

Liberty Link Soybean Programs - Glyphosate-Resistant Waterhemp - BRC Site 2.

Trial ID: 09-50W-S70

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: 06-28-09

Objectives: Determine which soil residual herbicide provides the greatest benefit for control of glyphosate-resistant waterhemp in a Liberty Link soybean system.

Crop 1: GLXMA Soybean Variety: S080122 Description: LL
 Planting Method: SEEDS Planting Date: 06-28-09
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: SETFA Setaria faberi Herrm. foxtail, giant
 Pest 2 Type: W Code: AMBTR Ambrosia trifida L. ragweed, giant
 Pest 3 Type: W Code: IPOSS morningglory, species
 Pest 4 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 27 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2008

Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 150 LB/A

% OM: 2.2 Texture: SILT LOAM
 pH: 6.3 Soil Name: PIERRON
 CEC: 11 Fert. Level: P1: 67 LB/A, K: 376 LB/A

	Application Description			
	A	B	C	D
Application Date:	06-28-09	07-16-09	07-24-09	08-14-09
Time of Day:	18:45	9:45	10:45	9:40
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	PRE	3"W	22DAE	44DAE
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	NVH	DKP	NVH	NVH
Air Temperature, Unit:	81 F	80 F	80 F	80 F
% Relative Humidity:	50	80	92	76
Wind Velocity, Unit:	4 MPH	2 MPH	1 MPH	2 MPH
Wind Direction:	N	N	W	W
Dew Presence (Y/N):	N	Y	Y	Y
Soil Moisture:	NORMAL	ABONOR	NORMAL	NORMAL
% Cloud Cover:	0	60	10	5

	06-28-09	07-16-09	07-24-09	08-14-09
Crop stage at application:	NA	V1-V2	V3-V4	R1
Height Min, Max (inch):	3	7 6	8 22	26

	Pest Stage At Each Application			
	06-28-09	07-16-09	07-24-09	08-14-09
Application Date:	06-28-09	07-16-09	07-24-09	08-14-09
Weed Code:	SETFA	SETFA	SETFA	SETFA
Stage Majority (leaves):	NA	2	3	NA
Stage Min, Max:		1 2	2 5	
Height Majority:		1 IN	3 IN	
Height Min, Max:		0.75 1	2 5	
Density, Unit:		0.8 FT2	0.8 FT2	
Weed Code:	AMBTR	AMBTR	AMBTR	AMBTR
Stage Majority (leaves):	NA	2	4	4
Stage Min, Max:		COTY 2	1 6	3 6
Height Majority:		3 IN	3 IN	6 IN
Height Min, Max:		1 3	2 5	4 8
Density, Unit:		0.7 FT2	0.7 FT2	0.01 FT2
Weed Code:	IPOSS	IPOSS	IPOSS	IPOSS
Stage Majority (leaves):	NA	1	4	6
Stage Min, Max:		COTY 2	2 6	5 8
Height Majority:		2 IN	3 IN	4 IN
Height Min, Max:		1 3	2 4	3 6
Density, Unit:		0.4 FT2	0.4 FT2	0.03 FT2
Weed Code:	AMATA	AMATA	AMATA	AMATA
Stage Majority (leaves):	NA	COTY	1	NA
Stage Min, Max:		COTY 1	1 2	
Height Majority:		0.5 IN	1 IN	
Height Min, Max:		0.5 1	0.5 1	
Density, Unit:		0.01 FT2	0.01 FT2	

