

MSU Weed Science Research Program

Weed Control Systems in Liberty Link Soybean

Trial ID: SOY09-08
 Conducted: T-12 Botany

Study Dir.: Sprague, Powell
 Investigator: Christy Sprague

Date Planted: 6/6/08
 Variety: Stine 5468333 LL
 Population: 210,000 seeds/A
 Soil Type: Loam
 Plot Size: 10 X 35 FT

Row Spacing: 7.5 IN
 No. of Reps: 4
 % OM: 3.4
 pH: 7.3
 Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel plow, soil finish x2 5/8/08
 Fertilizer: None at planting

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	mainly foxtail species	SETARIA SP.
2.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIFOLIA L.
3.	AMASS	REDROOT PIGWEED, POWELL AMARANTH	AMARANTHUS SP.
4.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
5.	BRAKA	MUSTARD, WILD	BRASSICA KABER
6.	SOLPT	NIGHTSHADE, EASTERN BLACK	SOLANUM PTYCANTHUM DUNAL
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

	A	B	C	D
Application Timing:	PRE	3" weeds	22 DAE	44 DAE
Date Treated:	5/9/08	6/26/08	7/8/08	7/23/08
Time Treated:	11:00 AM	2:15 PM	3:20 PM	2:30 PM
% Cloud Cover:	50	30	97	20
Air Temp., Unit:	55 F	86 F	78 F	79 F
% Relative Humidity:	49	59	78	43
Wind Speed/Unit/Dir:	7 mph E	7 mph SW	4 mph SW	5 mph N
Soil Temp., Unit:	52 F	75 F	75 F	78 F
Soil/Leaf Surface M:	5 -	5 5	5 3	5 5
Soil Moist (1=w 5=d):	5	4	3	3

Crop Stage at Each Application

	A	B	C	D
Crop Name:	GLXMA	GLXMA	GLXMA	GLXMA
Height (In.):	--	3-4"	6-9"	20"
Stage (L):	--	V1	V3	V10

Weed Stage at Each Application

	A	B	C	D
Weed 1 Name:	ANGR	ANGR	ANGR	ANGR
Height (In.):	--	1-4"	1-2"	4-10"
Stage (L):	--	1-3	2-4	3-5
Weed 2 Name:	AMBEL	AMBEL	AMBEL	AMBEL
Height (In.):	--	2-3"	1-8"	4-9"
Stage (L):	--	2-8	2-many	4-6
Weed 3 Name:	AMASS	AMASS	AMASS	AMASS
Height (In.):	--	.5-2"	2-6"	2-10"
Stage (L):	--	2-6	2-6	5-many
Weed 4 Name:	CHEAL	CHEAL	CHEAL	CHEAL
Height (In.):	--	.5-2"	4-12"	-
Stage (L):	--	4-8	many	-
Weed 5 Name:	BRAKA	BRAKA	BRAKA	BRAKA
Height (In.):	--	1"	10-16"	9-15"
Stage (L):	--	2-4	5-7	flowering
Weed 6 Name:	SOLPT	SOLPT	SOLPT	SOLPT
Height (In.):	-	-	-	-
Stage (L):	-	-	-	-

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Weed Density (plants/sq. ft.)

	1	2	3	4	5
Date:	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08
Weed Name:	CHEAL	ANGR	AMBEL	AMAPO	SOLPT
Density:	1.375	86.25	8.25	17.25	1.125

Application Equipment

Appl	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	GPA	Carrier	PSI
A	Cub	3.8	AirMix	11003	24"	20	100	19	water	28
B	Cub	3.8	AirMix	11003	25"	20	100	19	water	28
C	Cub	3.8	AirMix	11003	27"	20	100	19	water	28
D	Cub	3.8	AirMix	11003	29"	20	100	19	water	28

Comments: Previous Crop- Fallow

5/27/08: Soybeans frosted!

6/2/08: Sprayed entire study with Roundup WeatherMax (22 oz) + AMS

6/6/08: Triple "K" x1 over all treatments, replanted soybeans with same LibertyLink variety at 210,000 seeds/Acre with drill in 7.5" rows

