

Soybean, Tilled Weed Control Studies

Southern Illinois University

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final Initiation Date: 7-12-13 Completion Date: 9-12-13	Trial Location
City: Belleville Country: USA State/Prov.: Illinois IL Postal Code: 62221	

Objectives:
Evaluate the influence of residual herbicides on weed control in Liberty Link soybean.

Study Director: Bryan Young Organization: Southern Illinois University Address: 1205 Lincoln Drive - AG 176 - MC 4415 City+State/Prov: Carbondale IL Postal Code: 62901 Country: USA	Title: Professor Phone No.: 618-453-7679 Mobile No.: 618-713-6471 E-mail: bgyoung@siu.edu
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Crop 1: GLXMA Glycine max Soybean Variety: HS 42L02 BBCH Scale: BSOY Description: LL	Crop Description
Planting Rate, Unit: 75 LB/A Depth, Unit: 1 IN Row Spacing, Unit: 30 IN	Planting Date: 7-12-13 Planting Method: SEEDED

Pest 1 Type: W Code: PANDI Panicum dichotomiflorum Michx. Common Name: panicum, fall	Pest Description
Pest 2 Type: W Code: ABUTH Abutilon theophrasti Medik. Common Name: velvetleaf	
Pest 3 Type: W Code: AMATA Amaranthus rudis Sauer Common Name: waterhemp, common	
Pest 4 Type: W Code: AMBTR Ambrosia trifida L. Common Name: ragweed, giant	

Treated Plot Width: 7.5 FT Total Plot Width: 10 FT Treated Plot Length: 31 FT Total Plot Length: 31 FT	Site and Design Site Type: FIELD Experimental Unit: 1 PLOT Tillage Type: REDTIL reduced-till Study Design: RACOB� Randomized Complete Block (RCB)						
Replications: 3 Untreated Arrangement: INCLUDED single control randomized in each block							
<table><tr><th>No.</th><th>Previous Crop</th><th>Year</th></tr><tr><td>1.</td><td>ZEAMD</td><td>2012</td></tr></table>	No.	Previous Crop	Year	1.	ZEAMD	2012	
No.	Previous Crop	Year					
1.	ZEAMD	2012					

<table><tr><th>No.</th><th>Maintenance Product Name</th></tr><tr><td>1.</td><td>N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A</td></tr></table>	No.	Maintenance Product Name	1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A	Maintenance
No.	Maintenance Product Name				
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A				

% OM: 2.5 Texture: SIL silt loam pH: 6 Soil Name: Winfield CEC: 6	Soil Description									
<table><tr><th>Element</th><th>Quantity</th><th>Unit</th></tr><tr><td>P1</td><td>58</td><td>lb/A</td></tr><tr><td>K</td><td>286</td><td>lb/A</td></tr></table>	Element	Quantity	Unit	P1	58	lb/A	K	286	lb/A	Additional Measured Elements
Element	Quantity	Unit								
P1	58	lb/A								
K	286	lb/A								

Overall Moisture Conditions: ABONOR 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.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
2.	7-7-13					7	DAY	62	94	F
3.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
4.	7-14-13					7	DAY	64	94	F
5.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
6.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
7.	7-21-13					7	DAY	56	91	F
8.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
9.	7-28-13					7	DAY	52	87	F
10.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
11.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
12.	8-4-13					7	DAY	62	87	F
13.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
14.	8-11-13					7	DAY	54	85	F
15.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
16.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
17.	8-18-13					7	DAY	61	91	F
18.	8-25-13					7	DAY	62	100	F
19.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
20.	9-1-13					7	DAY	57	92	F
21.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description					
	A	B	C	D	E
Application Date:	7-13-13	7-29-13	8-1-13	8-16-13	
Appl. Start Time:	16:30	9:00	15:00	11:00	
Appl. Stop Time:	17:00	9:15	15:20	11:15	
Application Method:	Spray	Spray	Spray	Spray	Spray
Application Timing:	PRE	V2	2-4"W-1	2-4"W-2	LPOST-IN
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL	Not
Applied By:	RJW	RJW	LXF	RFK	Applied
Air Temperature, Unit:	83 F	73 F	87 F	75 F	
% Relative Humidity:	53	71	39	50	
Wind Velocity, Unit:	6 MPH	3 MPH	4 MPH	4 MPH	
Wind Direction:	S	S	N	NE	
Dew Presence (Y/N):	N	N	N	N	
Soil Temperature, Unit:	76 F	73 F	74 F	70 F	
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL	
% Cloud Cover:	20	100	10	50	
Next Moisture Occurred On:	7-20-13	7-30-13	8-2-13	8-18-13	
Time to Next Moisture, Unit:	7 DAY	1 DAY	1 DAY	2 DAY	

