

Ignite-Based Weed Management in No-Till Liberty Link Soybean.

Trial ID: 08-52-N150 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: 05-06-08

Objectives: To evaluate the efficacy of Ignite and soil residual herbicides in no-till Liberty Link soybean.

Crop 1: GLXMA Soybean Variety: SG4489N LL
 Planting Method: SEEDED Planting Date: 06-18-08
 Rate, Unit: 90 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 15 IN Seed Bed: ROUGH
 Soil Moisture: ABOVE NORMAL Soil Temp, Unit: 80 F

Pest 1 Type: W Code: CYPES Cyperus esculentus L. nutsedge, yellow
 Pest 2 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common
 Pest 3 Type: W Code: AMBTR Ambrosia trifida L. ragweed, giant
 Pest 4 Type: W Code: IPOSS morningglory, species
 Pest 5 Type: W Code: PANDI Panicum dichotomiflorum Michx. panicum, fall

Plot Width, Unit: 20 FT Site Type: FIELD
 Plot Length, Unit: 25 FT Tillage Type: NO-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2007

Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 100 LB/A

% OM: 2.2 Texture: SILT LOAM
 pH: 6.9 Soil Name: PIERRON
 CEC: 9 Fert. Level: P1: 107 LB/A, K: 420 LB/A

Application Description

	A	B	C
Application Date:	05-06-08	06-25-08	07-15-08
Time of Day:	7:30 AM	8:45 AM	9:00 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	14EPP	22DAE	44DAE-IN
Application Placement:	BROFOL	BROFOL	BROFOL
Air Temperature, Unit:	58 F	78 F	80 F
% Relative Humidity:	81	75	68
Wind Velocity, Unit:	1 MPH	1 MPH	1 MPH
Dew Presence (Y/N):	Y	Y	Y
Soil Temperature, Unit:	57 F	75 F	80 F
Soil Moisture:	ABONOR	NORMAL	ABONOR
% Cloud Cover:	80	90	5

	A	B	C
Crop stage at application:	05-06-08	06-25-08	07-15-08
Height Min, Max (inch):	NA	VC	V4
		0 2	6 12

Pest Stage At Each Application

	A	B	C
Application Date:	05-06-08	06-25-08	07-15-08
Weed Code:	CYPES	CYPES	CYPES
Stage Majority (leaves):	NA	3	6
Stage Min, Max:		2 6	3 10
Height Majority:		3.5 IN	4 IN
Height Min, Max:		3 5	3 7
Density, Unit:		4 FT2	4 FT2
Weed Code:	AMATA	AMATA	AMATA
Stage Majority (leaves):	NA	6	8
Stage Min, Max:		COTY 11	COTY 14
Height Majority:		3 IN	4 IN
Height Min, Max:		0.5 8	0.5 9
Density, Unit:		5 FT2	6 FT2
Weed Code:	AMBTR	AMBTR	AMBTR
Stage Majority (leaves):	2	4	6
Stage Min, Max:	COTY 4	COTY 8	COTY 10
Height Majority:	2 IN	3 IN	5 IN
Height Min, Max:	0.5 2.5	1 8	1 7
Density, Unit:	1 FT2	1 FT2	1 FT2
Weed Code:	IPOSS	IPOSS	IPOSS
Stage Majority (leaves):	NA	2	4
Stage Min, Max:		COTY 5	COTY 6
Height Majority:		3 IN	3 IN
Height Min, Max:		1 5	1 6
Density, Unit:		1 FT2	1 FT2
Weed Code:	PANDI	PANDI	PANDI
Stage Majority (leaves):	NA	2	2
Stage Min, Max:		1 4	1 5
Height Majority:		4 IN	3 IN
Height Min, Max:		0.5 8	1 4
Density, Unit:		5 FT2	2 FT2

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Application Equipment

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:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

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Trial ID: 08-52-N150 Location: Belleville Res. Center

