

MSU Weed Science Research Program

Evaluation of soil-applied (PRE) herbicides for use in soybean

Trial ID: SOY02-14 Study Dir.: Sprague and Powell
 Conducted: Campus T-10 Investigator: Christy Sprague

Date Planted: May/21/2014 **Row Spacing:** 30 IN
Variety: Pioneer 26T76R **No. of Reps:** 4
Population: 150,000 seeds/A **% OM:** 3
Soil Type: Loam **pH:** 7.7
Plot Size: 10 X 35 FT **Design:** RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel plow. Spring soil finish 2x.

Fertilizer: None

Crop	Code	Common Name
1.	GLXMA	SOYBEAN

Application Description

A
Application Timing: PRE
Date Treated: May/22/2014
Time Treated: 7:10 AM
% Cloud Cover: 5
Air Temp., Unit: 55 F
% Relative Humidity: 84
Wind Speed/Unit/Dir: 5 mph NW
Soil Temp., Unit: 60 F
Soil/Leaf Surface M: 4 -
Soil Moist (1=w 5=d): 4

Crop Stage at Each Application

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

weed Density (plants/sq. ft.)

	1	2	3	4	5
Date:	Jul/17/2014	Jul/17/2014	Jul/17/2014	Jul/17/2014	Jul/17/2014
Weed Name:	ANGR	CHEAL	AMBEL	ABUTH	SINAR
Density:	17	1	6	<1	<1

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom	GPA	Carrier	PSI
	Type	MPH	Type	Size	Height	Spacing	Width			
A	Cub	3.8	AIXR	11003	20"	20"	100"	19	Water	30

Comments: 07/11/14 - A blanket treatment of Roundup PowerMax at 32 fl oz/A + AMS was applied.

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Weed Code	GLXMA	GLXMA	ANGR	CHEAL	AMAPO
Crop Code	injury	injury	control	control	control
Rating Data Type	percent	percent	percent	percent	percent
Rating Unit	Jun/11/2014	Jun/19/2014	Jun/19/2014	Jun/19/2014	Jun/19/2014
Rating Date	20 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A
Trt-Eval Interval					
# Subsamples, Dec.					

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	Warrant	3	L	3	pt/a	PRE	A	9	2	70	71	90
2	Valor	51	WG	2	oz/a	PRE	A	13	7	75	98	99
3	Valor	51	WG	3	oz/a	PRE	A	16	6	79	93	99
4	Valor XLT	40.3	WG	3	oz/a	PRE	A	14	7	77	99	99
5	Valor XLT	40.3	WG	4.5	oz/a	PRE	A	19	15	83	94	99
6	Authority MAXX	66	WG	6	oz/a	PRE	A	0	0	71	99	97
7	Metribuzin	75	WG	5.33	oz/a	PRE	A	0	0	44	81	92
8	Valor	51	WG	2	oz/a	PRE	A	21	12	84	95	99
8	Warrant	3	L	3	pt/a	PRE	A					
9	Valor	51	WG	3	oz/a	PRE	A	23	19	86	97	99
9	Warrant	3	L	3	pt/a	PRE	A					
10	Valor XLT	40.3	WG	3	oz/a	PRE	A	24	20	80	97	99
10	Warrant	3	L	3	pt/a	PRE	A					
11	Valor XLT	40.3	WG	4.5	oz/a	PRE	A	28	21	85	98	99
11	Warrant	3	L	3	pt/a	PRE	A					
12	Authority MAXX	66	WG	6	oz/a	PRE	A	10	3	75	99	99
12	Warrant	3	L	3	pt/a	PRE	A					
13	Metribuzin	75	WG	5.33	oz/a	PRE	A	6	4	72	83	99
13	Warrant	3	L	3	pt/a	PRE	A					
14	Untreated							0	0	0	0	0
15	Valor	51	WG	2	oz/a	PRE	A	13	8	76	91	99
15	Metribuzin	75	WG	4	oz/a	PRE	A					
16	Fierce	76	WG	3	oz/a	PRE	A	15	6	80	95	99
17	Fierce	76	WG	3	oz/a	PRE	A	16	4	91	99	99
17	Metribuzin	75	WG	4	oz/a	PRE	A					
18	Fierce	76	WG	4.5	oz/a	PRE	A	15	10	91	99	99
18	Metribuzin	75	WG	6	oz/a	PRE	A					
19	Authority MTZ	45	WG	11	oz/a	PRE	A	0	1	85	99	99
20	Authority MTZ	45	WG	16	oz/a	PRE	A	0	2	93	99	99
21	Enlite	47.8	WG	2.8	oz/a	PRE	A	9	5	58	99	99
22	Prefix	5.29	L	2	pt/a	PRE	A	5	3	75	59	99
23	Statement	5.25	L	2	pt/a	PRE	A	1	3	74	65	90

