

Evaluation of weed control systems in GAT soybean

Trial ID: SOY04-09
 Conducted: C-12

Study Dir.: Sprague, Powell
 Investigator: Christy Sprague

Date Planted: 5/18/09
Variety: GAT Soybean
Population: Silt Loam
Soil Type: Loam
Plot Size: 10 X 30 FT
Row Spacing: 30 IN
No. of Reps: 4
% OM: 3.6
pH: 7.5
Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall moldboard plow, spring soil finished twice
Fertilizer: None

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIFOLIA L.
2.	ANGR	mainly foxtail species	SETARIA SP.
3.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
4.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
5.	AMAPO	AMARANTH, POWELL	AMARANTHUS POWELLII S. WATS.
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

	A	B	C
Application Timing:	PRE	MPOS	POST
Date Treated:	5/18/09	6/23/09	6/29/09
Time Treated:	4:30 pm	1:45 pm	9:30am
% Cloud Cover:	0	60	90
Air Temp., Unit:	72 F	92 F	71 F
% Relative Humidity:	23	46	65
Wind Speed/Unit/Dir:	5 mph SW	1 mph NW	6 mph W
Soil Temp., Unit:	62 F	78 F	66 F
Soil/Leaf Surface M:	5 5	3 5	5 5
Soil Moist (1=w 5=d):	3	3	5

Crop Stage at Each Application

	A	B	C
Crop Name:	GLXMA	GLXMA	GLXMA
Height (In.):	-	8	10
Stage (L):	-	V3	V4

Weed Stage at Each Application

	A	B	C
Weed 1 Name:	AMBEL	AMBEL	AMBEL
Height (In.):	-	5	6
Stage (L):	-	12	many
Weed 2 Name:	ANGR	ANGR	ANGR
Height (In.):	-	7	4
Stage (L):	-	4	5
Weed 3 Name:	ABUTH	ABUTH	ABUTH
Height (In.):	-	2	-
Stage (L):	-	4	-
Weed 4 Name:	CHEAL	CHEAL	CHEAL
Height (In.):	-	4	-
Stage (L):	-	10	-
Weed 5 Name:	AMAPO	AMAPO	AMAPO
Height (In.):	-	4	-
Stage (L):	-	6	-

Weed Density (plants/sq. ft.)

	1	2	3	4	5
Weed Name:	ANGR	AMBEL	ABUTH	AMAPO	CHEAL
Density:	14	16	<1	<1	<1

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	23"	20"	100"	19	Water	28
B	Cub	3.8	AirMix	11003	27"	20"	100"	19	Water	28
C	Cub	3.8	AirMix	11003	27"	20"	100"	19	Water	28

Comments: Rows 2 and 3 were planted to GAT soybean and rows 1 and 4 were planted to Pioneer 92M61 Roundup Ready.

