

Ignite-Based Programs in Liberty Link Corn.

Trial ID: 08-11B-W60 Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Belleville IL 62221 USA
 Trial Status: FINAL Initiation Date: 06-15-08

Objectives: Compare the efficacy of tank-mix partners and weed control programs with a new glufosinate formulation, Ignite, in Liberty Link corn.

Crop 1: ZEAMD Dent corn Variety: P33K44
 Planting Method: SEEDED Planting Date: 06-15-08
 Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: SETFA Setaria faberi Herrm. foxtail, giant
 Pest 2 Type: W Code: CYPES Cyperus esculentus L. nutsedge, yellow
 Pest 3 Type: W Code: IPOHE Ipomoea hederacea (L.) jacq. morningglory, annual
 Pest 4 Type: W Code: ABUTH Abutilon theophrasti Medicus velvetleaf

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 26 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. GLXMA 2007

Field Prep./Maintenance: N 150 LB/A, P2O5 0 LB/A, K2O 100 LB/A

% OM: 2.3 Texture: SILT LOAM
 pH: 6.1 Soil Name: BETHALTO
 CEC: 12 Fert. Level: P1 87 LB/A, K 446 LB/A

Application Description

	A	B	C
Application Date:	06-16-08	07-01-08	07-04-08
Time of Day:	11:00	11:45	10:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	1-2"W	2-4"W
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	TGM	TGM	BGY
Air Temperature, Unit:	80 F	82 F	69 F
% Relative Humidity:	60	42	92
Wind Velocity, Unit:	1 MPH	5 MPH	3 MPH
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	75 F	79 F	83 F
Soil Moisture:	ABONOR	NORMAL	ABONOR
% Cloud Cover:	90	5	80

	06-16-08	07-01-08	07-04-08
Crop stage at application:	NA	V4	V5
Height Min, Max (inch):		10 12	12 14

Pest Stage At Each Application

	06-16-08	07-01-08	07-04-08
Application Date:	06-16-08	07-01-08	07-04-08
Weed Code:	SETFA	SETFA	SETFA
Stage Majority (leaves):	NA	3	3
Stage Min, Max:		1 4	1 4
Height Majority:		2 IN	3 IN
Height Min, Max:		1.5 4	0.5 4
Density, Unit:		6 FT2	6 FT2
Weed Code:	CYPES	CYPES	CYPES
Stage Majority (leaves):	NA	3	4
Stage Min, Max:		2 4	2 6
Height Majority:		3 IN	3.5 IN
Height Min, Max:		2 5	2 6
Density, Unit:		4 FT2	4 FT2
Weed Code:	IPOHE	IPOHE	IPOHE
Stage Majority (leaves):	NA	2	1
Stage Min, Max:		COTY 2	COTY 2
Height Majority:		2 IN	2 IN
Height Min, Max:		1 2	0.5 3
Density, Unit:		0.5 FT2	1 FT2
Weed Code:	ABUTH	ABUTH	ABUTH
Stage Majority (leaves):	NA	2	2
Stage Min, Max:		COTY 3	COTY 4
Height Majority:		2 IN	2.5 IN
Height Min, Max:		1 2.5	0.5 5
Density, Unit:		1 FT2	2 FT2

Application Equipment

	CO2 sprayer	CO2 sprayer	CO2 sprayer
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	30 PSI	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

