

Weed control and soybean tolerance with increasing rates of metribuzin

Trial ID: SOY02-19 Study Dir.: Sprague, Powell, Stiles
 Conducted: Campus, C-12 Investigator: Christy Sprague

Planting Date: May-14-2019 **Row Spacing:** 30 IN
Variety: Pioneer 24A80X **No. of Reps:** 4
Population: 155000 seeds/A **% OM:** 3.5
Soil Type: CL clay loam **pH:** 7.3
Plot Size: 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall soil finish; Spring soil finish (2X)
Fertilizer:

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	ANGR	mainly foxtail species	Annual grass
2	CHEAL	lambsquarters, common	Chenopodium album
3	AMAPO	amaranth, Powell	Amaranthus powellii
4	AMBEL	ragweed, common	Ambrosia artemisiifolia
5	ABUTH	velvetleaf	Abutilon theophrasti
Crop	Code	Common Name	
1	GLXMA	Soybean	

Application Description

Application Timing: A PRE
Date Treated: May-14-2019
Time Treated: 7:50 PM
% Cloud Cover: 0
Air Temp., Unit: 66 F
% Relative Humidity: 32
Wind Speed/Unit/Dir: 4 mph NW
Soil Temp, Unit: 64 F
Leaf Moist/Dew Presence (Y/N): 5
Soil Moist: 3

Crop Stage at Each Application

A
Crop 1 Name: GLXMA
Height:
Stage:

Weed Stage at Each Application

A
Weed 1 Name: ANGR
Height:
Stage:
Weed 2 Name: CHEAL
Height:
Stage:
Weed 3 Name: AMAPO
Height:
Stage:
Weed 4 Name: AMBEL
Height:
Stage:
Weed 5 Name: ABUTH
Height:
Stage:

Weed Density

	1	2	3	4	5
Date:	May-14-2019	May-14-2019	May-14-2019	May-14-2019	May-14-2019
Weed Name:	ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Density:	223 ft2	6 ft2	1 ft2	9 ft2	1 ft2

Application Equipment

Appl	Sprayer Type	Ground Speed	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	Spray Volume	Carrier	Operation Pressure
A	CUB	3.8 mph	AIXR	11003	22 "	20 "	100 "	19 GPA	WATER	30 psi

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Comments: Roundup PowerMax at 32 fl oz/A + AMS at 17 lb/100 gal was applied to the entire trial on July 9, 2019. Soybean injury assessed on July 23, 2019 was due to weed competition.

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Pest Code				ANGR	CHEAL	AMAPO	AMBEL
Crop Type, Code	GLXMA	GLXMA					
Rating Date	Jun-4-2019	Jun-11-2019	Jun-11-2019	Jun-11-2019	Jun-11-2019	Jun-11-2019	Jun-11-2019
Rating Type	injury	injury	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	21 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A
Number of Decimals	0	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit	Appl Timing	Code				
1	Untreated							0	0	0	0
2	Metribuzin	75 WG		4 oz/a	PRE	A		0	0	50	60
3	Metribuzin	75 WG		6 oz/a	PRE	A		0	0	80	85
4	Metribuzin	75 WG		8 oz/a	PRE	A		0	1	89	91
5	Metribuzin	75 WG		10 oz/a	PRE	A		0	3	98	99
6	Metribuzin	75 WG		12 oz/a	PRE	A		0	0	98	100
7	Metribuzin	75 WG		16 oz/a	PRE	A		4	8	100	100
LSD P=.05								1.1	4.9	7.0	7.4
Standard Deviation								0.8	3.3	4.7	5.0
CV								132.29	204.54	6.39	6.55

Missing data estimates are included in columns: Average=26,27
 Could not calculate LSD (% mean diff) for columns 4,5,7,11,13,17,19,21,22,23,24,25 because error mean square = 0.