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	GLXMA injury-RR percent 6/23/09 0 DA-B	GLXMA injury-GAT percent 6/23/09 0 DA-B	ANGR control percent 6/23/09 0 DA-B	CHEAL control percent 6/23/09 0 DA-B	AMAPO control percent 6/23/09 0 DA-B	AMBEL control percent 6/23/09 0 DA-B	ABUTH control percent 6/23/09 0 DA-B	GLXMA injury-RR percent 6/29/09 6 DA-B
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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	GLXMA injury-RR percent 6/23/09 0 DA-B	GLXMA injury-GAT percent 6/23/09 0 DA-B	ANGR control percent 6/23/09 0 DA-B	CHEAL control percent 6/23/09 0 DA-B	AMAPO control percent 6/23/09 0 DA-B	AMBEL control percent 6/23/09 0 DA-B	ABUTH control percent 6/23/09 0 DA-B	GLXMA injury-RR percent 6/29/09 6 DA-B
1	Diligent (4 oz/A)							43	13	98	99	99	92	99	26
1	Classic	25	WG	1	oz/a	PRE	A								
1	rimsulfuron (Resolve) SG	25	WG	1	oz/a	PRE	A								
1	Valor	51	WG	1.96	oz/a	PRE	A								
2	Diligent (6 oz/A)							63	20	98	99	99	94	99	40
2	Classic	25	WG	1.5	oz/a	PRE	A								
2	rimsulfuron (Resolve) SG	25	WG	1.5	oz/a	PRE	A								
2	Valor	51	WG	2.9	oz/a	PRE	A								
3	Authority First	70	WG	3.2	oz/a	PRE	A	9	3	70	99	99	76	99	4
4	Untreated							0	0	0	0	0	0	0	0
5	Diligent (4 oz/A)							45	14	96	99	99	91	98	21
5	Classic	25	WG	1	oz/a	PRE	A								
5	rimsulfuron (Resolve) SG	25	WG	1	oz/a	PRE	A								
5	Valor	51	WG	1.96	oz/a	PRE	A								
5	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C								
5	AMS		WG	17	lb/100 gal	POST	C								
6	Authority First	70	WG	3.2	oz/a	PRE	A	6	4	69	99	99	70	99	1
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C								
6	AMS		WG	17	lb/100 gal	POST	C								
7	Roundup PowerMax	4.5	SL	22	fl oz/a	MPOS	B								1
7	AMS		WG	17	lb/100 gal	MPOS	B								
8	Freestyle (1.33 oz/A)														76
8	Classic	25	WG	0.66	oz/a	MPOS	B								
8	Express SG	50	WG	0.5	oz/a	MPOS	B								
8	Harmony SG	50	WG	0.5	oz/a	MPOS	B								
8	Roundup PowerMax	4.5	SL	22	fl oz/a	MPOS	B								
8	AMS		WG	17	lb/100 gal	MPOS	B								
9	Freestyle (1.33 oz/A)														78
9	Classic	25	WG	0.66	oz/a	MPOS	B								
9	Express SG	50	WG	0.5	oz/a	MPOS	B								
9	Harmony SG	50	WG	0.5	oz/a	MPOS	B								
9	Activator 90		L	0.25	% v/v	MPOS	B								
9	AMS		WG	17	lb/100 gal	MPOS	B								
LSD (P=.05)								10.0	7.2	6.6	0.0	0.0	7.6	0.9	13.6
Standard Deviation								6.6	4.8	4.4	0.0	0.0	5.0	0.6	9.3
CV								24.17	54.54	6.13	0.0	0.0	7.13	0.71	33.89