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								ZEAMD	ZEAMD	ZEAMD	SETFA	SETFA	SETFA	
								06-30-08	07-15-08	08-08-08	06-30-08	07-15-08	08-08-08	
								Injury	Injury	Injury	Control	Control	Control	
								Percent	Percent	Percent	Percent	Percent	Percent	
									14 DAT		14 DAT			
								-1 DA-B		35 DA-C	-1 DA-B		35 DA-C	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	NONTREATED								0 a	0 a	0 a	0 e	0 c	0 d
2	BALANCE FLEXX	2 SC		0.047 lb ai/a		3 fl oz/a	PRE	A	0 a	0 a	0 a	67 c	99 a	96 ab
3	AATREX NINE-O	90 WG		1 lb ai/a		1.11 lb/a	PRE	A						
2	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	2-4"W	C						
2	LAUDIS	3.5 SC		0.0547 lb ai/a		2 fl oz/a	2-4"W	C						
2	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
3	BALANCE FLEXX	2 SC		0.047 lb ai/a		3 fl oz/a	PRE	A	0 a	0 a	0 a	67 c	99 a	95 ab
3	AATREX NINE-O	90 WG		1 lb ai/a		1.11 lb/a	PRE	A						
3	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	2-4"W	C						
3	AATREX NINE-O	90 WG		1 lb ai/a		1.11 lb/a	2-4"W	C						
3	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
4	RADIUS	4 SC		0.313 lb ai/a		10 fl oz/a	PRE	A	0 a	0 a	0 a	77 b	99 a	98 ab
4	AATREX NINE-O	90 WG		1 lb ai/a		1.11 lb/a	PRE	A						
4	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	2-4"W	C						
4	LAUDIS	3.5 SC		0.0547 lb ai/a		2 fl oz/a	2-4"W	C						
4	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
5	CORVUS	2.62 SC		0.0614 lb ai/a		3 fl oz/a	PRE	A	0 a	0 a	0 a	50 d	99 a	95 ab
5	AATREX NINE-O	90 WG		1 lb ai/a		1.11 lb/a	PRE	A						
5	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	2-4"W	C						
5	LAUDIS	3.5 SC		0.0547 lb ai/a		2 fl oz/a	2-4"W	C						
5	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
6	AATREX NINE-O	90 WG		1 lb ai/a		1.11 lb/a	PRE	A	0 a	0 a	0 a	57 d	99 a	87 c
6	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	2-4"W	C						
6	LAUDIS	3.5 SC		0.0547 lb ai/a		2 fl oz/a	2-4"W	C						
6	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
7	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	1-2"W	B		0 a	0 a		99 a	95 ab
7	LAUDIS	3.5 SC		0.082 lb ai/a		3 fl oz/a	1-2"W	B						
7	AATREX NINE-O	90 WG		1.5 lb ai/a		1.67 lb/a	1-2"W	B						
7	N-PAK AMS	100 SL		5 % v/v		5 % v/v	1-2"W	B						
8	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	1-2"W	B		0 a	0 a		99 a	94 b
8	CAPRENO	3.45 SC		0.081 lb ai/a		3 fl oz/a	1-2"W	B						
8	N-PAK AMS	100 SL		5 % v/v		5 % v/v	1-2"W	B						
9	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	1-2"W	B		0 a	0 a		99 a	98 a
9	CAPRENO	3.45 SC		0.081 lb ai/a		3 fl oz/a	1-2"W	B						
9	AATREX NINE-O	90 WG		1.5 lb ai/a		1.67 lb/a	1-2"W	B						
9	N-PAK AMS	100 SL		5 % v/v		5 % v/v	1-2"W	B						
10	DEGREE XTRA	4.04 CS		2 lb ai/a		2 qt/a	PRE	A	0 a	0 a	0 a	99 a	99 a	96 ab
10	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	2-4"W	C						
10	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
11	DEGREE XTRA	4.04 CS		2 lb ai/a		2 qt/a	PRE	A	0 a	0 a	0 a	94 a	66 b	97 ab
11	ROUNDUP P-MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a	2-4"W	C						
11	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
LSD (P=.05)									0.0	0.0	0.0	8.9	29.4	3.6
Replicate F									0.000	0.000	0.000	2.786	0.978	0.379
Replicate Prob(F)									1.0000	1.0000	1.0000	0.0958	0.3933	0.6895
Treatment F									0.000	0.000	0.000	111.416	9.363	548.338
Treatment Prob(F)									1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

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Location: Belleville Res. Center