Application Equipment

	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
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 11-08-09		GLXMA 11-08-09		GLXMA 07-16-09		GLXMA 07-22-09		GLXMA 07-30-09		GLXMA 08-07-09	
														Moisture Percent		Yield bu/A		Injury Percent		Injury Percent 6 DA-B		Injury Percent 14 DA-B		Injury Percent 14 DA-C	
Trt	Treatment	Form	Form	Rate	Rate	Other	Other	Growth	Appl																
No.	Name	Conc	Type	Unit	Unit	Rate	Rate	Stage	Code																
1	NONTREATED									12.3	abc	30	b	0	a	0	b	0	a	0	a	0	a	0	a
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	12.5	abc	41	a	0	a	0	b	0	a	0	a	0	a	0	a
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C																
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C																
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D																
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D																
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	12.2	bc	44	a	0	a	0	b	0	a	0	a	0	a	0	a
3	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C																
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C																
4	AUTHORITY FIRST	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	12.3	abc	44	a	0	a	0	b	0	a	0	a	0	a	0	a
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C																
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C																
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D																
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D																
5	AUTHORITY FIRST	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	12.2	bc	44	a	0	a	0	b	0	a	0	a	0	a	0	a
5	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C																
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C																
6	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C	12.5	abc	42	a					0	a	0	a	0	a	0	a
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C																
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3"W	B	12.3	abc	43	a			9	a	0	a	0	a	0	a	0	a
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	3"W	B																
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C																
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C																
8	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A	12.4	abc	44	a	0	a	0	b	0	a	0	a	0	a	0	a
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C																
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C																
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D																
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D																
9	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	12.5	abc	41	a	0	a	0	b	0	a	0	a	0	a	0	a
9	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C																
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C																
9	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D																
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D																
10	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	12.5	abc	40	a	0	a	0	b	0	a	0	a	0	a	0	a
10	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C																
10	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C																
10	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D																
10	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D																
11	VALOR XLT	40.3	WG			3	oz/a	PRE	A	12.6	a	39	a	0	a	0	b	0	a	0	a	0	a	0	a
11	VALOR SX	51	WG	0.056	lb ai/a			PRE	A																
11	CLASSIC	25	WG	0.0194	lb ai/a			PRE	A																
11	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C																
11	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C																
11	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D																
11	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D																
12	ENVIVE	41.3	WG			3.5	oz/a	PRE	A	12.2	c	42	a	0	a	0	b	0	a	0	a	0	a	0	a
12	CLASSIC	25	WG	0.02	lb ai/a			PRE	A																
12	HARMONY SG	50	SG	0.00643	lb ai/a			PRE	A																
12	VALOR SX	51	WG	0.0635	lb ai/a			PRE	A																
12	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C																
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C																
12	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D																
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D																
13	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	PRE	A	12.5	ab	43	a	0	a	0	b	0	a	0	a	0	a	0	a
13	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C																
13	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C																
13	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D																
13	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D																

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Pest Code Crop Code Rating Date Rating Data Type Rating Unit Rating Timing Trt-Eval Interval										SETFA	SETFA	SETFA	SETFA	SETFA
										07-16-09 Control Percent	07-22-09 Control Percent 6 DA-B	07-30-09 Control Percent	08-07-09 Control Percent	08-28-09 Control Percent
										0 DA-B	-2 DA-C	14 DA-B	14 DA-C	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 d	0 d	0 c	0 e	0 c
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	95 ab	95 a	99 a	98 abc	99 a
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	95 ab	95 a	99 a	99 ab	97 a
3	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C					
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
4	AUTHORITY FIRST	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	95 abc	83 b	99 a	98 a-d	98 a
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
5	AUTHORITY FIRST	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	95 ab	92 a	99 a	97 a-d	95 a
5	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C					
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
6	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C			99 a	96 cd	95 a
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3"W	B		99 a	99 a	95 d	88 b
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	3"W	B					
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
8	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A	0 d	0 d	98 b	97 a-d	98 a
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
9	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	91 c	73 c	99 a	99 a	99 a
9	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
9	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
10	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	97 ab	92 a	99 a	98 a-d	99 a
10	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
10	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
10	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
10	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
11	VALOR XLT	40.3	WG			3	oz/a	PRE	A	97 ab	96 a	99 a	96 bcd	98 a
11	VALOR SX	51	WG	0.056	lb ai/a			PRE	A					
11	CLASSIC	25	WG	0.0194	lb ai/a			PRE	A					
11	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
11	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
11	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
11	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
12	ENVIVE	41.3	WG			3.5	oz/a	PRE	A	98 a	97 a	99 a	97 a-d	98 a
12	CLASSIC	25	WG	0.02	lb ai/a			PRE	A					
12	HARMONY SG	50	SG	0.00643	lb ai/a			PRE	A					
12	VALOR SX	51	WG	0.0635	lb ai/a			PRE	A					
12	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
12	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
13	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	PRE	A	93 bc	92 a	99 a	98 abc	99 a
13	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
13	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
13	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
13	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					

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Pest Code	SETFA	SETFA	SETFA	SETFA	SETFA
Crop Code					
Rating Date	07-16-09	07-22-09	07-30-09	08-07-09	08-28-09
Rating Data Type	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent
Rating Timing		6 DA-B			
Trt-Eval Interval	0 DA-B	-2 DA-C	14 DA-B	14 DA-C	35 DA-C

