

Weed Management in Liberty Link Soybean - DuPont.

Trial ID: 10-10C-E70

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: 06-07-10

Objectives: Evaluate different residual herbicide strategies
 in Liberty Link soybean.

Crop 1: GLXMA Soybean Variety: Enos Description: LL
 Planting Method: SEEDED Planting Date: 06-14-10
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: IPOHE Ipomoea hederacea (L.) Jacq. morningglory, ivyleaf
 Pest 2 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common
 Pest 3 Type: W Code: CYPES Cyperus esculentus L. nutsedge, yellow
 Pest 4 Type: W Code: SETFA Setaria faberi Herrm. foxtail, giant

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 30 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2009

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

% OM: 1.8 Texture: SILT LOAM
 pH: 6.9 Soil Name: PIERRON
 CEC: 9 Fert. Level: P1: 100 LB/A, K: 322 LB/A

	Application Description			
	A	B	C	D
Application Date:	06-07-10	06-14-10	06-25-10	07-01-10
Time of Day:	17:00	9:00	9:00	10:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	7DBP	PRE	3-4"W-1	3-4"W-2
Application Placement:	BROSOI	BROSOI	BROFOL	
Applied By:	DKP	JR	JR	JR
Air Temperature, Unit:	80 F	80 F	76 F	78 F
% Relative Humidity:	90	92	92	58
Wind Velocity, Unit:	1 MPH	1 MPH	1 MPH	2 MPH
Wind Direction:	W	S		
Dew Presence (Y/N):	N			
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL
% Cloud Cover:	90	0	0	0
Crop stage at application:	NA	NA	VC	V1
Height Min, Max (inch):			3 4	5 6

	Pest Stage At Each Application			
	06-07-10	06-14-10	06-25-10	07-01-10
Application Date:	06-07-10	06-14-10	06-25-10	07-01-10
Weed Code:	IPOHE	IPOHE	IPOHE	IPOHE
Stage Majority (leaves):	NA	NA	4	2
Stage Min, Max:			4 5	1 2
Height Majority:			3 IN	1 IN
Height Min, Max:			3 4	1 2
Density, Unit:			0.1 FT2	0.01 FT2
Weed Code:	AMATA	AMATA	AMATA	AMATA
Stage Majority (leaves):	NA	NA	6	8
Stage Min, Max:			4 7	6 9
Height Majority:			2 IN	3 IN
Height Min, Max:			1 3	2 4
Density, Unit:			0.01 FT2	0.01 FT2
Weed Code:	CYPES	CYPES	CYPES	CYPES
Stage Majority (leaves):	NA	NA	8	8
Stage Min, Max:			2 10	2 10
Height Majority:			8 IN	8 IN
Height Min, Max:			1 12	1 12
Density, Unit:			1 FT2	1 FT2
Weed Code:	SETFA	SETFA	SETFA	SETFA
Stage Majority (leaves):	NA	NA	5	4
Stage Min, Max:			4 5	3 4
Height Majority:			5 IN	3 IN
Height Min, Max:			4 5	3 4
Density, Unit:			0.01 FT2	0.01 FT2

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

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Pest Code
Crop Code
Rating Date
Rating Data Type
Rating Unit
Rating Timing
Trt-Eval Interval

GLXMA GLXMA GLXMA GLXMA GLXMA
10-22-10
Yield Injury Injury Injury Injury
bu/A Percent Percent Percent Percent
0 DA-C 7 DA-C 14 DA-C 28 DA-C
0 DA-D 7 DA-D 14 DA-D 28 DA-D