Pest Code							CYPES	CYPES	CYPES								
Crop Code							06-25-08	07-09-08	07-30-08								
Rating Date		GLXMA	GLXMA	GLXMA	GLXMA	GLXMA											
Rating Data Type		11-01-08	11-01-08	06-25-08	07-09-08	07-30-08	Control	Control	Control								
Rating Unit		Moisture	Yield	Injury	Injury	Injury	Percent	Percent	Percent								
Rating Timing				50 DA-A	-6 DA-C	15 DA-C	50 DA-A	-6 DA-C	15 DA-C								
Trt-Eval Interval				0 DA-B	14 DA-B	35 DA-B	0 DA-B	14 DA-B	35 DA-B								
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code								
1	NONTREATED									11.1 a	13 b	0 a	0 a	0 a	0 c	0 d	0 b
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A	11.3 a	52 a	0 a	0 a	0 a	0 c	84 c	91 a
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B								
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B								
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C								
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C								
3	VALOR XLT	40.3	WG			3	oz/a	14EPP	A	11.2 a	52 a	0 a	0 a	0 a	93 a	93 a	94 a
	VALOR SX	51	WG	0.056	lb ai/a			14EPP	A								
	CLASSIC	25	WG	0.0194	lb ai/a			14EPP	A								
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B								
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B								
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C								
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C								
4	GANGSTER FR	84	WG	0.0158	lb ai/a	0.3	oz/a	14EPP	A	11.2 a	56 a	0 a	0 a	0 a	27 bc	90 ab	91 a
	GANGSTER V	51	WG	0.765	oz ai/a	1.5	oz/a	14EPP	A								
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B								
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B								
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C								
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C								
5	VALOR	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A	11.2 a	48 a	0 a	0 a	0 a	17 bc	91 a	95 a
	SENCOR	75	WG	0.216	lb ai/a	4.6	oz/a	14EPP	A								
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B								
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B								
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C								
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C								
6	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	14EPP	A	11.1 a	55 a	0 a	0 a	0 a	55 ab	93 a	94 a
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B								
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B								
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C								
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C								
7	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B	11.2 a	52 a		0 a	0 a		85 bc	91 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B								
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C								
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C								
LSD (P=.05)										0.28	10.8	0.0	0.0	0.0	49.7	5.4	4.5
Replicate F										0.648	2.918	0.000	0.000	0.000	0.499	0.269	0.158
Replicate Prob(F)										0.5420	0.0928	1.0000	1.0000	1.0000	0.6213	0.7685	0.8557
Treatment F										0.530	18.717	0.000	0.000	0.000	5.313	377.227	582.451
Treatment Prob(F)										0.7752	0.0001	1.0000	1.0000	1.0000	0.0122	0.0001	0.0001

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

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								AMATA	AMATA	AMATA	AMBTR	AMBTR	AMBTR		
								06-25-08	07-09-08	07-30-08	06-25-08	07-09-08	07-30-08		
								Control	Control	Control	Control	Control	Control		
								Percent	Percent	Percent	Percent	Percent	Percent		
								50 DA-A	-6 DA-C	15 DA-C	50 DA-A	-6 DA-C	15 DA-C		
								0 DA-B	14 DA-B	35 DA-B	0 DA-B	14 DA-B	35 DA-B		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	NONTREATED									0 b	0 c	0 b	0 c	0 c	0 b
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A	65 ab	98 ab	98 a	33 b	96 ab	98 a
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B						
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C						
3	VALOR XLT	40.3	WG			3	oz/a	14EPP	A	72 a	98 a	98 a	96 a	97 a	98 a
	VALOR SX	51	WG	0.056	lb ai/a			14EPP	A						
	CLASSIC	25	WG	0.0194	lb ai/a			14EPP	A						
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B						
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C						
4	GANGSTER FR	84	WG	0.0158	lb ai/a	0.3	oz/a	14EPP	A	38 ab	97 ab	98 a	98 a	97 a	98 a
	GANGSTER V	51	WG	0.765	oz ai/a	1.5	oz/a	14EPP	A						
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B						
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C						
5	VALOR	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A	60 ab	97 ab	98 a	30 b	93 b	98 a
	SENCOR	75	WG	0.216	lb ai/a	4.6	oz/a	14EPP	A						
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B						
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C						
6	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	14EPP	A	63 ab	98 a	98 a	89 a	95 ab	97 a
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B						
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C						
7	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B		96 b	98 a		94 ab	97 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B						
	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C						
LSD (P=.05)								67.2	1.8	0.7	26.8	3.2	0.9		
Replicate F								0.569	2.537	10.333	2.554	0.540	0.774		
Replicate Prob(F)								0.5834	0.1206	0.0025	0.1271	0.5962	0.4828		
Treatment F								1.586	4151.854	28943.337	24.187	1198.511	16597.679		
Treatment Prob(F)								0.2498	0.0001	0.0001	0.0001	0.0001	0.0001		