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code
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LSD (P=.05)									
		4.0	7.7	0.6	2.9	4.9			
Replicate F		1.406	2.099	0.235	1.486	1.155			
Replicate Prob(F)		0.2683	0.1464	0.7921	0.2464	0.3319			
Treatment F		797.055	189.508	20710.707	751.420	255.399			
Treatment Prob(F)		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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									AMBTR	AMBTR	AMBTR	AMBTR	AMBTR
Pest Code									07-16-09	07-22-09	07-30-09	08-07-09	08-28-09
Crop Code									Control	Control	Control	Control	Control
Rating Date									Percent	Percent	Percent	Percent	Percent
Rating Data Type									6 DA-B	6 DA-B	6 DA-B	6 DA-B	6 DA-B
Rating Unit									0 DA-B	-2 DA-C	14 DA-B	14 DA-C	35 DA-C
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	NONTREATED									0 e	0 h	0 d	0 c 0 d
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	87 bc	48 fg	96 bc	97 ab 99 a
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	93 a	57 ef	97 abc	97 ab 96 abc
3	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C				
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
4	AUTHORITY FIRST	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	95 a	82 bc	99 a	99 a 98 ab
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
5	AUTHORITY FIRST	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	97 a	87 ab	98 ab	98 ab 93 c
5	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C				
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
6	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C			96 c	98 a 98 ab
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3"W	B		98 a	97 abc	98 a 95 bc
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	3"W	B				
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
8	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A	93 ab	63 de	98 ab	99 a 99 a
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
9	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	93 ab	43 g	97 abc	97 ab 99 a
9	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
9	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
10	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	80 d	37 g	98 ab	97 ab 98 ab
10	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
10	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
10	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
10	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
11	VALOR XLT	40.3	WG			3	oz/a	PRE	A	94 a	63 de	97 abc	98 ab 99 a
11	VALOR SX	51	WG	0.056	lb ai/a			PRE	A				
11	CLASSIC	25	WG	0.0194	lb ai/a			PRE	A				
11	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
11	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
11	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
11	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
12	ENVIVE	41.3	WG			3.5	oz/a	PRE	A	94 a	72 cd	97 abc	96 b 99 a
12	CLASSIC	25	WG	0.02	lb ai/a			PRE	A				
12	HARMONY SG	50	SG	0.00643	lb ai/a			PRE	A				
12	VALOR SX	51	WG	0.0635	lb ai/a			PRE	A				
12	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
12	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
13	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	PRE	A	83 cd	40 g	98 ab	99 a 99 a
13	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
13	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
13	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
13	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				

Liberty Link Soybean Programs - Glyphosate-Resistant Waterhemp - BRC Site 2.

Trial ID: 09-50W-S70

Location: Belleville Res. Center

Pest Code	AMBTR	AMBTR	AMBTR	AMBTR	AMBTR
Crop Code					
Rating Date	07-16-09	07-22-09	07-30-09	08-07-09	08-28-09
Rating Data Type	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent
Rating Timing		6 DA-B			
Trt-Eval Interval	0 DA-B	-2 DA-C	14 DA-B	14 DA-C	35 DA-C

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Other Rate	Other Rate	Other Unit	Growth Stage	Appl Code
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LSD (P=.05)						6.1	13.3		1.9	2.3	3.8
Replicate F						2.191	0.379		8.049	0.372	0.191
Replicate Prob(F)						0.1380	0.6890		0.0021	0.6930	0.8277
Treatment F						180.593	34.165		1799.648	1187.524	444.630
Treatment Prob(F)						0.0001	0.0001		0.0001	0.0001	0.0001

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

Liberty Link Soybean Programs - Glyphosate-Resistant Waterhemp - BRC Site 2.

Trial ID: 09-50W-S70

Location: Belleville Res. Center

Pest Code Crop Code Rating Date Rating Data Type Rating Unit Rating Timing Trt-Eval Interval										IPOSS	IPOSS	IPOSS	IPOSS	IPOSS
										07-16-09 Control Percent	07-22-09 Control Percent 6 DA-B	07-30-09 Control Percent	08-07-09 Control Percent	08-28-09 Control Percent
										0 DA-B	-2 DA-C	14 DA-B	14 DA-C	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 f	0 d	0 b	0 d
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	91 ab	67 c	99 a	97 a	99 a
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	87 bc	58 cd	97 abc	96 a	93 bc
3	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C					
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
4	AUTHORITY FIRST	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	95 a	88 ab	98 ab	96 a	97 a
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
5	AUTHORITY FIRST	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	97 a	85 b	99 a	97 a	93 bc
5	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C					
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
6	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C			95 bc	94 a	90 c
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3"W	B		98 a	99 a	96 a	94 b
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	3"W	B					
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
8	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A	94 ab	53 de	98 a	96 a	99 a
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
9	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	91 ab	53 de	97 abc	96 a	98 a
9	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
9	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
10	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	80 c	42 e	98 ab	97 a	98 a
10	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
10	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
10	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
10	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
11	VALOR XLT	40.3	WG			3	oz/a	PRE	A	95 a	85 b	98 a	97 a	98 a
11	VALOR SX	51	WG	0.056	lb ai/a			PRE	A					
11	CLASSIC	25	WG	0.0194	lb ai/a			PRE	A					
11	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
11	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
11	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
11	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
12	ENVIVE	41.3	WG			3.5	oz/a	PRE	A	95 a	80 b	98 ab	96 a	98 a
12	CLASSIC	25	WG	0.02	lb ai/a			PRE	A					
12	HARMONY SG	50	SG	0.00643	lb ai/a			PRE	A					
12	VALOR SX	51	WG	0.0635	lb ai/a			PRE	A					
12	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
12	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					
13	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	PRE	A	68 d	43 e	94 c	95 a	97 a
13	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C					
13	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C					
13	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D					
13	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D					

Liberty Link Soybean Programs - Glyphosate-Resistant Waterhemp - BRC Site 2.