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Pest Code	ABUTH	GLXMA	ANGR	CHEAL	AMAPO	AMBEL
Crop Type, Code						
Rating Date	Jun-11-2019	Jun-25-2019	Jun-25-2019	Jun-25-2019	Jun-25-2019	Jun-25-2019
Rating Type	control	injury	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	28 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit	Appl Timing	Code						
1	Untreated							0	0	0	0	0	
2	Metribuzin	75 WG		4 oz/a	PRE	A		100	0	50	97	100	49
3	Metribuzin	75 WG		6 oz/a	PRE	A		100	0	78	99	100	80
4	Metribuzin	75 WG		8 oz/a	PRE	A		100	0	84	99	100	91
5	Metribuzin	75 WG		10 oz/a	PRE	A		100	1	90	100	100	96
6	Metribuzin	75 WG		12 oz/a	PRE	A		100	0	91	100	100	99
7	Metribuzin	75 WG		16 oz/a	PRE	A		100	6	93	100	100	97
LSD P=.05								.	0.9	4.2	3.0	.	6.5
Standard Deviation								0.0	0.6	2.8	2.0	0.0	4.4
CV								0.0	70.2	4.06	2.38	0.0	6.03

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Pest Code	ABUTH	GLXMA	ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Crop Type, Code							
Rating Date	Jun-25-2019	Jul-2-2019	Jul-2-2019	Jul-2-2019	Jul-2-2019	Jul-2-2019	Jul-2-2019
Rating Type	control	injury	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	42 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A
Number of Decimals	0	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit	Appl Timing	Code	ABUTH	GLXMA	ANGR	CHEAL	AMAPO	AMBEL	ABUTH
1	Untreated							0	0	0	0	0	0	0
2	Metribuzin	75 WG		4 oz/a	PRE	A		100	0	40	75	100	43	100
3	Metribuzin	75 WG		6 oz/a	PRE	A		100	0	58	81	100	60	100
4	Metribuzin	75 WG		8 oz/a	PRE	A		100	0	66	90	100	76	100
5	Metribuzin	75 WG		10 oz/a	PRE	A		100	0	75	95	100	88	100
6	Metribuzin	75 WG		12 oz/a	PRE	A		100	0	75	96	100	96	100
7	Metribuzin	75 WG		16 oz/a	PRE	A		100	2	83	99	100	96	100
LSD P=.05								.	1.0	6.5	7.7	.	9.6	.
Standard Deviation								0.0	0.7	4.4	5.2	0.0	6.5	0.0
CV								0.0	305.51	7.72	6.74	0.0	9.85	0.0

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Pest Code		ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Crop Type, Code	GLXMA					
Rating Date	Jul-23-2019	Jul-23-2019	Jul-23-2019	Jul-23-2019	Jul-23-2019	Jul-23-2019
Rating Type	injury	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	14 DAT	14 DAT	14 DAT	14 DAT	14 DAT	14 DAT
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit	Appl Timing	Code						
1	Untreated			24	100	100	100	100	100	100	100	100	
2	Metribuzin	75 WG	4 oz/a	PRE	A	10	100	100	100	100	100	100	
3	Metribuzin	75 WG	6 oz/a	PRE	A	1	100	100	100	100	100	100	
4	Metribuzin	75 WG	8 oz/a	PRE	A	0	100	100	100	100	100	100	
5	Metribuzin	75 WG	10 oz/a	PRE	A	0	100	100	100	100	100	100	
6	Metribuzin	75 WG	12 oz/a	PRE	A	0	100	100	100	100	100	100	
7	Metribuzin	75 WG	16 oz/a	PRE	A	0	100	100	100	100	100	100	
LSD P=.05								2.1	
Standard Deviation								1.4	0.0	0.0	0.0	0.0	0.0
CV								28.87	0.0	0.0	0.0	0.0	0.0

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Pest Code		
Crop Type, Code	GLXMA	GLXMA
Rating Date	Oct-8-2019	Oct-8-2019
Rating Type	moisture	yield
Rating Unit	percent	bu/acre
Trt-Eval Interval	147 DA-A	at 13% M
Number of Decimals	1	1

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit	Appl Timing	Appl Code		
1	Untreated							13.2	41.2
2	Metribuzin	75 WG		4 oz/a	PRE	A		13.1	48.2
3	Metribuzin	75 WG		6 oz/a	PRE	A		13.5	47.7
4	Metribuzin	75 WG		8 oz/a	PRE	A		13.3	56.8
5	Metribuzin	75 WG		10 oz/a	PRE	A		13.9	54.9
6	Metribuzin	75 WG		12 oz/a	PRE	A		13.2	52.2
7	Metribuzin	75 WG		16 oz/a	PRE	A		14.1	50.2
	LSD P=.05							1.19	9.34
	Standard Deviation							0.80	6.26
	CV							5.93	12.49

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