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Weed Code				ANGR	CHEAL	AMAPO
Crop Code		GLXMA	GLXMA			
Rating Data Type		injury	injury	control	control	control
Rating Unit		percent	percent	percent	percent	percent
Rating Date		Jun/11/2014	Jun/19/2014	Jun/19/2014	Jun/19/2014	Jun/19/2014
Trt-Eval Interval		20 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A
# Subsamples, Dec.						

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Code
LSD (P=.05)							
CV							

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

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Weed Code	AMBEL	SINAR	GLXMA	ANGR	CHEAL
Crop Code					
Rating Data Type	control	control	injury	control	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jun/19/2014	Jun/19/2014	Jul/11/2014	Jul/11/2014	Jul/11/2014
Trt-Eval Interval	28 DA-A	28 DA-A	50 DA-A	50 DA-A	50 DA-A
# Subsamples, Dec.					

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	Warrant	3	L	3	pt/a	PRE	A	33	15	0	63	97
2	Valor	51	WG	2	oz/a	PRE	A	76	90	0	51	99
3	Valor	51	WG	3	oz/a	PRE	A	83	90	0	55	96
4	Valor XLT	40.3	WG	3	oz/a	PRE	A	83	95	0	68	99
5	Valor XLT	40.3	WG	4.5	oz/a	PRE	A	91	98	0	77	95
6	Authority MAXX	66	WG	6	oz/a	PRE	A	65	90	0	70	99
7	Metribuzin	75	WG	5.33	oz/a	PRE	A	53	97	0	0	90
8	Valor	51	WG	2	oz/a	PRE	A	79	89	0	61	91
8	Warrant	3	L	3	pt/a	PRE	A					
9	Valor	51	WG	3	oz/a	PRE	A	93	95	2	70	97
9	Warrant	3	L	3	pt/a	PRE	A					
10	Valor XLT	40.3	WG	3	oz/a	PRE	A	90	98	0	70	93
10	Warrant	3	L	3	pt/a	PRE	A					
11	Valor XLT	40.3	WG	4.5	oz/a	PRE	A	95	99	0	78	99
11	Warrant	3	L	3	pt/a	PRE	A					
12	Authority MAXX	66	WG	6	oz/a	PRE	A	65	96	0	68	99
12	Warrant	3	L	3	pt/a	PRE	A					
13	Metribuzin	75	WG	5.33	oz/a	PRE	A	64	84	0	49	85
13	Warrant	3	L	3	pt/a	PRE	A					
14	Untreated							0	0	0	0	0
15	Valor	51	WG	2	oz/a	PRE	A	78	92	0	33	81
15	Metribuzin	75	WG	4	oz/a	PRE	A					
16	Fierce	76	WG	3	oz/a	PRE	A	85	98	0	68	90
17	Fierce	76	WG	3	oz/a	PRE	A	95	99	0	87	96
17	Metribuzin	75	WG	4	oz/a	PRE	A					
18	Fierce	76	WG	4.5	oz/a	PRE	A	97	99	0	90	99
18	Metribuzin	75	WG	6	oz/a	PRE	A					
19	Authority MTZ	45	WG	11	oz/a	PRE	A	80	98	0	81	99
20	Authority MTZ	45	WG	16	oz/a	PRE	A	84	99	0	91	99
21	Enlite	47.8	WG	2.8	oz/a	PRE	A	76	98	0	35	99
22	Prefix	5.29	L	2	pt/a	PRE	A	66	96	0	69	53
23	Statement	5.25	L	2	pt/a	PRE	A	73	94	0	64	62

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Weed Code	AMBEL	SINAR	GLXMA	ANGR	CHEAL
Crop Code					
Rating Data Type	control	control	injury	control	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jun/19/2014	Jun/19/2014	Jul/11/2014	Jul/11/2014	Jul/11/2014
Trt-Eval Interval	28 DA-A	28 DA-A	50 DA-A	50 DA-A	50 DA-A
# Subsamples, Dec.					