Crop Stage At Each Application					
	A	B	C	D	E
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	V2	V3	V5	NA
Stage Minimum, Percent:		V2	V2	V5	
Stage Maximum, Percent:		V2	V3	V5	
Height, Unit:		6 IN	6 IN	12 IN	
Height Minimum, Maximum:		4 6	5 6	10 12	

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Pest Stage At Each Application					
	A	B	C	D	E
Pest 1 Code, Type, Scale:	PANDI W	PANDI W	PANDI W	PANDI W	PANDI W
Stage Majority, Percent:	NA	3	2	NA	NA
Stage Minimum, Percent:		2	1		
Stage Maximum, Percent:		5	2		
Height, Unit:		4 IN	1 IN		
Height Minimum, Maximum:		0.5 6	0.5 1		
Density, Unit:		5 FT2	0.01 FT2		
Pest 2 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	4	NA	6	NA
Stage Minimum, Percent:		2		2	
Stage Maximum, Percent:		6		6	
Height, Unit:		3 IN		3 IN	
Height Minimum, Maximum:		0.5 4		2 4	
Density, Unit:		0.01 FT2		0.001 FT2	
Pest 3 Code, Type, Scale:	AMATA W	AMATA W	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	NA	6	NA	NA	NA
Stage Minimum, Percent:		COTY			
Stage Maximum, Percent:		10			
Height, Unit:		3 IN			
Height Minimum, Maximum:		0.5 4			
Density, Unit:		5 FT2			
Pest 4 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:	NA	6	4	6	NA
Stage Minimum, Percent:		4	COTY	2	
Stage Maximum, Percent:		10	8	6	
Height, Unit:		4 IN	4 IN	3 IN	
Height Minimum, Maximum:		2 5	0.5 6	2 4	
Density, Unit:		0.05 FT2	1 FT2	0.001 FT2	

Application Equipment					
	A	B	C	D	E
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA	15 GPA

