

Weed control and crop tolerance with increasing rates of metribuzin in no-till soybean

Trial ID: NTS05-24 Study Dir.: Sprague, Stiles
 Conducted: Campus, T-18 Investigator: Christy Sprague

Planting Date: May-13-2024 **Row Spacing:** 30 IN
Variety: AG24XF4 **No. of Reps:** 4
Population: 150000 S/A **% OM:** 2.8
Soil Type: L loam **pH:** 5.7
Plot Size: 10 X 35 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: No-tilled into corn stubble.

Fertilizer:

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	ERICA	horseweed (marestail)	Erigeron canadensis
Crop	Code	Common Name	
1	GLXMA	Soybean	

Application Description

Application Timing: A
Date Treated: PRE
 May-14-2024
Time Treated: 1:40 PM
% Cloud Cover: 100
Air Temp., Unit: 58 F
% Relative Humidity: 66
Wind Speed/Unit/Dir: 8 MPH NE
Soil Temp, Unit: 60 F
Leaf Moist/Dew Presence (Y/N): N
Soil Moist: 3

Crop Stage at Each Application

Crop 1 Name: A
 GLXMA
Height:
Stage:

Weed Stage at Each Application

Weed 1 Name: A
 ERICA
Height: 2-6 " (4)
Stage: 15-20L

Weed Density

Date: 1
 May-14-2024
Weed Name: ERICA
Density: 3 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	24.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	30 PSI

Comments: Horseweed at this location is Group 2 and 9 resistant. Roundup PowerMax 3 at 30 fl oz/A + AMS at 17 lb/100 gallons was applied on July 1, 2024.

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Protocol ID: NTS05-24 Location: Campus, T-18 Trial Year: 2004

Study Director: Sprague, Stiles Sponsor Contact:

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Rating Date	Jun-4-2024	Jun-4-2024	Jun-25-2024	Jun-25-2024	Jul-9-2024	Jul-9-2024	Sep-30-2024					
Rating Type	injury	control	injury	control	injury	control	control					
Rating Unit	%	%	%	%	%	%	%					
Crop Type, Code	C, GLXMA		C, GLXMA		C, GLXMA							
Pest Code		ERICA		ERICA		ERICA	ERICA					
Trt-Eval Interval	21 DA-A	21 DA-A	42 DA-A	42 DA-A	56 DA-A	56 DA-A	139 DA-A					
Number of Decimals	0	0	0	0	0	0	0					
Trt No.	Treatment Name	Rate	Unit	Appl Code	Appl Timing							
1	Liberty	32 fl oz/a	A	PRE		0	0	0	0	0	0	
	Roundup PowerMax 3	30 fl oz/a	A	PRE								
	AMS	17 lb/100 gal	A	PRE								
2	Metribuzin	4 oz/a	A	PRE		0	95	0	85	0	87	74
	Liberty	32 fl oz/a	A	PRE								
	Roundup PowerMax 3	30 fl oz/a	A	PRE								
	AMS	17 lb/100 gal	A	PRE								
3	Metribuzin	6 oz/a	A	PRE		0	98	0	91	0	87	88
	Liberty	32 fl oz/a	A	PRE								
	Roundup PowerMax 3	30 fl oz/a	A	PRE								
	AMS	17 lb/100 gal	A	PRE								
4	Metribuzin	8 oz/a	A	PRE		0	100	0	98	0	96	100
	Liberty	32 fl oz/a	A	PRE								
	Roundup PowerMax 3	30 fl oz/a	A	PRE								
	AMS	17 lb/100 gal	A	PRE								
5	Metribuzin	10 oz/a	A	PRE		0	98	0	94	0	94	96
	Liberty	32 fl oz/a	A	PRE								
	Roundup PowerMax 3	30 fl oz/a	A	PRE								
	AMS	17 lb/100 gal	A	PRE								
6	Metribuzin	12 oz/a	A	PRE		0	99	0	99	0	99	98
	Liberty	32 fl oz/a	A	PRE								
	Roundup PowerMax 3	30 fl oz/a	A	PRE								
	AMS	17 lb/100 gal	A	PRE								
7	Metribuzin	16 oz/a	A	PRE		2	100	0	97	0	100	98
	Liberty	32 fl oz/a	A	PRE								
	Roundup PowerMax 3	30 fl oz/a	A	PRE								
	AMS	17 lb/100 gal	A	PRE								
	LSD P=.05					1.5	3.8	.	8.3	.	8.6	6.8
	Standard Deviation					1.0	2.6	0.0	5.6	0.0	5.8	4.6
	CV					424.26	3.06	0.0	6.97	0.0	7.2	5.82

Missing data estimates are included in columns: Average=1,3,5,8,9

Could not calculate LSD (% mean diff) or mean separation letters for columns 3,5 because error variance is 0.

Mean separation letters are 'na' (not applicable) when error variance is 0

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Study Director: Sprague, Stiles Sponsor Contact:

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Rating Date	Oct-7-2024	Oct-7-2024
Rating Type	moisture	yield
Rating Unit	%	bu/A
Crop Type, Code	C, GLXMA	C, GLXMA
Pest Code		
Trt-Eval Interval	146 DA-A	146 DA-A
Number of Decimals	2	1

Trt No.	Treatment Name	Rate	Unit	Appl Code	Appl Timing		
1	Liberty	32 fl oz/a		A	PRE	9.49	66.1
	Roundup PowerMax 3	30 fl oz/a		A	PRE		
	AMS	17 lb/100 gal		A	PRE		
2	Metribuzin	4 oz/a		A	PRE	9.47	65.3
	Liberty	32 fl oz/a		A	PRE		
	Roundup PowerMax 3	30 fl oz/a		A	PRE		
	AMS	17 lb/100 gal		A	PRE		
3	Metribuzin	6 oz/a		A	PRE	9.47	70.4
	Liberty	32 fl oz/a		A	PRE		
	Roundup PowerMax 3	30 fl oz/a		A	PRE		
	AMS	17 lb/100 gal		A	PRE		
4	Metribuzin	8 oz/a		A	PRE	9.48	68.2
	Liberty	32 fl oz/a		A	PRE		
	Roundup PowerMax 3	30 fl oz/a		A	PRE		
	AMS	17 lb/100 gal		A	PRE		
5	Metribuzin	10 oz/a		A	PRE	9.43	64.9
	Liberty	32 fl oz/a		A	PRE		
	Roundup PowerMax 3	30 fl oz/a		A	PRE		
	AMS	17 lb/100 gal		A	PRE		
6	Metribuzin	12 oz/a		A	PRE	9.87	64.2
	Liberty	32 fl oz/a		A	PRE		
	Roundup PowerMax 3	30 fl oz/a		A	PRE		
	AMS	17 lb/100 gal		A	PRE		
7	Metribuzin	16 oz/a		A	PRE	9.49	66.4
	Liberty	32 fl oz/a		A	PRE		
	Roundup PowerMax 3	30 fl oz/a		A	PRE		
	AMS	17 lb/100 gal		A	PRE		
	LSD P=.05					0.407	6.87
	Standard Deviation					0.270	4.56
	CV					2.83	6.86

Missing data estimates are included in columns: Average=1,3,5,8,9

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Mean separation letters are 'na' (not applicable) when error variance is 0