

MSU Weed Science Research Program

Weed control systems in Liberty Link soybean

Trial ID: SOY12-11 Study Dir.: Sprague, Powell  
 Conducted: C-27S Crops Investigator: Christy Sprague

Date Planted: 5/10/2011 Row Spacing: 30 IN  
 Variety: Stine 23LA02 No. of Reps: 4  
 Population: 152,000 % OM: 2.4  
 Soil Type: Silt Loam pH: 7.1  
 Plot Size: 10 X 40 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel plow, spring soil finish.  
 Fertilizer: None at planting.

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	ANNUAL GRASS	mainly foxtail species
2.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
3.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
4.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

	A	B	C	D
Application Timing:	PRE	MPOS	POST	LPOS
Date Treated:	5/10/2011	6/9/2011	6/21/2011	7/5/2011
Time Treated:	10:30 PM	3:00 PM	3:40 PM	11:35 AM
% Cloud Cover:	85	95	40	5
Air Temp., Unit:	63 F	75 F	84 F	86 F
% Relative Humidity:	45	64	69	44
Wind Speed/Unit/Dir:	4 mph E	6 mph NW	8 mph SE	3 mph SW
Soil Temp., Unit:	65 F	76 F	72 F	76 F
Soil/Leaf Surface M:	5 -	5 5	5 5	5 5
Soil Moist (1=w 5=d):	3	4	3	4

Crop Stage at Each Application

	A	B	C	D
Crop Name:	GLXMA	GLXMA	GLXMA	GLXMA
Height (In.):	-	5-6"	8-12"	15-18"
Stage (L):	-	V2	V4	R2

Weed Stage at Each Application

	A	B	C	D
Weed 1 Name:	ANGR	ANGR	ANGR	ANGR
Height (In.):	-	4-7"	5-12"	4-6"
Stage (L):	-	5-7	5-7	6-10
Weed 2 Name:	CHEAL	CHEAL	CHEAL	CHEAL
Height (In.):	-	0.5-1"	2-5"	2-4"
Stage (L):	-	5-7	10-20	8-12
Weed 3 Name:	AMBEL	AMBEL	AMBEL	AMBEL
Height (In.):	-	2"	10-20"	3"
Stage (L):	-	6-8	2-9	6
Weed 4 Name:	ABUTH	ABUTH	ABUTH	ABUTH
Height (In.):	-	1-2"	1-6	1-3"
Stage (L):	-	2-4	4-8"	4-8

Weed Density (plants/sq. ft.)

Weed Name:	1	2	3	4
ANGR	13			
CHEAL		3		
AMBEL			2	
ABUTH				1

Application Equipment

Appl	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Nozzle Width	GPA	Carrier	PSI
A	Cub	3.8	AirMix	11003	19"	20"	100"	19	Water	28
B	Cub	3.8	AirMix	11003	22"	20"	100"	19	Water	28
C	Cub	3.8	AirMix	11003	24"	20"	100"	19	Water	28
D	Cub	3.8	AirMix	11003	28"	20"	100"	19	Water	28

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Table with 8 columns: Weed Code, Crop Code, Rating Data Type, Rating Unit, Rating Date, Trt-Eval Interval, # Subsamples, Dec., ANGR, CHEAL, AMBEL, ABUTH, GLXMA, ANGR. It lists injury and control percentages for various treatments.

Main data table with 15 columns: Trt No., Treatment Name, Form Conc, Form Type, Rate, Rate Unit, Grow Stg, Appl Code, and injury/control percentages for treatments like Valor XLT, Prefix, Authority First, Authority Assist, and Untreated.

Summary statistics table with 8 columns: LSD (P=.05), Standard Deviation, CV, and injury/control percentages for treatments like Ignite, Prefix, AMS, Dual II Magnum, and AMS.

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.

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Table with columns: Weed Code, Crop Code, Rating Data Type, Rating Unit, Rating Date, Trt-Eval Interval, # Subsamples, Dec., CHEAL, AMBEL, ABUTH, GLXMA, ANGR, CHEAL, AMBEL. Rows include treatments like Valor XLT, Prefix, Authority First, Authority Assist, Untreated, Ignite, AMS, Dual II Magnum, and summary statistics (LSD, Standard Deviation, CV).

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Weed Code	ABUTH	ANGR	CHEAL	AMBEL	ABUTH	GLXMA	GLXMA							
Crop Code						moisture	yield							
Rating Data Type	control	control	control	control	control	percent	bu/acre							
Rating Unit	percent	percent	percent	percent	percent	percent								
Rating Date	7/7/2011	8/4/2011	8/4/2011	8/4/2011	8/4/2011	11/1/2011	11/1/2011							
Trt-Eval Interval	28 DA-B	56 DA-B	56 DA-B	56 DA-B	56 DA-B	145 DA-B	at 13% M							
# Subsamples, Dec.	0	0	0	0	0	1	1							
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	ABUTH	ANGR	CHEAL	AMBEL	ABUTH	GLXMA moisture	GLXMA yield
1	Valor XLT	40.3	WG	3	oz/a	PRE	A	98	95	99	99	99	13.8	55.4
1	Ignite	2.34	L	29	fl oz/a	POST	C							
1	AMS		WG	8.5	lb/100 gal	POST	C							
2	Prefix	5.29	L	2	pt/a	PRE	A	99	99	99	99	95	13.7	59.2
2	Ignite	2.34	L	29	fl oz/a	POST	C							
2	AMS		WG	8.5	lb/100 gal	POST	C							
3	Authority First	70	WG	6	oz/a	PRE	A	99	98	99	99	99	13.8	57.7
3	Ignite	2.34	L	29	fl oz/a	POST	C							
3	AMS		WG	8.5	lb/100 gal	POST	C							
4	Authority Assist	4	L	5	fl oz/a	PRE	A	99	99	97	97	99	13.8	58.0
4	Ignite	2.34	L	29	fl oz/a	POST	C							
4	AMS		WG	8.5	lb/100 gal	POST	C							
5	Untreated							0	0	0	0	0	14.2	16.5
6	Ignite	2.34	L	29	fl oz/a	MPOS	B	80	86	71	97	76	13.5	54.2
6	Prefix	5.29	L	2	pt/a	MPOS	B							
6	AMS		WG	8.5	lb/100 gal	MPOS	B							
7	Ignite	2.34	L	29	fl oz/a	MPOS	B	79	93	70	94	75	13.7	56.7
7	Dual II Magnum	7.64	L	1.33	pt/a	MPOS	B							
7	AMS		WG	8.5	lb/100 gal	MPOS	B							
8	Ignite	2.34	L	29	fl oz/a	MPOS	B	83	99	91	99	99	13.5	62.0
8	AMS		WG	8.5	lb/100 gal	MPOS	B							
8	Ignite	2.34	L	29	fl oz/a	LPOS	D							
8	AMS		WG	8.5	lb/100 gal	LPOS	D							
LSD (P=.05)								5.6	5.8	6.7	6.2	6.7	0.35	5.27
Standard Deviation								3.8	3.9	4.6	4.2	4.6	0.24	3.58
CV								4.78	4.69	5.87	4.91	5.72	1.74	6.83

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.