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								GLXMA 7-29-13 Injury Percent 16 DA-A 0 DA-B	GLXMA 8-1-13 Injury Percent 3 DA-B 0 DA-C	GLXMA 8-15-13 Injury Percent 14 DA-C	GLXMA 8-29-13 Injury Percent 28 DA-C	GLXMA 9-12-13 Injury Percent 42 DA-C
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1 NONTREATED								0 d	0 e	0 d	0 c	0 a
2 AUTHORITY FIRST LIBERTY 280 AMS LIBERTY 280 AMS	70 WG 2.34 EC 100 SG 2.34 EC 100 SG		0.284 lb ai/a 0.53 lb ai/a 1.02 % w/w 0.53 lb ai/a 1.02 % w/w	6.5 oz/a 29 fl oz/a 8.5 lb/100 gal 29 fl oz/a 8.5 lb/100 gal		PRE 2-4"W-1 2-4"W-1 LPOST-IN LPOST-IN	A C C 	7 a	7 c	1 cd	3 abc	2 a
3 VALOR XLT LIBERTY 280 AMS LIBERTY 280 AMS	40.3 WG 2.34 EC 100 SG 2.34 EC 100 SG		0.088 lb ai/a 0.53 lb ai/a 1.02 % w/w 0.53 lb ai/a 1.02 % w/w	3.5 oz/a 29 fl oz/a 8.5 lb/100 gal 29 fl oz/a 8.5 lb/100 gal		PRE 2-4"W-1 2-4"W-1 LPOST-IN LPOST-IN	A C C 	6 ab	6 cd	1 d	2 bc	1 a
4 VALOR SX LIBERTY 280 ZIDUA AMS LIBERTY 280 AMS	51 WG 2.34 EC 85 WG 100 SG 2.34 EC 100 SG		0.064 lb ai/a 0.53 lb ai/a 0.106 lb ai/a 1.02 % w/w 0.53 lb ai/a 1.02 % w/w	2 oz/a 29 fl oz/a 2 oz/a 8.5 lb/100 gal 29 fl oz/a 8.5 lb/100 gal		PRE V2 V2 V2 LPOST-IN LPOST-IN	A B B B 	4 ab	15 a	3 bcd	3 abc	1 a
5 LIBERTY 280 PREFIX AMS LIBERTY 280 ZIDUA AMS	2.34 EC 5.29 EC 100 SG 2.34 EC 85 WG 100 SG		0.53 lb ai/a 1.32 lb ai/a 1.02 % w/w 0.53 lb ai/a 0.106 lb ai/a 1.02 % w/w	29 fl oz/a 2 pt/a 8.5 lb/100 gal 29 fl oz/a 2 oz/a 8.5 lb/100 gal		V2 V2 V2 2-4"W-2 2-4"W-2 2-4"W-2	B B B D D D		13 a	6 b	3 abc	2 a
6 OPTILL PRO (CO-PACK) OPTILL OUTLOOK LIBERTY 280 AMS LIBERTY 280 AMS	68 WG 6 EC 2.34 EC 100 SG 2.34 EC 100 SG		0.085 lb ai/a 0.47 lb ai/a 0.53 lb ai/a 1.02 % w/w 0.53 lb ai/a 1.02 % w/w	2 oz/a 10 fl oz/a 29 fl oz/a 8.5 lb/100 gal 29 fl oz/a 8.5 lb/100 gal		PRE PRE PRE 2-4"W-1 2-4"W-1 LPOST-IN	A A A C C 	4 bc	4 d	2 cd	0 c	0 a
7 ENVIVE LIBERTY 280 OUTLOOK AMS LIBERTY 280 AMS	41.3 WG 2.34 EC 6 EC 100 SG 2.34 EC 100 SG		0.103 lb ai/a 0.53 lb ai/a 0.656 lb ai/a 1.02 % w/w 0.53 lb ai/a 1.02 % w/w	4 oz/a 29 fl oz/a 14 fl oz/a 8.5 lb/100 gal 29 fl oz/a 8.5 lb/100 gal		PRE V2 V2 V2 LPOST-IN LPOST-IN	A B B B 	7 a	15 a	4 bc	6 a	3 a
8 LIBERTY 280 WARRANT AMS LIBERTY 280 OUTLOOK AMS	2.34 EC 3 CS 100 SG 2.34 EC 6 EC 100 SG		0.53 lb ai/a 1.13 lb ai/a 1.02 % w/w 0.53 lb ai/a 0.656 lb ai/a 1.02 % w/w	29 fl oz/a 3 pt/a 8.5 lb/100 gal 29 fl oz/a 14 fl oz/a 8.5 lb/100 gal		V2 V2 V2 2-4"W-2 2-4"W-2 2-4"W-2	B B B D D D		10 b	1 cd	2 bc	2 a
9 BOUNDARY LIBERTY 280 AMS LIBERTY 280 AMS	6.5 EC 2.34 EC 100 SG 2.34 EC 100 SG		1.22 lb ai/a 0.53 lb ai/a 1.02 % w/w 0.53 lb ai/a 1.02 % w/w	1.5 pt/a 29 fl oz/a 8.5 lb/100 gal 29 fl oz/a 8.5 lb/100 gal		PRE 2-4"W-1 2-4"W-1 LPOST-IN LPOST-IN	A C C 	4 bc	4 d	2 cd	0 c	0 a

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.

Missing data estimates are included in columns: Average=16

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Pest Code								GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Code								7-29-13	8-1-13	8-15-13	8-29-13	9-12-13
Rating Date								Injury	Injury	Injury	Injury	Injury
Rating Type								Percent	Percent	Percent	Percent	Percent
Rating Unit								16 DA-A	3 DA-B	14 DA-C	28 DA-C	42 DA-C
Rating Timing								0 DA-B	0 DA-C			
Trt-Eval Interval												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Other Rate	Other Rate	Growth Stage	Appl Code			
10	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	1 cd	1 e	11 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C			4 ab
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	2-4"W-1	C			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C			
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN				2 a
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN				
LSD (P=.05)								2.7	2.4	3.6	3.4	2.8
Standard Deviation								1.6	1.4	2.1	2.0	1.6
CV								39.15	19.09	67.06	83.99	123.41
Replicate F								1.427	2.855	2.105	0.113	0.973
Replicate Prob(F)								0.2728	0.0837	0.1508	0.8939	0.3971
Treatment F								7.728	47.525	7.216	3.086	1.259
Treatment Prob(F)								0.0006	0.0001	0.0002	0.0200	0.3227