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	GLXMA injury percent 7/6/08 58 DA-A	ANGR control percent 7/6/08 58 DA-A	CHEAL control percent 7/6/08 58 DA-A	AMAPO control percent 7/6/08 58 DA-A
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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	Valor	51	WG	2	oz/a	PRE	A	0	20	75	78
1	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
1	AMS		WG	8.5	lb/100 gal	22 DAE	C				
2	Valor XLT	40.3	WG	3	oz/a	PRE	A	0	71	99	99
2	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
2	AMS		WG	8.5	lb/100 gal	22 DAE	C				
3	Gangster V (Valor)	51	WG	1.5	oz/a	PRE	A	0	54	99	93
3	Gangster FR (FirstRate)	84	WG	0.5	oz/a	PRE	A				
3	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
3	AMS		WG	8.5	lb/100 gal	22 DAE	C				
4	Pursuit	70	DG	1.4	oz/a	PRE	A	0	65	99	99
4	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
4	AMS		WG	8.5	lb/100 gal	22 DAE	C				
5	Prowl H2O	3.8	L	2	pt/a	PRE	A	0	84	73	48
5	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
5	AMS		WG	8.5	lb/100 gal	22 DAE	C				
6	Untreated							0	0	0	0
7	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C	0	0	0	0
7	AMS		WG	8.5	lb/100 gal	22 DAE	C				
7	Ignite 280	2.33	SL	22	fl oz/a	44 DAE	D				
7	AMS		WG	8.5	lb/100 gal	44 DAE	D				
8	Ignite 280	2.33	SL	22	fl oz/a	3" weeds	B	1	96	99	99
8	AMS		WG	8.5	lb/100 gal	3" weeds	B				
8	Ignite 280	2.33	SL	22	fl oz/a	44 DAE	D				
8	AMS		WG	8.5	lb/100 gal	44 DAE	D				
LSD (P=.10)								0.6	9.7	7.9	8.1
Standard Deviation								0.5	7.9	6.5	6.6
CV								565.69	16.32	9.6	10.34

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Weed Code	AMBEL	ABUTH	GLXMA	ANGR
Crop Code				
Rating Data Type	control	control	injury	control
Rating Unit	percent	percent	percent	percent
Rating Date	7/6/08	7/6/08	7/21/08	7/21/08
Trt-Eval Interval	58 DA-A	58 DA-A	73 DA-A	73 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	AMBEL	ABUTH	GLXMA	ANGR
1	Valor	51	WG	2	oz/a	PRE	A	38	99	3	95
1	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
1	AMS		WG	8.5	lb/100 gal	22 DAE	C				
2	Valor XLT	40.3	WG	3	oz/a	PRE	A	81	99	0	91
2	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
2	AMS		WG	8.5	lb/100 gal	22 DAE	C				
3	Gangster V (Valor)	51	WG	1.5	oz/a	PRE	A	74	99	0	95
3	Gangster FR (FirstRate)	84	WG	0.5	oz/a	PRE	A				
3	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
3	AMS		WG	8.5	lb/100 gal	22 DAE	C				
4	Pursuit	70	DG	1.4	oz/a	PRE	A	35	99	0	96
4	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
4	AMS		WG	8.5	lb/100 gal	22 DAE	C				
5	Prowl H2O	3.8	L	2	pt/a	PRE	A	0	0	6	91
5	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
5	AMS		WG	8.5	lb/100 gal	22 DAE	C				
6	Untreated							0	0	0	0
7	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C	0	0	9	76
7	AMS		WG	8.5	lb/100 gal	22 DAE	C				
7	Ignite 280	2.33	SL	22	fl oz/a	44 DAE	D				
7	AMS		WG	8.5	lb/100 gal	44 DAE	D				
8	Ignite 280	2.33	SL	22	fl oz/a	3" weeds	B	99	99	1	56
8	AMS		WG	8.5	lb/100 gal	3" weeds	B				
8	Ignite 280	2.33	SL	22	fl oz/a	44 DAE	D				
8	AMS		WG	8.5	lb/100 gal	44 DAE	D				
LSD (P=.10)								11.1	0.0	5.5	9.4
Standard Deviation								9.1	0.0	4.6	7.7
CV								22.39	0.0	194.22	10.3

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Weed Code	CHEAL	AMBEL	AMAPO	ANGR
Crop Code				
Rating Data Type	control	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	7/21/08	7/21/08	7/21/08	8/12/08
Trt-Eval Interval	73 DA-A	73 DA-A	73 DA-A	95 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	Valor	51	WG	2	oz/a	PRE	A	99	99	98	99
1	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
1	AMS		WG	8.5	lb/100 gal	22 DAE	C				
2	Valor XLT	40.3	WG	3	oz/a	PRE	A	99	99	99	99
2	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
2	AMS		WG	8.5	lb/100 gal	22 DAE	C				
3	Gangster V (Valor)	51	WG	1.5	oz/a	PRE	A	99	99	99	99
3	Gangster FR (FirstRate)	84	WG	0.5	oz/a	PRE	A				
3	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
3	AMS		WG	8.5	lb/100 gal	22 DAE	C				
4	Pursuit	70	DG	1.4	oz/a	PRE	A	99	99	99	99
4	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
4	AMS		WG	8.5	lb/100 gal	22 DAE	C				
5	Prowl H2O	3.8	L	2	pt/a	PRE	A	99	97	95	99
5	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C				
5	AMS		WG	8.5	lb/100 gal	22 DAE	C				
6	Untreated							0	0	0	0
7	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C	99	99	79	99
7	AMS		WG	8.5	lb/100 gal	22 DAE	C				
7	Ignite 280	2.33	SL	22	fl oz/a	44 DAE	D				
7	AMS		WG	8.5	lb/100 gal	44 DAE	D				
8	Ignite 280	2.33	SL	22	fl oz/a	3" weeds	B	93	90	73	99
8	AMS		WG	8.5	lb/100 gal	3" weeds	B				
8	Ignite 280	2.33	SL	22	fl oz/a	44 DAE	D				
8	AMS		WG	8.5	lb/100 gal	44 DAE	D				
LSD (P=.10)								3.0	1.0	5.6	0.0
Standard Deviation								2.5	0.8	4.6	0.0
CV								2.86	0.96	5.72	0.0

