

MSU Weed Science Research Program

Evaluation of Residual Herbicides for Use in Liberty Link Soybean

Trial ID: SOY03-07  
 Conducted: C-12

Study Dir.: Sprague, Powell  
 Investigator: Christy Sprague

<b>Date Planted:</b> 5/22/07	<b>Row Spacing:</b> 30 IN
<b>Variety:</b> SG2479LL	<b>No. of Reps:</b> 4
<b>Population:</b> 158,000 seeds/acre	<b>% OM:</b> 3.4
<b>Soil Type:</b> Loam	<b>pH:</b> 6.7
<b>Plot Size:</b> 10 X 28 FT	<b>Design:</b> RANDOMIZED COMPLETE BLOCK

**Tillage:** Fall Chisel, Spring Soil Finish 5/8/07, Spring Soil Finish 5/21/07  
**Fertilizer:** None at planting

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
2.	ANGR	mainly foxtail species	SETARIA SP.
3.	AMAPO	AMARANTH, POWELL	AMARANTHUS POWELLII S.WATS.
4.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
5.	SOLPT	NIGHTSHADE, EASTERN BLACK	SOLANUM PTYCANTHUM DUNAL
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

**Application Description**

	A	B
<b>Application Timing:</b>	Pre	Post
<b>Date Treated:</b>	5/23/07	6/14/07
<b>Time Treated:</b>	10:00 am	6:00 pm
<b>% Cloud Cover:</b>	20	50
<b>Air Temp., Unit:</b>	78 F	87 F
<b>% Relative Humidity:</b>	33	20
<b>Wind Speed/Unit/Dir:</b>	2 mph S	4 mph N
<b>Soil Temp., Unit:</b>	66 F	87 F
<b>Soil/Leaf Surface M:</b>	5 5	5 5
<b>Soil Moist (1=w 5=d):</b>	5	5

**Crop Stage at Each Application**

	A	B
<b>Crop Name:</b>	GLXMA	GLXMA
<b>Height (In.):</b>	-	6-7"
<b>Stage (L):</b>	-	V2

**Weed Stage at Each Application**

	A	B
<b>Weed 1 Name:</b>	AMBEL	AMBEL
<b>Height (In.):</b>	-	3/4-2"
<b>Stage (L):</b>	-	4-8
<b>Weed 2 Name:</b>	ANGR	ANGR
<b>Height (In.):</b>	-	1-4"
<b>Stage (L):</b>	-	3-5
<b>Weed 3 Name:</b>	AMAPO	AMAPO
<b>Height (In.):</b>	-	-
<b>Stage (L):</b>	-	-
<b>Weed 4 Name:</b>	ABUTH	ABUTH
<b>Height (In.):</b>	-	-
<b>Stage (L):</b>	-	-
<b>Weed 5 Name:</b>	SOLPT	SOLPT
<b>Height (In.):</b>	-	-
<b>Stage (L):</b>	-	-

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Weed Density (plants/sq. ft.)

	1	2	3	4	5
Date:	7/9/07	7/9/07	7/9/07	7/9/07	7/9/07
Weed Name:	ABUTH	ANGR	AMAPO	AMBEL	SOLPT
Density:	1	37	8	11	< 1

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	Cub	3.8	AirMix	11003	24"	20"	100"	19	Water	27
B	Cub	3.8	AirMix	11003	28"	20"	100"	19	Water	27