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Code
LSD (P=.05)		6.5		10.5		1.0	19.0
CV		6.23		8.55		959.17	22.13

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Weed Code	AMAPO	AMBEL	SINAR	GLXMA	GLXMA
Crop Code				moisture	yield
Rating Data Type	control	control	control	percent	bu/acre
Rating Unit	percent	percent	percent	percent	
Rating Date	Jul/11/2014	Jul/11/2014	Jul/11/2014	Oct/27/2014	Oct/27/2014
Trt-Eval Interval	50 DA-A	50 DA-A	50 DA-A	158 DA-A	at 13% M
# Subsamples, Dec.					

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	Warrant	3	L	3	pt/a	PRE	A	97	3	0	13.4	57.2
2	Valor	51	WG	2	oz/a	PRE	A	99	63	87	13.6	60.0
3	Valor	51	WG	3	oz/a	PRE	A	99	73	92	13.7	61.7
4	Valor XLT	40.3	WG	3	oz/a	PRE	A	99	73	99	13.2	66.7
5	Valor XLT	40.3	WG	4.5	oz/a	PRE	A	99	86	99	13.5	66.6
6	Authority MAXX	66	WG	6	oz/a	PRE	A	99	30	98	13.3	64.4
7	Metribuzin	75	WG	5.33	oz/a	PRE	A	91	53	94	13.4	60.7
8	Valor	51	WG	2	oz/a	PRE	A	99	70	99	13.4	62.8
8	Warrant	3	L	3	pt/a	PRE	A					
9	Valor	51	WG	3	oz/a	PRE	A	99	80	99	13.5	63.9
9	Warrant	3	L	3	pt/a	PRE	A					
10	Valor XLT	40.3	WG	3	oz/a	PRE	A	99	76	99	13.0	66.6
10	Warrant	3	L	3	pt/a	PRE	A					
11	Valor XLT	40.3	WG	4.5	oz/a	PRE	A	99	89	99	13.5	67.4
11	Warrant	3	L	3	pt/a	PRE	A					
12	Authority MAXX	66	WG	6	oz/a	PRE	A	99	36	99	13.3	63.5
12	Warrant	3	L	3	pt/a	PRE	A					
13	Metribuzin	75	WG	5.33	oz/a	PRE	A	99	35	83	13.5	61.3
13	Warrant	3	L	3	pt/a	PRE	A					
14	Untreated							0	0	0	13.2	53.4
15	Valor	51	WG	2	oz/a	PRE	A	99	70	97	13.5	63.9
15	Metribuzin	75	WG	4	oz/a	PRE	A					
16	Fierce	76	WG	3	oz/a	PRE	A	99	72	99	13.4	68.3
17	Fierce	76	WG	3	oz/a	PRE	A	99	86	99	13.8	63.4
17	Metribuzin	75	WG	4	oz/a	PRE	A					
18	Fierce	76	WG	4.5	oz/a	PRE	A	99	92	99	13.6	66.7
18	Metribuzin	75	WG	6	oz/a	PRE	A					
19	Authority MTZ	45	WG	11	oz/a	PRE	A	99	70	99	13.8	66.4
20	Authority MTZ	45	WG	16	oz/a	PRE	A	99	79	99	13.2	64.7
21	Enlite	47.8	WG	2.8	oz/a	PRE	A	99	63	96	13.2	63.1
22	Prefix	5.29	L	2	pt/a	PRE	A	99	60	97	13.6	65.4
23	Statement	5.25	L	2	pt/a	PRE	A	92	64	97	13.3	66.0

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Weed Code	AMAPO	AMBEL	SINAR	GLXMA	GLXMA
Crop Code				moisture	yield
Rating Data Type	control	control	control	percent	bu/acre
Rating Unit	percent	percent	percent	percent	bu/acre
Rating Date	Jul/11/2014	Jul/11/2014	Jul/11/2014	Oct/27/2014	Oct/27/2014
Trt-Eval Interval	50 DA-A	50 DA-A	50 DA-A	158 DA-A	at 13% M
# Subsamples, Dec.					

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Grow Unit	Appl Stg	Code
LSD (P=.05)		4.1		15.3		5.8	0.42 4.44
CV		3.1		17.55		4.64	2.24 4.93

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