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

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								IPOSS	IPOSS	IPOSS	PANDI	PANDI	PANDI		
								06-25-08	07-09-08	07-30-08	06-25-08	07-09-08	07-30-08		
								Control	Control	Control	Control	Control	Control		
								Percent	Percent	Percent	Percent	Percent	Percent		
								50 DA-A	-6 DA-C	15 DA-C	50 DA-A	-6 DA-C	15 DA-C		
								0 DA-B	14 DA-B	35 DA-B	0 DA-B	14 DA-B	35 DA-B		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Unit	Growth Stage	Appl Code						
1	NONTREATED									0 b	0 d	0 c	0 c	0 b	0 b
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A	58 a	92 bc	97 a	10 bc	98 a	98 a
2	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B						
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B						
2	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C						
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C						
3	VALOR XLT	40.3	WG			3	oz/a	14EPP	A	98 a	97 a	98 a	92 a	98 a	99 a
3	VALOR SX	51	WG	0.056	lb ai/a			14EPP	A						
3	CLASSIC	25	WG	0.0194	lb ai/a			14EPP	A						
3	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B						
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B						
3	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C						
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C						
4	GANGSTER FR	84	WG	0.0158	lb ai/a	0.3	oz/a	14EPP	A	79 a	96 ab	96 a	37 abc	98 a	99 a
4	GANGSTER V	51	WG	0.765	oz ai/a	1.5	oz/a	14EPP	A						
4	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B						
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B						
4	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C						
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C						
5	VALOR	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A	95 a	95 ab	98 a	20 bc	98 a	98 a
5	SENCOR	75	WG	0.216	lb ai/a	4.6	oz/a	14EPP	A						
5	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B						
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B						
5	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C						
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C						
6	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	14EPP	A	93 a	97 a	98 a	62 ab	98 a	98 a
6	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B						
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B						
6	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C						
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C						
7	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	22DAE	B		89 c	92 b		98 a	99 a
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B						
7	IGNITE 280	2.34	EC	0.4	lb ai/a	22	fl oz/a	44DAE-IN	C						
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE-IN	C						
LSD (P=.05)								41.2	4.0	2.4	61.3	1.1	0.7		
Replicate F								2.384	2.067	1.412	0.026	2.591	3.545		
Replicate Prob(F)								0.1424	0.1693	0.2814	0.9747	0.1161	0.0617		
Treatment F								8.264	769.343	2272.679	3.165	11773.820	23842.547		
Treatment Prob(F)								0.0025	0.0001	0.0001	0.0570	0.0001	0.0001		

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

Trial Comments

1. Protocol: Bayer (MRC), 1 of 4 sites.
2. Ratings: Record % ground cover of each weed at application.
Evaluate ci/wc at 0, 14, and 35 da"B".
3. Application "B" could also be 3-4"w.
4. 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.
Due to the late planting the postemergence application planned for 22 days after crop emergence was applied early at 7 days after planting at 3-4 inch weeds.
Following the 14EPP application on May 6, rainfall was 4.29 inch over the next 3 days, and 1.1 inch 5 days later.
5. DA-A = Days after 14EPP application. DA-B = Days after 22DAE application. DA-C = Days after 44DAE-IN application.
IPOSS was IPOHE (ivyleaf morningglory) and PHBPU (tall morningglory).
6. Harvested 11-1-08, (8) 15 inch rows by 22 ft.