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Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								PANDI 7-29-13 Control Percent 16 DA-A 0 DA-B	PANDI 8-1-13 Control Percent 3 DA-B 0 DA-C	PANDI 8-15-13 Control Percent 14 DA-C	PANDI 8-29-13 Control Percent 28 DA-C	PANDI 9-12-13 Control Percent 42 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Rate	Growth Unit Stage	Appl Code				
1	NONTREATED								0 d	0 e	0 d	0 b
2	AUTHORITY FIRST	70 WG		0.284 lb ai/a	6.5 oz/a		PRE	A	97 b	96 bc	99 a	99 a
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		2-4"W-1	C				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		2-4"W-1	C				
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		LPOST-IN					
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		LPOST-IN					
3	VALOR XLT	40.3 WG		0.088 lb ai/a	3.5 oz/a		PRE	A	97 ab	96 abc	98 bc	98 a
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		2-4"W-1	C				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		2-4"W-1	C				
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		LPOST-IN					
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		LPOST-IN					
4	VALOR SX	51 WG		0.064 lb ai/a	2 oz/a		PRE	A	95 c	98 ab	98 abc	98 a
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		V2	B				
	ZIDUA	85 WG		0.106 lb ai/a	2 oz/a		V2	B				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		V2	B				
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		LPOST-IN					
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		LPOST-IN					
5	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		V2	B		94 c	98 c	99 a
	PREFIX	5.29 EC		1.32 lb ai/a	2 pt/a		V2	B				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		V2	B				
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		2-4"W-2	D				
	ZIDUA	85 WG		0.106 lb ai/a	2 oz/a		2-4"W-2	D				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		2-4"W-2	D				
6	OPTILL PRO (CO-PACK)						PRE	A	99 a	99 a	99 ab	99 a
	OPTILL	68 WG		0.085 lb ai/a	2 oz/a		PRE	A				
	OUTLOOK	6 EC		0.47 lb ai/a	10 fl oz/a		PRE	A				
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		2-4"W-1	C				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		2-4"W-1	C				
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		LPOST-IN					
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		LPOST-IN					
7	ENVIVE	41.3 WG		0.103 lb ai/a	4 oz/a		PRE	A	97 b	98 ab	99 a	99 a
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		V2	B				
	OUTLOOK	6 EC		0.656 lb ai/a	14 fl oz/a		V2	B				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		V2	B				
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		LPOST-IN					
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		LPOST-IN					
8	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		V2	B		73 d	98 c	99 a
	WARRANT	3 CS		1.13 lb ai/a	3 pt/a		V2	B				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		V2	B				
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		2-4"W-2	D				
	OUTLOOK	6 EC		0.656 lb ai/a	14 fl oz/a		2-4"W-2	D				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		2-4"W-2	D				
9	BOUNDARY	6.5 EC		1.22 lb ai/a	1.5 pt/a		PRE	A	99 a	99 a	99 ab	99 a
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		2-4"W-1	C				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		2-4"W-1	C				
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		LPOST-IN					
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		LPOST-IN					