								CYPES	CYPES	CYPES	IPOHE	IPOHE	IPOHE	
								06-30-08	07-15-08	08-08-08	06-30-08	07-15-08	08-08-08	
								Control	Control	Control	Control	Control	Control	
								Percent	Percent	Percent	Percent	Percent	Percent	
								14 DAT	14 DAT	14 DAT	14 DAT	14 DAT	14 DAT	
								-1 DA-B		35 DA-C	-1 DA-B		35 DA-C	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	NONTREATED								0 d	0 d	0 d	0 d	0 d	0 e
2	BALANCE FLEXX	2 SC		0.047 lb ai/a		3 fl oz/a	PRE	A	33 c	87 c	85 b	47 bc	98 a	96 ab
3	AATREX NINE-O	90 WG		1 lb ai/a		1.11 lb/a	PRE	A						
2	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	2-4"W	C						
2	LAUDIS	3.5 SC		0.0547 lb ai/a		2 fl oz/a	2-4"W	C						
2	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
3	BALANCE FLEXX	2 SC		0.047 lb ai/a		3 fl oz/a	PRE	A	37 c	92 ab	89 ab	45 bc	98 a	96 ab
3	AATREX NINE-O	90 WG		1 lb ai/a		1.11 lb/a	PRE	A						
3	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	2-4"W	C						
3	AATREX NINE-O	90 WG		1 lb ai/a		1.11 lb/a	2-4"W	C						
3	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
4	RADIUS	4 SC		0.313 lb ai/a		10 fl oz/a	PRE	A	63 a	88 bc	88 ab	43 bc	98 a	95 ab
4	AATREX NINE-O	90 WG		1 lb ai/a		1.11 lb/a	PRE	A						
4	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	2-4"W	C						
4	LAUDIS	3.5 SC		0.0547 lb ai/a		2 fl oz/a	2-4"W	C						
4	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
5	CORVUS	2.62 SC		0.0614 lb ai/a		3 fl oz/a	PRE	A	37 c	88 bc	88 ab	37 c	98 a	94 ab
5	AATREX NINE-O	90 WG		1 lb ai/a		1.11 lb/a	PRE	A						
5	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	2-4"W	C						
5	LAUDIS	3.5 SC		0.0547 lb ai/a		2 fl oz/a	2-4"W	C						
5	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
6	AATREX NINE-O	90 WG		1 lb ai/a		1.11 lb/a	PRE	A	38 c	88 bc	87 ab	43 bc	98 a	92 bc
6	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	2-4"W	C						
6	LAUDIS	3.5 SC		0.0547 lb ai/a		2 fl oz/a	2-4"W	C						
6	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
7	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	1-2"W	B		95 a	89 ab		99 a	96 ab
7	LAUDIS	3.5 SC		0.082 lb ai/a		3 fl oz/a	1-2"W	B						
7	AATREX NINE-O	90 WG		1.5 lb ai/a		1.67 lb/a	1-2"W	B						
7	N-PAK AMS	100 SL		5 % v/v		5 % v/v	1-2"W	B						
8	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	1-2"W	B		85 c	79 c		80 c	73 d
8	CAPRENO	3.45 SC		0.081 lb ai/a		3 fl oz/a	1-2"W	B						
8	N-PAK AMS	100 SL		5 % v/v		5 % v/v	1-2"W	B						
9	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	1-2"W	B		94 a	91 a		99 a	98 a
9	CAPRENO	3.45 SC		0.081 lb ai/a		3 fl oz/a	1-2"W	B						
9	AATREX NINE-O	90 WG		1.5 lb ai/a		1.67 lb/a	1-2"W	B						
9	N-PAK AMS	100 SL		5 % v/v		5 % v/v	1-2"W	B						
10	DEGREE XTRA	4.04 CS		2 lb ai/a		2 qt/a	PRE	A	53 ab	89 bc	89 ab	52 ab	98 a	88 c
10	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a	2-4"W	C						
10	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
11	DEGREE XTRA	4.04 CS		2 lb ai/a		2 qt/a	PRE	A	50 b	87 c	87 ab	63 a	91 b	88 c
11	ROUNDUP P-MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a	2-4"W	C						
11	N-PAK AMS	100 SL		5 % v/v		5 % v/v	2-4"W	C						
LSD (P=.05)									11.1	4.2	4.8	13.8	3.3	5.5
Replicate F									2.368	0.586	2.629	4.200	1.063	0.484
Replicate Prob(F)									0.1301	0.5656	0.0969	0.0373	0.3640	0.6235
Treatment F									26.584	364.487	259.561	16.257	704.437	229.498
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

Ignite-Based Programs in Liberty Link Corn.

Trial ID: 08-11B-W60

Location: Belleville Res. Center

Pest Code	ABUTH	ABUTH	ABUTH
Crop Code			
Rating Date	06-30-08	07-15-08	08-08-08
Rating Data Type	Control	Control	Control
Rating Unit	Percent	Percent	Percent
Rating Timing		14 DAT	
Trt-Eval Interval	-1 DA-B		35 DA-C