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Weed Code								ANGR	AMBEL	ABUTH	AMAPO			ANGR	AMBEL
Crop Code						GLXMA		injury	control	control	control	injury	control	control	
Rating Data Type						injury		percent	percent	percent	percent	percent	percent	percent	
Rating Unit						6/15/07		6/15/07	6/15/07	6/15/07	6/15/07	6/20/07	6/20/07	6/20/07	
Rating Date						23 DA-A		23 DA-A	23 DA-A	23 DA-A	23 DA-A	28 DA-A	28 DA-A	28 DA-A	
Trt-Eval Interval															
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code								
1	Prowl H2O	3.8	SC	2.5	pt/a	PRE	A	23	78	23	61	80	4	99	99
1	Liberty	1.67	SL	30	fl oz/a	POST	B								
1	AMS		WG	8.5	lb/100 gal	POST	B								
2	Canopy	75	DF	3	oz/a	PRE	A	4	76	75	99	99	10	98	99
2	Liberty	1.67	SL	30	fl oz/a	POST	B								
2	AMS		WG	8.5	lb/100 gal	POST	B								
3	Boundary	6.5	EC	1.5	pt/a	PRE	A	4	99	78	78	99	2	99	99
3	Liberty	1.67	SL	30	fl oz/a	POST	B								
3	AMS		WG	8.5	lb/100 gal	POST	B								
4	Valor XLT	40.3	WG	3	oz/a	PRE	A	13	96	91	99	99	12	99	99
4	Liberty	1.67	SL	30	fl oz/a	POST	B								
4	AMS		WG	8.5	lb/100 gal	POST	B								
5	Untreated							0	0	0	0	0	0	0	0
6	Valor	51	WG	2	oz/a	PRE	A	13	90	86	97	99	3	99	99
6	Liberty	1.67	SL	30	fl oz/a	POST	B								
6	AMS		WG	8.5	lb/100 gal	POST	B								
7	Authority First	70	DF	3.2	oz/a	PRE	A	0	92	92	99	99	2	99	99
7	Liberty	1.67	SL	30	fl oz/a	POST	B								
7	AMS		WG	8.5	lb/100 gal	POST	B								
8	Sencor	75	WG	5.33	oz/a	PRE	A	1	71	71	76	96	1	97	99
8	Liberty	1.67	SL	30	fl oz/a	POST	B								
8	AMS		WG	8.5	lb/100 gal	POST	B								
9	Pursuit	70	WG	1.4	oz/a	PRE	A	0	98	75	99	99	0	99	99
9	Liberty	1.67	SL	30	fl oz/a	POST	B								
9	AMS		WG	8.5	lb/100 gal	POST	B								
10	FirstRate	84	WG	0.3	oz/a	PRE	A	1	80	89	97	99	6	99	99
10	Liberty	1.67	SL	30	fl oz/a	POST	B								
10	AMS		WG	8.5	lb/100 gal	POST	B								
LSD (P=.05)								3.8	7.0	13.2	8.4	3.9	3.1	1.3	0.7
Standard Deviation								2.6	4.8	9.1	5.8	2.7	2.2	0.9	0.5
CV								45.83	6.2	13.38	7.22	3.11	53.79	0.98	0.55

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Weed Code								ABUTH	AMAPO	GLXMA	ANGR	AMBEL	ABUTH	AMAPO	SOLPT
Crop Code								control	control	injury	control	control	control	control	control
Rating Data Type								percent	percent	percent	percent	percent	percent	percent	percent
Rating Unit								6/20/07	6/20/07	6/29/07	6/29/07	6/29/07	6/29/07	6/29/07	6/29/07
Rating Date								28 DA-A	28 DA-A	37 DA-A	37 DA-A	37 DA-A	37 DA-A	37 DA-A	37 DA-A
Trt-Eval Interval															
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code								
1	Prowl H2O	3.8	SC	2.5	pt/a	PRE	A	99	99	3	95	97	95	93	98
1	Liberty	1.67	SL	30	fl oz/a	POST	B								
1	AMS		WG	8.5	lb/100 gal	POST	B								
2	Canopy	75	DF	3	oz/a	PRE	A	99	99	8	93	99	99	99	98
2	Liberty	1.67	SL	30	fl oz/a	POST	B								
2	AMS		WG	8.5	lb/100 gal	POST	B								
3	Boundary	6.5	EC	1.5	pt/a	PRE	A	97	99	0	99	98	91	99	99
3	Liberty	1.67	SL	30	fl oz/a	POST	B								
3	AMS		WG	8.5	lb/100 gal	POST	B								
4	Valor XLT	40.3	WG	3	oz/a	PRE	A	99	99	10	97	99	98	99	99
4	Liberty	1.67	SL	30	fl oz/a	POST	B								
4	AMS		WG	8.5	lb/100 gal	POST	B								
5	Untreated							0	0	0	0	0	0	0	0
6	Valor	51	WG	2	oz/a	PRE	A	98	99	2	94	99	92	99	99
6	Liberty	1.67	SL	30	fl oz/a	POST	B								
6	AMS		WG	8.5	lb/100 gal	POST	B								
7	Authority First	70	DF	3.2	oz/a	PRE	A	99	99	0	98	99	98	99	99
7	Liberty	1.67	SL	30	fl oz/a	POST	B								
7	AMS		WG	8.5	lb/100 gal	POST	B								
8	Sencor	75	WG	5.33	oz/a	PRE	A	97	99	0	85	98	89	97	98
8	Liberty	1.67	SL	30	fl oz/a	POST	B								
8	AMS		WG	8.5	lb/100 gal	POST	B								
9	Pursuit	70	WG	1.4	oz/a	PRE	A	99	99	0	99	99	99	99	99
9	Liberty	1.67	SL	30	fl oz/a	POST	B								
9	AMS		WG	8.5	lb/100 gal	POST	B								
10	FirstRate	84	WG	0.3	oz/a	PRE	A	99	99	2	95	99	99	99	98
10	Liberty	1.67	SL	30	fl oz/a	POST	B								
10	AMS		WG	8.5	lb/100 gal	POST	B								
LSD (P=.05)								1.1	0.5	2.4	5.8	1.4	4.2	2.5	1.7
Standard Deviation								0.8	0.3	1.6	4.0	1.0	2.9	1.7	1.2
CV								0.88	0.36	68.09	4.7	1.11	3.4	1.95	1.33