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Pest Code									PANDI	PANDI	PANDI	PANDI	PANDI
Crop Code									7-29-13	8-1-13	8-15-13	8-29-13	9-12-13
Rating Date									Control	Control	Control	Control	Control
Rating Type									Percent	Percent	Percent	Percent	Percent
Rating Unit									16 DA-A	3 DA-B	14 DA-C	28 DA-C	42 DA-C
Rating Timing									0 DA-B	0 DA-C			
Trt-Eval Interval													
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Other Rate	Other Rate	Growth Stage	Appl Code				
10	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	99 a	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C				
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	2-4"W-1	C				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C				
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN					
LSD (P=.05)									1.8	2.9	0.9	0.9	1.5
Standard Deviation									1.0	1.7	0.5	0.5	0.9
CV									1.17	1.96	0.57	0.6	0.97
Replicate F									0.290	0.228	1.588	0.474	0.851
Replicate Prob(F)									0.7527	0.7986	0.2316	0.6302	0.4436
Treatment F									3558.131	1032.645	11547.295	10415.383	3926.791
Treatment Prob(F)									0.0001	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	ABUTH	ABUTH	ABUTH	ABUTH	ABUTH
							7-29-13 Control Percent 16 DA-A 0 DA-B	8-1-13 Control Percent 3 DA-B 0 DA-C	8-15-13 Control Percent 14 DA-C	8-29-13 Control Percent 28 DA-C	9-12-13 Control Percent 42 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Rate	Growth Stage	Appl Code			
1	NONTREATED								0 c	0 d	0 c
2	AUTHORITY FIRST	70 WG		0.284 lb ai/a	6.5 oz/a		PRE	A	97 a	97 a	98 a
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		2-4"W-1	C			99 a
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		2-4"W-1	C			
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		LPOST-IN				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		LPOST-IN				
3	VALOR XLT	40.3 WG		0.088 lb ai/a	3.5 oz/a		PRE	A	98 a	98 a	99 a
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		2-4"W-1	C			
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		2-4"W-1	C			
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		LPOST-IN				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		LPOST-IN				
4	VALOR SX	51 WG		0.064 lb ai/a	2 oz/a		PRE	A	98 a	98 a	99 a
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		V2	B			
	ZIDUA	85 WG		0.106 lb ai/a	2 oz/a		V2	B			
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		V2	B			
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		LPOST-IN				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		LPOST-IN				
5	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		V2	B	98 a	99 a	99 a
	PREFIX	5.29 EC		1.32 lb ai/a	2 pt/a		V2	B			
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		V2	B			
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		2-4"W-2	D			
	ZIDUA	85 WG		0.106 lb ai/a	2 oz/a		2-4"W-2	D			
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		2-4"W-2	D			
6	OPTILL PRO (CO-PACK)						PRE	A	91 a	91 ab	99 a
	OPTILL	68 WG		0.085 lb ai/a	2 oz/a		PRE	A			
	OUTLOOK	6 EC		0.47 lb ai/a	10 fl oz/a		PRE	A			
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		2-4"W-1	C			
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		2-4"W-1	C			
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		LPOST-IN				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		LPOST-IN				
7	ENVIVE	41.3 WG		0.103 lb ai/a	4 oz/a		PRE	A	98 a	99 a	99 a
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		V2	B			
	OUTLOOK	6 EC		0.656 lb ai/a	14 fl oz/a		V2	B			
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		V2	B			
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		LPOST-IN				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		LPOST-IN				
8	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		V2	B	77 c	96 b	99 a
	WARRANT	3 CS		1.13 lb ai/a	3 pt/a		V2	B			
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		V2	B			
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		2-4"W-2	D			
	OUTLOOK	6 EC		0.656 lb ai/a	14 fl oz/a		2-4"W-2	D			
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		2-4"W-2	D			
9	BOUNDARY	6.5 EC		1.22 lb ai/a	1.5 pt/a		PRE	A	82 b	82 bc	98 ab
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		2-4"W-1	C		99 a	99 a
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		2-4"W-1	C			
	LIBERTY 280	2.34 EC		0.53 lb ai/a	29 fl oz/a		LPOST-IN				
	AMS	100 SG		1.02 % w/w	8.5 lb/100 gal		LPOST-IN				

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code								ABUTH	ABUTH	ABUTH	ABUTH	ABUTH
Crop Code								7-29-13	8-1-13	8-15-13	8-29-13	9-12-13
Rating Date								Control	Control	Control	Control	Control
Rating Type								Percent	Percent	Percent	Percent	Percent
Rating Unit								16 DA-A	3 DA-B			
Rating Timing								0 DA-B	0 DA-C	14 DA-C	28 DA-C	42 DA-C
Trt-Eval Interval												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Other Rate	Other Rate	Growth Stage	Appl Code			
10	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	78 b	82 bc	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C			
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	2-4"W-1	C			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C			
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN				
LSD (P=.05)								9.2	10.0	2.2	0.0	0.6
Standard Deviation								5.3	5.8	1.3	0.0	0.3
CV								6.55	7.1	1.48	0.0	0.39
Replicate F								0.302	0.592	0.310	0.000	1.909
Replicate Prob(F)								0.7442	0.5644	0.7370	1.0000	0.1770
Treatment F								120.779	79.708	1692.114	0.000	23985.730
Treatment Prob(F)								0.0001	0.0001	0.0001	1.0000	0.0001