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	NONTREATED									0 e	0 c	0 c
2	BALANCE FLEXX	2 SC		0.047	lb ai/a	3	fl oz/a	PRE	A	63 cd	99 a	99 a
2	AATREX NINE-O	90 WG		1	lb ai/a	1.11	lb/a	PRE	A			
2	IGNITE 280	2.34 EC		0.402	lb ai/a	22	fl oz/a	2-4"W	C			
2	LAUDIS	3.5 SC		0.0547	lb ai/a	2	fl oz/a	2-4"W	C			
2	N-PAK AMS	100 SL		5	% v/v	5	% v/v	2-4"W	C			
3	BALANCE FLEXX	2 SC		0.047	lb ai/a	3	fl oz/a	PRE	A	86 ab	99 a	99 a
3	AATREX NINE-O	90 WG		1	lb ai/a	1.11	lb/a	PRE	A			
3	IGNITE 280	2.34 EC		0.402	lb ai/a	22	fl oz/a	2-4"W	C			
3	AATREX NINE-O	90 WG		1	lb ai/a	1.11	lb/a	2-4"W	C			
3	N-PAK AMS	100 SL		5	% v/v	5	% v/v	2-4"W	C			
4	RADIUS	4 SC		0.313	lb ai/a	10	fl oz/a	PRE	A	82 ab	99 a	99 a
4	AATREX NINE-O	90 WG		1	lb ai/a	1.11	lb/a	PRE	A			
4	IGNITE 280	2.34 EC		0.402	lb ai/a	22	fl oz/a	2-4"W	C			
4	LAUDIS	3.5 SC		0.0547	lb ai/a	2	fl oz/a	2-4"W	C			
4	N-PAK AMS	100 SL		5	% v/v	5	% v/v	2-4"W	C			
5	CORVUS	2.62 SC		0.0614	lb ai/a	3	fl oz/a	PRE	A	94 a	99 a	99 a
5	AATREX NINE-O	90 WG		1	lb ai/a	1.11	lb/a	PRE	A			
5	IGNITE 280	2.34 EC		0.402	lb ai/a	22	fl oz/a	2-4"W	C			
5	LAUDIS	3.5 SC		0.0547	lb ai/a	2	fl oz/a	2-4"W	C			
5	N-PAK AMS	100 SL		5	% v/v	5	% v/v	2-4"W	C			
6	AATREX NINE-O	90 WG		1	lb ai/a	1.11	lb/a	PRE	A	73 bcd	99 a	99 a
6	IGNITE 280	2.34 EC		0.402	lb ai/a	22	fl oz/a	2-4"W	C			
6	LAUDIS	3.5 SC		0.0547	lb ai/a	2	fl oz/a	2-4"W	C			
6	N-PAK AMS	100 SL		5	% v/v	5	% v/v	2-4"W	C			
7	IGNITE 280	2.34 EC		0.402	lb ai/a	22	fl oz/a	1-2"W	B		99 a	99 a
7	LAUDIS	3.5 SC		0.082	lb ai/a	3	fl oz/a	1-2"W	B			
7	AATREX NINE-O	90 WG		1.5	lb ai/a	1.67	lb/a	1-2"W	B			
7	N-PAK AMS	100 SL		5	% v/v	5	% v/v	1-2"W	B			
8	IGNITE 280	2.34 EC		0.402	lb ai/a	22	fl oz/a	1-2"W	B		99 a	99 a
8	CAPRENO	3.45 SC		0.081	lb ai/a	3	fl oz/a	1-2"W	B			
8	N-PAK AMS	100 SL		5	% v/v	5	% v/v	1-2"W	B			
9	IGNITE 280	2.34 EC		0.402	lb ai/a	22	fl oz/a	1-2"W	B		99 a	99 a
9	CAPRENO	3.45 SC		0.081	lb ai/a	3	fl oz/a	1-2"W	B			
9	AATREX NINE-O	90 WG		1.5	lb ai/a	1.67	lb/a	1-2"W	B			
9	N-PAK AMS	100 SL		5	% v/v	5	% v/v	1-2"W	B			
10	DEGREE XTRA	4.04 CS		2	lb ai/a	2	qt/a	PRE	A	78 abc	99 a	99 a
10	IGNITE 280	2.34 EC		0.402	lb ai/a	22	fl oz/a	2-4"W	C			
10	N-PAK AMS	100 SL		5	% v/v	5	% v/v	2-4"W	C			
11	DEGREE XTRA	4.04 CS		2	lb ai/a	2	qt/a	PRE	A	60 d	98 b	96 b
11	ROUNDUP P-MAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	2-4"W	C			
11	N-PAK AMS	100 SL		5	% v/v	5	% v/v	2-4"W	C			

LSD (P=.05) 18.1 0.4 0.7

Replicate F	1.544	0.476	1.579
Replicate Prob(F)	0.2477	0.6280	0.2308
Treatment F	24.198	41870.574	15367.370
Treatment Prob(F)	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

1. Protocol: Bayer (MRF).
2. Ratings: CI/WC at 0 and 14 da "B" and 14 + 35 da "C".
3. Estimate % ground cover for each species at each POST application (in UTC or target area).

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4. DA-A = Days after the PRE application. DA-B = Days after the 1-2"W application. DA-C = Days after the 2-4"W application.
DAT = Days after either the 1-2"W or 2-4"W application.
Ratings at 14 days after the 1-2"W and 2-4"W applications were on 7-15-08 and 7-18-08, respectively.
5. At the Belleville Research Center the above normal rainfall in spring 2008 (no more than four consecutive rain-free days between March 22 and June 15) delayed corn and soybean planting until mid-June.
6. Following the PRE application on June 16, rainfall was 0.29 inch 4 days later and 0.35 inch 11 days later.
7. Ground cover estimates in the nontreated plots for both postemergence applications (no changes between July 1 and July 4) were;
SETFA 15%, CYPES 10%, IPOHE 5%, and ABUTH 5%.
8. Not harvested.