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Weed Code								ANGR	AMBEL	AMAPO	ABUTH	
Crop Code								GLXMA				
Rating Data Type								injury	injury	injury	injury	
Rating Unit								percent	percent	percent	percent	
Rating Date								7/11/07	7/11/07	7/11/07	7/11/07	
Trt-Eval Interval								49 DA-A	49 DA-A	49 DA-A	49 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	Prowl H2O	3.8	SC	2.5	pt/a	PRE	A	0	86	93	79	92
1	Liberty	1.67	SL	30	fl oz/a	POST	B					
1	AMS		WG	8.5	lb/100 gal	POST	B					
2	Canopy	75	DF	3	oz/a	PRE	A	9	86	99	99	99
2	Liberty	1.67	SL	30	fl oz/a	POST	B					
2	AMS		WG	8.5	lb/100 gal	POST	B					
3	Boundary	6.5	EC	1.5	pt/a	PRE	A	0	96	97	98	88
3	Liberty	1.67	SL	30	fl oz/a	POST	B					
3	AMS		WG	8.5	lb/100 gal	POST	B					
4	Valor XLT	40.3	WG	3	oz/a	PRE	A	9	88	99	99	99
4	Liberty	1.67	SL	30	fl oz/a	POST	B					
4	AMS		WG	8.5	lb/100 gal	POST	B					
5	Untreated							0	0	0	0	0
6	Valor	51	WG	2	oz/a	PRE	A	0	83	95	98	91
6	Liberty	1.67	SL	30	fl oz/a	POST	B					
6	AMS		WG	8.5	lb/100 gal	POST	B					
7	Authority First	70	DF	3.2	oz/a	PRE	A	1	90	99	99	99
7	Liberty	1.67	SL	30	fl oz/a	POST	B					
7	AMS		WG	8.5	lb/100 gal	POST	B					
8	Sencor	75	WG	5.33	oz/a	PRE	A	0	74	97	95	86
8	Liberty	1.67	SL	30	fl oz/a	POST	B					
8	AMS		WG	8.5	lb/100 gal	POST	B					
9	Pursuit	70	WG	1.4	oz/a	PRE	A	1	97	99	99	99
9	Liberty	1.67	SL	30	fl oz/a	POST	B					
9	AMS		WG	8.5	lb/100 gal	POST	B					
10	FirstRate	84	WG	0.3	oz/a	PRE	A	0	88	98	99	99
10	Liberty	1.67	SL	30	fl oz/a	POST	B					
10	AMS		WG	8.5	lb/100 gal	POST	B					
LSD (P=.05)								3.4	7.9	4.0	3.9	6.2
Standard Deviation								2.4	5.5	2.8	2.7	4.3
CV								117.85	6.96	3.19	3.13	5.03