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Weed Code								ANGR	AMBEL	ABUTH	CHEAL	GLXMA	GLXMA	ANGR	
Crop Code								GLXMA	control	control	control	GLXMA	GLXMA	control	
Rating Data Type								injury-GAT	percent	percent	percent	injury-RR	injury-GAT	percent	
Rating Unit								percent	percent	percent	percent	percent	percent	percent	
Rating Date								6/29/09	6/29/09	6/29/09	6/29/09	7/13/09	7/13/09	7/13/09	
Trt-Eval Interval								6 DA-B	6 DA-B	6 DA-B	6 DA-B	14 DA-C	14 DA-C	14 DA-C	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code								
1	Diligent (4 oz/A)							10	97	84	99	99	8	0	90
1	Classic	25	WG	1	oz/a	PRE	A								
1	rimsulfuron (Resolve) SG	25	WG	1	oz/a	PRE	A								
1	Valor	51	WG	1.96	oz/a	PRE	A								
2	Diligent (6 oz/A)							8	98	88	99	99	29	0	91
2	Classic	25	WG	1.5	oz/a	PRE	A								
2	rimsulfuron (Resolve) SG	25	WG	1.5	oz/a	PRE	A								
2	Valor	51	WG	2.9	oz/a	PRE	A								
3	Authority First	70	WG	3.2	oz/a	PRE	A	5	68	69	99	99	0	0	35
4	Untreated							0	0	0	0	0	0	0	0
5	Diligent (4 oz/A)							6	97	84	84	99	10	3	98
5	Classic	25	WG	1	oz/a	PRE	A								
5	rimsulfuron (Resolve) SG	25	WG	1	oz/a	PRE	A								
5	Valor	51	WG	1.96	oz/a	PRE	A								
5	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C								
5	AMS		WG	17	lb/100 gal	POST	C								
6	Authority First	70	WG	3.2	oz/a	PRE	A	4	59	58	99	99	0	0	98
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C								
6	AMS		WG	17	lb/100 gal	POST	C								
7	Roundup PowerMax	4.5	SL	22	fl oz/a	MPOS	B	5	96	80	86	99	0	0	85
7	AMS		WG	17	lb/100 gal	MPOS	B								
8	Freestyle (1.33 oz/A)							10	98	86	86	99	89	0	92
8	Classic	25	WG	0.66	oz/a	MPOS	B								
8	Express SG	50	WG	0.5	oz/a	MPOS	B								
8	Harmony SG	50	WG	0.5	oz/a	MPOS	B								
8	Roundup PowerMax	4.5	SL	22	fl oz/a	MPOS	B								
8	AMS		WG	17	lb/100 gal	MPOS	B								
9	Freestyle (1.33 oz/A)							14	8	38	94	99	93	0	0
9	Classic	25	WG	0.66	oz/a	MPOS	B								
9	Express SG	50	WG	0.5	oz/a	MPOS	B								
9	Harmony SG	50	WG	0.5	oz/a	MPOS	B								
9	Activator 90		L	0.25	% v/v	MPOS	B								
9	AMS		WG	17	lb/100 gal	MPOS	B								
LSD (P=.05)								6.4	9.5	12.0	16.0	0.0	8.6	2.4	8.5
Standard Deviation								4.4	6.5	8.2	11.0	0.0	5.9	1.7	5.8
CV								64.89	9.46	12.62	13.22	0.0	23.33	600.0	8.92

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Weed Code								AMBEL	ABUTH	GLXMA	GLXMA	ANGR	CHEAL	AMAPO	AMBEL
Crop Code								control	control	injury-RR	injury-GAT	control	control	control	control
Rating Data Type								percent	percent	percent	percent	percent	percent	percent	percent
Rating Unit								7/13/09	7/13/09	7/27/09	7/27/09	7/27/09	7/27/09	7/27/09	7/27/09
Rating Date								14 DA-C	14 DA-C	28 DA-C	28 DA-C	28 DA-C	28 DA-C	28 DA-C	28 DA-C
Trt-Eval Interval															
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code								
1	Diligent (4 oz/A)							74	99	14	0	92	99	99	78
1	Classic	25	WG	1	oz/a	PRE	A								
1	rimsulfuron (Resolve) SG	25	WG	1	oz/a	PRE	A								
1	Valor	51	WG	1.96	oz/a	PRE	A								
2	Diligent (6 oz/A)							80	99	28	0	94	99	99	80
2	Classic	25	WG	1.5	oz/a	PRE	A								
2	rimsulfuron (Resolve) SG	25	WG	1.5	oz/a	PRE	A								
2	Valor	51	WG	2.9	oz/a	PRE	A								
3	Authority First	70	WG	3.2	oz/a	PRE	A	43	99	0	0	50	99	99	38
4	Untreated							0	0	0	0	0	0	0	0
5	Diligent (4 oz/A)							99	99	16	0	98	99	99	99
5	Classic	25	WG	1	oz/a	PRE	A								
5	rimsulfuron (Resolve) SG	25	WG	1	oz/a	PRE	A								
5	Valor	51	WG	1.96	oz/a	PRE	A								
5	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C								
5	AMS		WG	17	lb/100 gal	POST	C								
6	Authority First	70	WG	3.2	oz/a	PRE	A	97	99	0	0	94	99	99	99
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C								
6	AMS		WG	17	lb/100 gal	POST	C								
7	Roundup PowerMax	4.5	SL	22	fl oz/a	MPOS	B	94	94	0	0	82	90	93	91
7	AMS		WG	17	lb/100 gal	MPOS	B								
8	Freestyle (1.33 oz/A)							96	99	84	0	86	99	99	94
8	Classic	25	WG	0.66	oz/a	MPOS	B								
8	Express SG	50	WG	0.5	oz/a	MPOS	B								
8	Harmony SG	50	WG	0.5	oz/a	MPOS	B								
8	Roundup PowerMax	4.5	SL	22	fl oz/a	MPOS	B								
8	AMS		WG	17	lb/100 gal	MPOS	B								
9	Freestyle (1.33 oz/A)							46	95	85	4	25	99	99	55
9	Classic	25	WG	0.66	oz/a	MPOS	B								
9	Express SG	50	WG	0.5	oz/a	MPOS	B								
9	Harmony SG	50	WG	0.5	oz/a	MPOS	B								
9	Activator 90		L	0.25	% v/v	MPOS	B								
9	AMS		WG	17	lb/100 gal	MPOS	B								
LSD (P=.05)								8.2	3.0	6.7	1.2	9.0	3.8	2.6	6.9
Standard Deviation								5.6	2.0	4.6	0.8	6.2	2.6	1.8	4.7
CV								8.08	2.34	18.28	200.0	8.95	2.97	2.03	6.69