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	CANOPY EX	29.5	WG			1.5	oz/a	7DBP	A	41 b	0 a	25 b	25 a	15 a
1	CLASSIC	25	WG	0.0212	lb ai/a			7DBP	A					
1	EXPRESS	50	SG	0.00636	lb ai/a			7DBP	A					
1	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D					
1	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	3-4"W-2	D					
1	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D					
2	ENVIVE	41.3	WG			3.5	oz/a	PRE	B	47 ab	0 a	25 b	20 a	12 a
2	CLASSIC	25	WG	0.02	lb ai/a			PRE	B					
2	HARMONY SG	50	SG	0.00643	lb ai/a			PRE	B					
2	VALOR SX	51	WG	0.0635	lb ai/a			PRE	B					
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D					
2	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	3-4"W-2	D					
2	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D					
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B	52 a	0 a	25 b	25 a	15 a
3	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D					
3	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	3-4"W-2	D					
3	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D					
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-1	C	43 ab	0 a	40 a	18 ab	0 b
4	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	3-4"W-1	C					
4	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-1	C					
5	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-1	C	39 b	0 a	28 b	12 b	0 b
5	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	3-4"W-1	C					
5	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-1	C					
6	NONTREATED									0 c	0 a	0 c	0 c	0 b
7	AUTHORITY FIRST	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	B	43 ab	0 a	0 c	0 c	0 b
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D					
7	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D					
8	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	B	45 ab	0 a	0 c	0 c	0 b
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D					
8	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D					
LSD (P=.05)										9.8	0.0	6.7	7.2	6.8
Replicate F										1.839	0.000	0.505	1.278	1.960
Replicate Prob(F)										0.1953	1.0000	0.6140	0.3091	0.1776
Treatment F										25.301	0.000	50.763	21.843	10.630
Treatment Prob(F)										0.0001	1.0000	0.0001	0.0001	0.0001

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

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									IPOHE	IPOHE	IPOHE	IPOHE	AMATA	AMATA	AMATA	AMATA
Pest Code									Control	Control	Control	Control	Control	Control	Control	Control
Crop Code									Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date									0 DA-C	7 DA-C	14 DA-C	28 DA-C	0 DA-C	7 DA-C	14 DA-C	28 DA-C
Rating Data Type									0 DA-D	7 DA-D	14 DA-D	28 DA-D	0 DA-D	7 DA-D	14 DA-D	28 DA-D
Rating Unit																
Rating Timing																
Trt-Eval Interval																
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
1	CANOPY EX	29.5	WG			1.5	oz/a	7DBP	A	98 a	99 a	99 a	99 a	77 b	99 a	96 b
1	CLASSIC	25	WG	0.0212	lb ai/a			7DBP	A							98 ab
1	EXPRESS	50	SG	0.00636	lb ai/a			7DBP	A							
1	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D							
1	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	3-4"W-2	D							
1	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D							
2	ENVIVE	41.3	WG			3.5	oz/a	PRE	B	99 a	99 a	99 a	99 a	99 a	99 a	99 a
2	CLASSIC	25	WG	0.02	lb ai/a			PRE	B							
2	HARMONY SG	50	SG	0.00643	lb ai/a			PRE	B							
2	VALOR SX	51	WG	0.0635	lb ai/a			PRE	B							
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D							
2	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	3-4"W-2	D							
2	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D							
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B	99 a	99 a	99 ab	98 a	99 a	99 a	99 a
3	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D							
3	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	3-4"W-2	D							
3	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D							
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-1	C	0 b	99 a	99 a	95 b	0 c	99 a	95 c
4	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	3-4"W-1	C							
4	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-1	C							
5	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-1	C	0 b	99 a	98 ab	96 b	0 c	99 a	96 bc
5	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	3-4"W-1	C							
5	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-1	C							
6	NONTREATED									0 b	0 b	0 c	0 c	0 c	0 b	0 d
7	AUTHORITY FIRST	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	B	99 a	99 a	98 ab	99 a	99 a	99 a	99 a
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D							
7	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D							
8	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	B	99 a	99 a	96 b	99 a	99 a	99 a	99 a
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D							
8	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D							
LSD (P=.05)									1.4	0.0	2.6	1.6	14.6	0.0	1.4	2.2
Replicate F									1.000	0.000	0.477	0.824	1.000	0.000	1.000	0.027
Replicate Prob(F)									0.3927	1.0000	0.6305	0.4591	0.3927	1.0000	0.3927	0.9738
Treatment F									11751.064	0.000	1656.273	4434.581	105.344	0.000	5474.634	2295.772
Treatment Prob(F)									0.0001	1.0000	0.0001	0.0001	0.0001	1.0000	0.0001	0.0001