Trial ID: 09-50W-S70

Location: Belleville Res. Center

Pest Code	IPOSS	IPOSS	IPOSS	IPOSS	IPOSS
Crop Code					
Rating Date	07-16-09	07-22-09	07-30-09	08-07-09	08-28-09
Rating Data Type	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent
Rating Timing		6 DA-B			
Trt-Eval Interval	0 DA-B	-2 DA-C	14 DA-B	14 DA-C	35 DA-C

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code
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LSD (P=.05)	8.1	12.6	3.2	3.1	3.0
Replicate F	2.972	0.662	1.549	4.135	4.917
Replicate Prob(F)	0.0741	0.5258	0.2329	0.0286	0.0162
Treatment F	105.327	40.106	613.063	621.092	693.745
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0001

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

Liberty Link Soybean Programs - Glyphosate-Resistant Waterhemp - BRC Site 2.

Trial ID: 09-50W-S70

Location: Belleville Res. Center

										AMATA	AMATA	AMATA	AMATA
Pest Code										07-22-09	07-30-09	08-07-09	08-28-09
Crop Code										Control	Control	Control	Control
Rating Date										Percent	Percent	Percent	Percent
Rating Data Type										6 DA-B			
Rating Unit										-2 DA-C	14 DA-B	14 DA-C	35 DA-C
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	NONTREATED									0 d	0 c	0 d	0 c
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	99 a	99 a	99 a	99 a
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	99 a	99 a	99 a	99 a
3	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C				
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
4	AUTHORITY FIRST	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	97 ab	99 a	97 bc	99 a
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
5	AUTHORITY FIRST	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	93 ab	99 a	99 a	99 a
5	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C				
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
6	IGNITE 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	22DAE	C		97 b	97 c	94 b
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3"W	B	98 a	99 a	99 a	95 b
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	3"W	B				
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
8	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A	27 c	99 a	98 ab	99 a
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
9	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	27 c	99 a	96 c	99 a
9	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
9	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
10	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	98 a	99 a	99 a	99 a
10	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
10	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
10	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
10	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
11	VALOR XLT	40.3	WG			3	oz/a	PRE	A	99 a	99 a	99 a	99 a
11	VALOR SX	51	WG	0.056	lb ai/a			PRE	A				
11	CLASSIC	25	WG	0.0194	lb ai/a			PRE	A				
11	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
11	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
11	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
11	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
12	ENVIVE	41.3	WG			3.5	oz/a	PRE	A	99 a	99 a	99 a	99 a
12	CLASSIC	25	WG	0.02	lb ai/a			PRE	A				
12	HARMONY SG	50	SG	0.00643	lb ai/a			PRE	A				
12	VALOR SX	51	WG	0.0635	lb ai/a			PRE	A				
12	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
12	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				
13	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	PRE	A	91 b	99 a	99 a	99 a
13	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	C				
13	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	C				
13	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	D				
13	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	D				

Liberty Link Soybean Programs - Glyphosate-Resistant Waterhemp - BRC Site 2.

Trial ID: 09-50W-S70

Location: Belleville Res. Center

Pest Code	AMATA	AMATA	AMATA	AMATA
Crop Code				
Rating Date	07-22-09	07-30-09	08-07-09	08-28-09
Rating Data Type	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent
Rating Timing	6 DA-B			
Trt-Eval Interval	-2 DA-C	14 DA-B	14 DA-C	35 DA-C

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
LSD (P=.05)					6.3			1.0	1.3	3.0
Replicate F					0.056			1.565	1.565	0.032
Replicate Prob(F)					0.9459			0.2296	0.2296	0.9686
Treatment F					286.430			6554.323	3794.457	696.246
Treatment Prob(F)					0.0001			0.0001	0.0001	0.0001

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

Trial Comments

1. Protocol: Bayer (MRC).
2. Ratings: CI/WC at 0 + 14 da B and C; WC at 35 da C.
3. All POST applications should be 3-4"W or less, the D application is only if necessary.
4. IPOSS = Morningglory species including IPOHE (ivyleaf morningglory) and IPOLA (pitted morningglory).
5. Harvested 11-8-09, (2) 30 inch rows by 24 ft.