	0 c	0 d
9	INSTIGATE	45.84	WG	0.172	lb ai/a	6 oz/a	PRE	A	58 cd	63 a	99 a	96 a	95 a	99 a
	AATREX	4	SC	1	lb ai/a	1 qt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32 fl oz/a	28DAP	B						
	AATREX	4	SC	1	lb ai/a	1 qt/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92 % v/v	28DAP	B						
10	INSTIGATE	45.84	WG	0.172	lb ai/a	6 oz/a	PRE	A	57 d	67 a	99 a	87 a	85 ab	99 a
	CINCH ATZ	5.5	SC	1.38	lb ai/a	2 pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32 fl oz/a	28DAP	B						
	AATREX	4	SC	1	lb ai/a	1 qt/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92 % v/v	28DAP	B						
LSD (P=.05)	23.3	35.5	13.7	13.7	13.8	13.7								
Standard Deviation	13.6	20.7	8.0	8.0	8.1	8.0								
CV	20.74	31.34	9.75	9.8	9.86	9.57								
Replicate F	1.357	0.006	1.218	2.240	5.347	1.858								
Replicate Prob(F)	0.2826	0.9939	0.3190	0.1353	0.0150	0.1847								
Treatment F	10.561	4.443	49.884	43.436	40.815	47.953								
Treatment Prob(F)	0.0001	0.0035	0.0001	0.0001	0.0001	0.0001								

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								AMATA	AMATA	AMATA			
								5-30-12 Control Percent 14 DAP 13 DA-A	6-13-12 Control Percent 28 DAP 0 DA-B	7-11-12 Control Percent 28 DA-B			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Unit	Growth Stage	Appl Code				
1	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	96 a	99 a	99 a	
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B				
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B				
2	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	96 a	96 a	99 a	
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	28DAP	B				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B				
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B				
3	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	96 a	96 a	99 a	
	CINCH ATZ	5.5	SC	1.38	lb ai/a	2	pt/a	PRE	A				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B				
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B				
4	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	98 a	98 a	90 b	
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A				
5	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	99 a	96 a	
	CINCH ATZ	5.5	SC	2.75	lb ai/a	4	pt/a	PRE	A				
6	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	96 a	96 a	99 a	
	CINCH	7.64	SC	1.91	lb ai/a	2	pt/a	PRE	A				
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	28DAP	B				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B				
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B				
7	LUMAX	3.95	SE	2.96	lb ai/a	3	qt/a	PRE	A	99 a	99 a	99 a	
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B				
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B				
8	NONTREATED										0 b	0 b	0 c
9	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	98 a	96 a	99 a	
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B				
	AATREX	4	SC	1	lb ai/a	1	qt/a	28DAP	B				
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B				
10	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	97 a	98 a	99 a	
	CINCH ATZ	5.5	SC	1.38	lb ai/a	2	pt/a	PRE	A				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B				
	AATREX	4	SC	1	lb ai/a	1	qt/a	28DAP	B				
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B				
LSD (P=.05)								4.6	4.5	5.6			
Standard Deviation								2.7	2.6	3.3			
CV								3.09	3.02	3.73			
Replicate F								1.320	1.773	1.898			
Replicate Prob(F)								0.2919	0.1982	0.1787			
Treatment F								389.600	408.045	268.037			
Treatment Prob(F)								0.0001	0.0001	0.0001			

Instigate Evaluation in Corn.

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Trial Comments

1. Protocol: DuPont (USA-12-004).
2. Ratings: CI at 7 DA-B; CI/WC at 14 and 28 DAP and at 28 DA-B.
3. Rainfall following the PRE application was 0.1 inch 3 days later and 0.3 inch 13 days later.
4. Not harvested.