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Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								AMATA	AMATA	AMATA	AMATA	AMATA
Trt Treatment No. Name								7-29-13 Control Percent 16 DA-A 0 DA-B	8-1-13 Control Percent 3 DA-B 0 DA-C	8-15-13 Control Percent 14 DA-C	8-29-13 Control Percent 28 DA-C	9-12-13 Control Percent 42 DA-C
1 NONTREATED								0 b	0 c	0 b	0 c	0 c
2 AUTHORITY FIRST LIBERTY 280 AMS LIBERTY 280 AMS	70 WG	0.284 lb ai/a	6.5 oz/a	PRE	A			98 a	98 a	99 a	99 a	98 b
	2.34 EC	0.53 lb ai/a	29 fl oz/a	2-4"W-1	C							
	100 SG	1.02 % w/w	8.5 lb/100 gal	2-4"W-1	C							
	2.34 EC	0.53 lb ai/a	29 fl oz/a	LPOST-IN								
	100 SG	1.02 % w/w	8.5 lb/100 gal	LPOST-IN								
3 VALOR XLT LIBERTY 280 AMS LIBERTY 280 AMS	40.3 WG	0.088 lb ai/a	3.5 oz/a	PRE	A			99 a	99 a	99 a	99 b	99 a
	2.34 EC	0.53 lb ai/a	29 fl oz/a	2-4"W-1	C							
	100 SG	1.02 % w/w	8.5 lb/100 gal	2-4"W-1	C							
	2.34 EC	0.53 lb ai/a	29 fl oz/a	LPOST-IN								
	100 SG	1.02 % w/w	8.5 lb/100 gal	LPOST-IN								
4 VALOR SX LIBERTY 280 ZIDUA AMS LIBERTY 280 AMS	51 WG	0.064 lb ai/a	2 oz/a	PRE	A			99 a	99 a	99 a	99 a	99 a
	2.34 EC	0.53 lb ai/a	29 fl oz/a	V2	B							
	85 WG	0.106 lb ai/a	2 oz/a	V2	B							
	100 SG	1.02 % w/w	8.5 lb/100 gal	V2	B							
	2.34 EC	0.53 lb ai/a	29 fl oz/a	LPOST-IN								
	100 SG	1.02 % w/w	8.5 lb/100 gal	LPOST-IN								
5 LIBERTY 280 PREFIX AMS LIBERTY 280 ZIDUA AMS	2.34 EC	0.53 lb ai/a	29 fl oz/a	V2	B			98 a	99 a	99 a	99 a	99 a
	5.29 EC	1.32 lb ai/a	2 pt/a	V2	B							
	100 SG	1.02 % w/w	8.5 lb/100 gal	V2	B							
	2.34 EC	0.53 lb ai/a	29 fl oz/a	2-4"W-2	D							
	85 WG	0.106 lb ai/a	2 oz/a	2-4"W-2	D							
	100 SG	1.02 % w/w	8.5 lb/100 gal	2-4"W-2	D							
6 OPTILL PRO (CO-PACK) OPTILL OUTLOOK LIBERTY 280 AMS LIBERTY 280 AMS	68 WG	0.085 lb ai/a	2 oz/a	PRE	A			98 a	98 a	99 a	99 a	99 a
	6 EC	0.47 lb ai/a	10 fl oz/a	PRE	A							
	2.34 EC	0.53 lb ai/a	29 fl oz/a	2-4"W-1	C							
	100 SG	1.02 % w/w	8.5 lb/100 gal	2-4"W-1	C							
	2.34 EC	0.53 lb ai/a	29 fl oz/a	LPOST-IN								
	100 SG	1.02 % w/w	8.5 lb/100 gal	LPOST-IN								
7 ENVIVE LIBERTY 280 OUTLOOK AMS LIBERTY 280 AMS	41.3 WG	0.103 lb ai/a	4 oz/a	PRE	A			99 a	99 a	99 a	99 a	99 a
	2.34 EC	0.53 lb ai/a	29 fl oz/a	V2	B							
	6 EC	0.656 lb ai/a	14 fl oz/a	V2	B							
	100 SG	1.02 % w/w	8.5 lb/100 gal	V2	B							
	2.34 EC	0.53 lb ai/a	29 fl oz/a	LPOST-IN								
	100 SG	1.02 % w/w	8.5 lb/100 gal	LPOST-IN								
8 LIBERTY 280 WARRANT AMS LIBERTY 280 OUTLOOK AMS	2.34 EC	0.53 lb ai/a	29 fl oz/a	V2	B			90 b	99 a	99 a	99 a	99 a
	3 CS	1.13 lb ai/a	3 pt/a	V2	B							
	100 SG	1.02 % w/w	8.5 lb/100 gal	V2	B							
	2.34 EC	0.53 lb ai/a	29 fl oz/a	2-4"W-2	D							
	6 EC	0.656 lb ai/a	14 fl oz/a	2-4"W-2	D							
	100 SG	1.02 % w/w	8.5 lb/100 gal	2-4"W-2	D							
9 BOUNDARY LIBERTY 280 AMS LIBERTY 280 AMS	6.5 EC	1.22 lb ai/a	1.5 pt/a	PRE	A			99 a	99 a	99 a	99 a	99 a
	2.34 EC	0.53 lb ai/a	29 fl oz/a	2-4"W-1	C							
	100 SG	1.02 % w/w	8.5 lb/100 gal	2-4"W-1	C							
	2.34 EC	0.53 lb ai/a	29 fl oz/a	LPOST-IN								
	100 SG	1.02 % w/w	8.5 lb/100 gal	LPOST-IN								