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

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Location: Belleville Res. Center

Pest Code	CYPES	CYPES	CYPES	CYPES	SETFA	SETFA	SETFA
Crop Code							
Rating Date							
Rating Data Type							
Rating Unit	Control	Control	Control	Control	Control	Control	Control
Rating Timing	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Trt-Eval Interval	0 DA-C	7 DA-C	14 DA-C	28 DA-C	7 DA-C	14 DA-C	28 DA-C
	0 DA-D	7 DA-D	14 DA-D	28 DA-D	7 DA-D	14 DA-D	28 DA-D

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
1	CANOPY EX	29.5	WG			1.5	oz/a	7DBP	A	94 a	95 bc	95 ab	93 b	99 a	99 a	98 a
1	CLASSIC	25	WG	0.0212	lb ai/a			7DBP	A							
1	EXPRESS	50	SG	0.00636	lb ai/a			7DBP	A							
1	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D							
1	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	3-4"W-2	D							
1	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D							
2	ENVIVE	41.3	WG			3.5	oz/a	PRE	B	96 a	96 b	96 ab	95 ab	99 a	99 a	99 a
2	CLASSIC	25	WG	0.02	lb ai/a			PRE	B							
2	HARMONY SG	50	SG	0.00643	lb ai/a			PRE	B							
2	VALOR SX	51	WG	0.0635	lb ai/a			PRE	B							
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D							
2	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	3-4"W-2	D							
2	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D							
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B	96 a	99 a	97 a	98 a	99 a	99 a	99 a
3	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D							
3	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	3-4"W-2	D							
3	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D							
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-1	C	0 c	90 d	95 ab	92 b		99 a	98 a
4	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	3-4"W-1	C							
4	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-1	C							
5	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-1	C	0 c	90 d	98 a	95 ab		99 a	99 a
5	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	3-4"W-1	C							
5	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-1	C							
6	NONTREATED									0 c	0 e	0 d	0 d	0 b	0 b	0 b
7	AUTHORITY FIRST	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	B	90 b	93 c	93 b	92 b	99 a	99 a	99 a
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D							
7	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D							
8	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	B	87 b	90 d	90 c	83 c	99 a	99 a	99 a
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-2	D							
8	AMS	100	SG	3	lb/a	3	lb/a	3-4"W-2	D							
LSD (P=.05)										3.8	2.4	2.9	4.5	0.0	0.0	1.5
Replicate F										0.429	0.021	0.754	1.909	0.000	0.000	0.740
Replicate Prob(F)										0.6593	0.9789	0.4887	0.1849	1.0000	1.0000	0.4950
Treatment F										1459.533	1697.000	1253.642	499.229	0.000	0.000	4982.562
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	1.0000	1.0000	0.0001

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

Trial Comments

1. Protocol: DuPont (USA-10-293).
2. CI/WC at C and 7, 14, and 28 DA-C.
3. Blanket tillage at 7 DBP (tillage before the first application).
4. The planned 3-4"W application (C) was split into 3-4"W-1 (C) and 3-4"W-2 (D) as the weeds reached the postemergence height timing sooner when not following a preemergence application.
5. Ratings at 0 days after the 3-4"W-1 (C) and 3-4"W-2 (D) applications were on 6-25-10 and 7-1-10, respectively. Ratings at 7 days after the 3-4"W-1 (C) and 3-4"W-2 (D) applications were on 7-2-10 and 7-8-10, respectively. Ratings at 14 days after the 3-4"W-1 (C) and 3-4"W-2 (D) applications were on 7-9-10 and 7-15-10, respectively. Ratings at 28 days after the 3-4"W-1 (C) and 3-4"W-2 (D) applications were on 7-23-10 and 7-29-10, respectively.
6. Crop injury was height reduction.
7. Harvested 10-22-10, (2) 30 inch rows by 27 ft.