

MSU Weed Science Research Program

Injury from preemergence herbicides on cracking soybean

Trial ID: SOY01-13 Study Dir.: Sprague, Powell  
Conducted: Campus C-12 Investigator: Christy Sprague

Date Planted: May/08/2013 Row Spacing: 30 IN  
Variety: AG2433RR No. of Reps: 4  
Population: 155,000 seeds/A % OM: 4.0  
Soil Type: Silt loam pH: 7.4  
Plot Size: 10 X 30 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel plow, spring soil finished 2x

Fertilizer: None  
Crop Code Common Name  
1. GLXMA SOYBEAN

Application Description

A  
Application Timing: Cracking  
Date Treated: May/17/2013  
Time Treated: 6:45 PM  
% Cloud Cover: 90  
Air Temp., Unit: 66 F  
% Relative Humidity: 40  
Wind Speed/Unit/Dir: 4 mph E  
Soil Temp., Unit: 70 F  
Soil/Leaf Surface M: 5 5  
Soil Moist (1=w 5=d): 5

Crop Stage at Each Application

A  
Crop Name: GLXMA  
Height (In.): -  
Stage (L): Cracking

Weed Density (plants/sq. ft.)

	1	2	3	4	5
Date:	Jul/11/2013	Jul/11/2013	Jul/11/2013	Jul/11/2013	Jul/11/2013
Weed Name:	ANGR	CHEAL	AMBEL	ABUTH	SINAR
Density:	2	2	4	<1	<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	AIXR	11003	22"	20"	100"	19	water	30

Comments: Blanket application of Roundup PowerMax (22 fl oz/A) + AMS (17 lb/100 gal) was applied on 6/19/13.

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Weed Code					
Crop Code	GLXMA	GLXMA	ANGR	CHEAL	AMBEL
Rating Data Type	injury	injury	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	May/31/2013	Jun/07/2013	Jun/07/2013	Jun/07/2013	Jun/07/2013
Trt-Eval Interval	14 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	Valor	51	WG	2	oz/a	Cracking	A	55	27	98	99	89
2	Metribuzin	75	WG	5.33	oz/a	Cracking	A	3	1	73	66	43
3	Sharpen	2.85	L	1	fl oz/a	Cracking	A	7	0	0	33	27
4	Authority First 70	70	WG	6.4	oz/a	Cracking	A	12	0	92	99	77
5	Untreated							2	0	0	0	0
LSD (P=.05)								16.6	3.0	13.9	25.3	20.4
CV								56.34	28.67	13.98	22.56	22.91

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

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Weed Code	ABUTH	SINAR	GLXMA	ANGR	CHEAL
Crop Code					
Rating Data Type	control	control	injury	control	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jun/07/2013	Jun/07/2013	Jul/03/2013	Jul/03/2013	Jul/03/2013
Trt-Eval Interval	21 DA-A	21 DA-A	14 DA-B	14 DA-B	14 DA-B
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code	ABUTH	SINAR	GLXMA	ANGR	CHEAL
1	Valor	51	WG	2	oz/a	Cracking A	99	99	0	99	99	
2	Metribuzin	75	WG	5.33	oz/a	Cracking A	99	99	0	99	99	
3	Sharpen	2.85	L	1	fl oz/a	Cracking A	99	99	0	99	99	
4	Authority First	70	WG	6.4	oz/a	Cracking A	99	99	0	99	99	
5	Untreated						0	0	0	99	98	
LSD (P=.05)								0.0	0.0	0.0	0.0	1.9
CV								0.0	0.0	0.0	0.0	1.05

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Weed Code	AMBEL	ABUTH	SINAR	GLXMA	ANGR
Crop Code					
Rating Data Type	control	control	control	injury	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jul/03/2013	Jul/03/2013	Jul/03/2013	Jul/19/2013	Jul/19/2013
Trt-Eval Interval	14 DA-B	14 DA-B	14 DA-B	30 DA-B	30 DA-B
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	AMBEL	ABUTH	SINAR	GLXMA	ANGR
1	Valor	51	WG	2	oz/a	Cracking A	78	99	99	99	0	96
2	Metribuzin	75	WG	5.33	oz/a	Cracking A	63	99	99	99	1	96
3	Sharpen	2.85	L	1	fl oz/a	Cracking A	72	99	99	99	2	95
4	Authority First	70	WG	6.4	oz/a	Cracking A	68	99	99	99	2	95
5	Untreated						67	94	99	99	2	94
LSD (P=.05)								8.0	6.8	0.0	4.7	4.9
CV								6.12	3.69	0.0	209.99	2.71

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

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Weed Code	CHEAL	AMBEL	ABUTH	SINAR	
Crop Code					GLXMA
Rating Data Type	control	control	control	control	moisture
Rating Unit	percent	percent	percent	percent	
Rating Date	Jul/19/2013	Jul/19/2013	Jul/19/2013	Jul/19/2013	Oct/11/2013
Trt-Eval Interval	30 DA-B	30 DA-B	30 DA-B	30 DA-B	147 DA-A
# Subsamples, Dec.	0	0	0	0	1

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	CHEAL	AMBEL	ABUTH	SINAR	GLXMA
1	Valor	51	WG	2	oz/a	Cracking	A	99	99	94	99	12.3
2	Metribuzin	75	WG	5.33	oz/a	Cracking	A	96	99	93	99	12.2
3	Sharpen	2.85	L	1	fl oz/a	Cracking	A	95	96	95	99	12.1
4	Authority First	70	WG	6.4	oz/a	Cracking	A	99	99	84	99	12.2
5	Untreated							98	99	87	99	12.2
LSD (P=.05)								3.4	4.4	6.4	0.0	0.27
CV								1.83	2.36	3.77	0.0	1.18

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

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Weed Code  
 Crop Code GLXMA  
 Rating Data Type yield  
 Rating Unit bu/acre  
 Rating Date Oct/11/2013  
 Trt-Eval Interval at 13% M  
 # Subsamples, Dec. 1

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	
1	Valor	51	WG	2	oz/a	Cracking	A	58.8
2	Metribuzin	75	WG	5.33	oz/a	Cracking	A	57.0
3	Sharpen	2.85	L	1	fl oz/a	Cracking	A	53.8
4	Authority First	70	WG	6.4	oz/a	Cracking	A	57.8
5	Untreated							50.3
LSD (P=.05)								9.40
CV								8.99

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