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code									AMATA	AMATA	AMATA	AMATA	AMATA
Crop Code									7-29-13	8-1-13	8-15-13	8-29-13	9-12-13
Rating Date									Control	Control	Control	Control	Control
Rating Type									Percent	Percent	Percent	Percent	Percent
Rating Unit									16 DA-A	3 DA-B	14 DA-C	28 DA-C	42 DA-C
Rating Timing									0 DA-B	0 DA-C			
Trt-Eval Interval													
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Other Rate	Other Rate	Growth Stage	Appl Code				
10	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	99 a	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C				
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	2-4"W-1	C				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C				
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN					
LSD (P=.05)									1.3	1.2	0.5	0.3	0.6
Standard Deviation									0.8	0.7	0.3	0.2	0.4
CV									0.88	0.77	0.3	0.2	0.41
Replicate F									0.505	0.512	0.474	1.000	1.000
Replicate Prob(F)									0.6140	0.6077	0.6302	0.3874	0.3874
Treatment F									6335.794	6336.391	41721.530	88144.009	22020.252
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

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Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								AMBTR 7-29-13 Control Percent 16 DA-A 0 DA-B	AMBTR 8-1-13 Control Percent 3 DA-B 0 DA-C	AMBTR 8-15-13 Control Percent 14 DA-C	AMBTR 8-29-13 Control Percent 28 DA-C	AMBTR 9-12-13 Control Percent 42 DA-C
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate	Unit	Other Rate	Other Rate	Growth Unit Stage	Appl Code				
1 NONTREATED									0 c	0 d	0 d	0 d
2 AUTHORITY FIRST LIBERTY 280 AMS LIBERTY 280 AMS	70 WG 2.34 EC 100 SG 2.34 EC 100 SG		0.284 lb ai/a 0.53 lb ai/a 1.02 % w/w 0.53 lb ai/a 1.02 % w/w		6.5 oz/a 29 fl oz/a 8.5 lb/100 gal 29 fl oz/a 8.5 lb/100 gal		PRE 2-4"W-1 2-4"W-1 LPOST-IN LPOST-IN	A C C	84 a	77 b	98 ab	98 abc 97 abc
3 VALOR XLT LIBERTY 280 AMS LIBERTY 280 AMS	40.3 WG 2.34 EC 100 SG 2.34 EC 100 SG		0.088 lb ai/a 0.53 lb ai/a 1.02 % w/w 0.53 lb ai/a 1.02 % w/w		3.5 oz/a 29 fl oz/a 8.5 lb/100 gal 29 fl oz/a 8.5 lb/100 gal		PRE 2-4"W-1 2-4"W-1 LPOST-IN LPOST-IN	A C C	96 a	93 a	99 a	99 a 97 abc
4 VALOR SX LIBERTY 280 ZIDUA AMS LIBERTY 280 AMS	51 WG 2.34 EC 85 WG 100 SG 2.34 EC 100 SG		0.064 lb ai/a 0.53 lb ai/a 0.106 lb ai/a 1.02 % w/w 0.53 lb ai/a 1.02 % w/w		2 oz/a 29 fl oz/a 2 oz/a 8.5 lb/100 gal 29 fl oz/a 8.5 lb/100 gal		PRE V2 V2 V2 LPOST-IN LPOST-IN	A B B B	91 a	96 a	98 ab	98 bc 95 c
5 LIBERTY 280 PREFIX AMS LIBERTY 280 ZIDUA AMS	2.34 EC 5.29 EC 100 SG 2.34 EC 85 WG 100 SG		0.53 lb ai/a 1.32 lb ai/a 1.02 % w/w 0.53 lb ai/a 0.106 lb ai/a 1.02 % w/w		29 fl oz/a 2 pt/a 8.5 lb/100 gal 29 fl oz/a 2 oz/a 8.5 lb/100 gal		V2 V2 V2 2-4"W-2 2-4"W-2 2-4"W-2	B B B D D D		98 a	99 a	99 a 99 a
6 OPTILL PRO (CO-PACK) OPTILL OUTLOOK LIBERTY 280 AMS LIBERTY 280 AMS	68 WG 6 EC 2.34 EC 100 SG 2.34 EC 100 SG		0.085 lb ai/a 0.47 lb ai/a 0.53 lb ai/a 1.02 % w/w 0.53 lb ai/a 1.02 % w/w		2 oz/a 10 fl oz/a 29 fl oz/a 8.5 lb/100 gal 29 fl oz/a 8.5 lb/100 gal		PRE PRE PRE 2-4"W-1 2-4"W-1 LPOST-IN LPOST-IN	A A A C C	83 a	78 b	99 a	99 ab 98 ab
7 ENVIVE LIBERTY 280 OUTLOOK AMS LIBERTY 280 AMS	41.3 WG 2.34 EC 6 EC 100 SG 2.34 EC 100 SG		0.103 lb ai/a 0.53 lb ai/a 0.656 lb ai/a 1.02 % w/w 0.53 lb ai/a 1.02 % w/w		4 oz/a 29 fl oz/a 14 fl oz/a 8.5 lb/100 gal 29 fl oz/a 8.5 lb/100 gal		PRE V2 V2 V2 LPOST-IN LPOST-IN	A B B B	93 a	97 a	99 a	99 a 99 a
8 LIBERTY 280 WARRANT AMS LIBERTY 280 OUTLOOK AMS	2.34 EC 3 CS 100 SG 2.34 EC 6 EC 100 SG		0.53 lb ai/a 1.13 lb ai/a 1.02 % w/w 0.53 lb ai/a 0.656 lb ai/a 1.02 % w/w		29 fl oz/a 3 pt/a 8.5 lb/100 gal 29 fl oz/a 14 fl oz/a 8.5 lb/100 gal		V2 V2 V2 2-4"W-2 2-4"W-2 2-4"W-2	B B B D D D		77 b	93 c	99 a 99 a
9 BOUNDARY LIBERTY 280 AMS LIBERTY 280 AMS	6.5 EC 2.34 EC 100 SG 2.34 EC 100 SG		1.22 lb ai/a 0.53 lb ai/a 1.02 % w/w 0.53 lb ai/a 1.02 % w/w		1.5 pt/a 29 fl oz/a 8.5 lb/100 gal 29 fl oz/a 8.5 lb/100 gal		PRE 2-4"W-1 2-4"W-1 LPOST-IN LPOST-IN	A C C	42 b	33 c	96 b	97 c 96 bc