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 Investigator: Christy Sprague

Weed Code	ABUTH		
Crop Code		GLXMA	GLXMA
Rating Data Type	control	moisture	yield
Rating Unit	percent	percent	bu/acre
Rating Date	7/27/09	10/13/09	10/13/09
Trt-Eval Interval	28 DA-C	148 DA-A	at 13% M

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	Diligent (4 oz/A)							99	22.1	67.8
1	Classic	25	WG	1	oz/a	PRE	A			
1	rimsulfuron (Resolve) SG	25	WG	1	oz/a	PRE	A			
1	Valor	51	WG	1.96	oz/a	PRE	A			
2	Diligent (6 oz/A)							99	20.8	74.8
2	Classic	25	WG	1.5	oz/a	PRE	A			
2	rimsulfuron (Resolve) SG	25	WG	1.5	oz/a	PRE	A			
2	Valor	51	WG	2.9	oz/a	PRE	A			
3	Authority First	70	WG	3.2	oz/a	PRE	A	99	22.6	53.1
4	Untreated							0	24.7	37.3
5	Diligent (4 oz/A)							99	22.8	77.8
5	Classic	25	WG	1	oz/a	PRE	A			
5	rimsulfuron (Resolve) SG	25	WG	1	oz/a	PRE	A			
5	Valor	51	WG	1.96	oz/a	PRE	A			
5	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C			
5	AMS		WG	17	lb/100 gal	POST	C			
6	Authority First	70	WG	3.2	oz/a	PRE	A	99	22.1	73.4
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	C			
6	AMS		WG	17	lb/100 gal	POST	C			
7	Roundup PowerMax	4.5	SL	22	fl oz/a	MPOS	B	96	20.7	71.1
7	AMS		WG	17	lb/100 gal	MPOS	B			
8	Freestyle (1.33 oz/A)							99	21.9	78.5
8	Classic	25	WG	0.66	oz/a	MPOS	B			
8	Express SG	50	WG	0.5	oz/a	MPOS	B			
8	Harmony SG	50	WG	0.5	oz/a	MPOS	B			
8	Roundup PowerMax	4.5	SL	22	fl oz/a	MPOS	B			
8	AMS		WG	17	lb/100 gal	MPOS	B			
9	Freestyle (1.33 oz/A)							99	23.7	41.2
9	Classic	25	WG	0.66	oz/a	MPOS	B			
9	Express SG	50	WG	0.5	oz/a	MPOS	B			
9	Harmony SG	50	WG	0.5	oz/a	MPOS	B			
9	Activator 90		L	0.25	% v/v	MPOS	B			
9	AMS		WG	17	lb/100 gal	MPOS	B			
LSD (P=.05)								0.6	5.31	8.18
Standard Deviation								0.4	3.64	5.61
CV								0.44	16.27	8.78