

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

Trial ID: NTS07-22 Study Dir.: Sprague, Stiles, Powell
 Conducted: Campus, T-18 Investigator:

Planting Date: May-23-2022 **Row Spacing:** 30 IN
Variety: AG24XF1 **No. of Reps:** 4
Population: 150000 seeds/A **% OM:** 2.8
Soil Type: L loam **pH:** 5.7
Plot Size: 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: No-tilled into standing corn stalks.
Fertilizer:

Crop and Weed Description

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

Application Description

A
Application Timing: PRE
Date Treated: May-23-2022
Time Treated: 2:40 PM
% Cloud Cover: 85
Air Temp., Unit: 59 F
% Relative Humidity: 47
Wind Speed/Unit/Dir: 5 MPH NE
Soil Temp, Unit: 68 F
Leaf Moist/Dew Presence (Y/N): N
Soil Moist: 4

Crop Stage at Each Application

A
Crop 1 Name: GLXMA
Height:
Stage:

Weed Stage at Each Application

A
Weed 1 Name: ERICA
Height: 1-10 " (5.5)
Stage: 4 L-24 L (14 L)

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 "	100 "	19 GAL/AC	WATER	30 PSI

Comments: Horseweed is resistant to glyphosate (Group 9) and ALS-inhibiting herbicides (Group 2). Roundup PowerMax 3 was applied at 30 fl oz/ A + AMS at 17 lb/100 gal on July 12 to manage all other weeds besides glyphosate-resistant horseweed.

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 Project ID: Project ID 2: Project ID 3:
 Study Director: Sprague, Stiles, Powell Sponsor Contact:
 Investigator (Creator): Christy Sprague

Pest Code	Crop Type, Code	Rating Date	Rating Type	Rating Unit/Min/Max	Trt-Eval Interval	Number of Decimals	ERICA		ERICA		ERICA	
							C, GLXMA	ERICA	C, GLXMA	ERICA	C, GLXMA	ERICA
							Jun-27-2022	Jun-27-2022	Jun-27-2022	Jun-27-2022	Jul-12-2022	Jul-12-2022
							injury	control	injury	control	injury	control
							% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100
							35 DA-A	35 DA-A	35 DA-A	35 DA-A	50 DA-A	50 DA-A
							0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Unit	Appl Timing	Appl Code							
1	Liberty	32 fl oz/a		PRE	A	0	0	0	0	0	0	0
	Roundup PowerMax 3	30 fl oz/a		PRE	A							
	AMS	17 lb/100 gal		PRE	A							
2	Metribuzin	4 oz/a		PRE	A	0	100	0	95	0	84	
	Liberty	32 fl oz/a		PRE	A							
	Roundup PowerMax 3	30 fl oz/a		PRE	A							
	AMS	17 lb/100 gal		PRE	A							
3	Metribuzin	6 oz/a		PRE	A	0	100	0	95	0	95	
	Liberty	32 fl oz/a		PRE	A							
	Roundup PowerMax 3	30 fl oz/a		PRE	A							
	AMS	17 lb/100 gal		PRE	A							
4	Metribuzin	8 oz/a		PRE	A	0	100	0	99	0	98	
	Liberty	32 fl oz/a		PRE	A							
	Roundup PowerMax 3	30 fl oz/a		PRE	A							
	AMS	17 lb/100 gal		PRE	A							
5	Metribuzin	10 oz/a		PRE	A	0	100	0	96	0	93	
	Liberty	32 fl oz/a		PRE	A							
	Roundup PowerMax 3	30 fl oz/a		PRE	A							
	AMS	17 lb/100 gal		PRE	A							
6	Metribuzin	12 oz/a		PRE	A	0	100	1	99	0	98	
	Liberty	32 fl oz/a		PRE	A							
	Roundup PowerMax 3	30 fl oz/a		PRE	A							
	AMS	17 lb/100 gal		PRE	A							
7	Metribuzin	16 oz/a		PRE	A	0	100	1	99	0	96	
	Liberty	32 fl oz/a		PRE	A							
	Roundup PowerMax 3	30 fl oz/a		PRE	A							
	AMS	17 lb/100 gal		PRE	A							
	LSD P=.05							2.0	4.2			8.1
	Standard Deviation					0.0	0.0	1.4	2.8	0.0		5.4
	CV					0.0	0.0	384.42	3.4	0.0		6.78

Missing data estimates are included in columns: Average=10,11
 Could not calculate LSD (% mean diff) for columns 1,2,5 because error mean square = 0.

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Investigator (Creator): Christy Sprague

Pest Code		ERICA	ERICA		
Crop Type, Code	C, GLXMA			C, GLXMA	C, GLXMA
Rating Date	Jul-26-2022	Jul-26-2022	Oct-7-2022	Oct-24-2022	Oct-24-2022
Rating Type	injury	control	control	moisture	yield
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	bu/A, -, -
Trt-Eval Interval	64 DA-A	64 DA-A	137 DA-A	154 DA-A	154 DA-A
Number of Decimals	0	0	0	1	1

Trt No.	Treatment Name	Rate	Unit	Appl Timing	Appl Code					
1	Liberty	32 fl oz/a		PRE	A	0	0	0	13.6	50.2
	Roundup PowerMax 3	30 fl oz/a		PRE	A					
	AMS	17 lb/100 gal		PRE	A					
2	Metribuzin	4 oz/a		PRE	A	0	78	71	12.9	62.4
	Liberty	32 fl oz/a		PRE	A					
	Roundup PowerMax 3	30 fl oz/a		PRE	A					
	AMS	17 lb/100 gal		PRE	A					
3	Metribuzin	6 oz/a		PRE	A	0	93	86	15.5	61.1
	Liberty	32 fl oz/a		PRE	A					
	Roundup PowerMax 3	30 fl oz/a		PRE	A					
	AMS	17 lb/100 gal		PRE	A					
4	Metribuzin	8 oz/a		PRE	A	0	97	95	12.5	63.9
	Liberty	32 fl oz/a		PRE	A					
	Roundup PowerMax 3	30 fl oz/a		PRE	A					
	AMS	17 lb/100 gal		PRE	A					
5	Metribuzin	10 oz/a		PRE	A	0	92	93	14.5	65.7
	Liberty	32 fl oz/a		PRE	A					
	Roundup PowerMax 3	30 fl oz/a		PRE	A					
	AMS	17 lb/100 gal		PRE	A					
6	Metribuzin	12 oz/a		PRE	A	0	100	99	12.7	61.7
	Liberty	32 fl oz/a		PRE	A					
	Roundup PowerMax 3	30 fl oz/a		PRE	A					
	AMS	17 lb/100 gal		PRE	A					
7	Metribuzin	16 oz/a		PRE	A	3	94	94	13.8	64.6
	Liberty	32 fl oz/a		PRE	A					
	Roundup PowerMax 3	30 fl oz/a		PRE	A					
	AMS	17 lb/100 gal		PRE	A					
	LSD P=.05					2.0	10.7	7.2	3.73	7.95
	Standard Deviation					1.3	7.2	4.8	2.50	5.33
	CV					313.88	9.09	6.3	18.37	8.69

Missing data estimates are included in columns: Average=10,11

Could not calculate LSD (% mean diff) for columns 1,2,5 because error mean square = 0.