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Weed Code								AMBEL	CHEAL	
Crop Code										GLXMA
Rating Data Type								control	control	moisture
Rating Unit								percent	percent	percent
Rating Date								8/12/08	8/12/08	10/30/08
Trt-Eval Interval								95 DA-A	95 DA-A	174 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	Valor	51	WG	2	oz/a	PRE	A	99	99	14.6
1	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C			
1	AMS		WG	8.5	lb/100 gal	22 DAE	C			
2	Valor XLT	40.3	WG	3	oz/a	PRE	A	99	99	14.6
2	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C			
2	AMS		WG	8.5	lb/100 gal	22 DAE	C			
3	Gangster V (Valor)	51	WG	1.5	oz/a	PRE	A	99	99	14.5
3	Gangster FR (FirstRate)	84	WG	0.5	oz/a	PRE	A			
3	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C			
3	AMS		WG	8.5	lb/100 gal	22 DAE	C			
4	Pursuit	70	DG	1.4	oz/a	PRE	A	99	99	14.5
4	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C			
4	AMS		WG	8.5	lb/100 gal	22 DAE	C			
5	Prowl H2O	3.8	L	2	pt/a	PRE	A	99	99	14.9
5	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C			
5	AMS		WG	8.5	lb/100 gal	22 DAE	C			
6	Untreated							0	0	15.3
7	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C	99	99	14.6
7	AMS		WG	8.5	lb/100 gal	22 DAE	C			
7	Ignite 280	2.33	SL	22	fl oz/a	44 DAE	D			
7	AMS		WG	8.5	lb/100 gal	44 DAE	D			
8	Ignite 280	2.33	SL	22	fl oz/a	3" weeds	B	99	99	14.4
8	AMS		WG	8.5	lb/100 gal	3" weeds	B			
8	Ignite 280	2.33	SL	22	fl oz/a	44 DAE	D			
8	AMS		WG	8.5	lb/100 gal	44 DAE	D			
LSD (P=.10)								0.0	0.0	0.40
Standard Deviation								0.0	0.0	0.33
CV								0.0	0.0	2.22

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Weed Code
 Crop Code
 Rating Data Type
 Rating Unit
 Rating Date
 Trt-Eval Interval

GLXMA
 yield
 bu/acre
 10/30/08
 at 13% M

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	
1	Valor	51	WG	2	oz/a	PRE	A	60.2
1	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C	
1	AMS		WG	8.5	lb/100 gal	22 DAE	C	
2	Valor XLT	40.3	WG	3	oz/a	PRE	A	62.8
2	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C	
2	AMS		WG	8.5	lb/100 gal	22 DAE	C	
3	Gangster V (Valor)	51	WG	1.5	oz/a	PRE	A	63.7
3	Gangster FR (FirstRate)	84	WG	0.5	oz/a	PRE	A	
3	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C	
3	AMS		WG	8.5	lb/100 gal	22 DAE	C	
4	Pursuit	70	DG	1.4	oz/a	PRE	A	62.8
4	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C	
4	AMS		WG	8.5	lb/100 gal	22 DAE	C	
5	Prowl H2O	3.8	L	2	pt/a	PRE	A	59.1
5	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C	
5	AMS		WG	8.5	lb/100 gal	22 DAE	C	
6	Untreated							21.0
7	Ignite 280	2.33	SL	22	fl oz/a	22 DAE	C	60.3
7	AMS		WG	8.5	lb/100 gal	22 DAE	C	
7	Ignite 280	2.33	SL	22	fl oz/a	44 DAE	D	
7	AMS		WG	8.5	lb/100 gal	44 DAE	D	
8	Ignite 280	2.33	SL	22	fl oz/a	3" weeds	B	60.4
8	AMS		WG	8.5	lb/100 gal	3" weeds	B	
8	Ignite 280	2.33	SL	22	fl oz/a	44 DAE	D	
8	AMS		WG	8.5	lb/100 gal	44 DAE	D	
LSD (P=.10)								3.57
Standard Deviation								2.93
CV								5.21