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code								AMBTR	AMBTR	AMBTR	AMBTR	AMBTR
Crop Code								7-29-13	8-1-13	8-15-13	8-29-13	9-12-13
Rating Date								Control	Control	Control	Control	Control
Rating Type								Percent	Percent	Percent	Percent	Percent
Rating Unit								16 DA-A	3 DA-B			
Rating Timing								0 DA-B	0 DA-C	14 DA-C	28 DA-C	42 DA-C
Trt-Eval Interval												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
10	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	33 b	30 c	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2-4"W-1	C			99 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	2-4"W-1	C			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	2-4"W-1	C			
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	LPOST-IN				
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	LPOST-IN				
LSD (P=.05)								17.1	15.7	2.0	1.1	2.8
Standard Deviation								9.7	9.1	1.2	0.6	1.6
CV								14.98	13.45	1.34	0.73	1.85
Replicate F								0.200	1.056	0.385	3.857	3.660
Replicate Prob(F)								0.8207	0.3684	0.6859	0.0404	0.0464
Treatment F								39.747	42.701	2071.562	7027.402	1079.985
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0001

Weed Control in Liberty Link Soybeans.

Trial ID: 13-1-E60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Bayer (NH2).
2. CI/WC at 0 DA-B, 0 DA-C and 14, 28, and 42 DA-C.
3. Applications D (2-4"W-2) and E (LPOST-IN) are "if needed".
4. No yield.
5. Following the PRE application the first rainfall event, beginning 7 days later, was 0.59 inch over 1 day.
Following the V2 application the first rainfall event, beginning 1 day later, was 0.46 inch over 1 day.
Following the 2-4"W-1 application the first rainfall event, beginning 1 day later, was 0.24 inch over 1 day.
Following the 2-4"W-2 application the first rainfall event, beginning 2 days later, was 0.1 inch over 1 day.
The E (LPOST-IN) application was not applied, not needed.
6. At application "B", in treatments 4 and 7, AMBTR was the only weed in the plots and it was smaller than in the other treatments.
7. Not harvested.