

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

Trial ID: NTS01-21 Study Dir.: Sprague, Powell, Stiles
 Conducted: Campus, C-13 Investigator: Christy Sprague

Planting Date: 5-18-21 **Row Spacing:** 30 IN
Variety: AG24XF1 **No. of Reps:** 4
Population: 155000 seeds/A **% OM:** 2.9
Soil Type: CL clay loam **pH:** 7.2
Plot Size: 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

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

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	ERICA	horseweed	Conyza canadensis
2	CHEAL	common lambsquarters	Chenopodium album
3	AMBEL	common ragweed	Ambrosia artemisiifolia
Crop	Code	Common Name	
1	GLXMA	Soybean	

Application Description

A
Application Timing: PRE
Date Treated: 5-21-21
Time Treated: 9:00 AM
% Cloud Cover: 40
Air Temp., Unit: 72 F
% Relative Humidity: 56
Wind Speed/Unit/Dir: 3.8 MPH SW
Soil Temp, Unit: 60 F
Leaf Moist/Dew Presence (Y/N): N
Soil Moist: 5

Crop Stage at Each Application

A
Crop 1 Name: GLXMA
Height:
Stage:

Weed Stage at Each Application

A
Weed 1 Name: ERICA
Height: 1-5 " (3)
Stage: 8 L-18 L (12 L)
Weed 2 Name: CHEAL
Height: 1-6 " (3.5)
Stage: 4 L-20 L (12 L)
Weed 3 Name: AMBEL
Height:
Stage:

Weed Density

	1	2	3
Date:	5-21-21	5-21-21	5-21-21
Weed Name:	ERICA	CHEAL	AMBEL
Density:	4 FT2	0.5 FT2	0.5 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	26.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	30 PSI

Comments: Roundup PowerMax at 32 fl oz/A + AMS at 17 lbs/100 gal was applied to the entire plot on July 6, 2021.

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 Protocol ID: NTS01-21 Investigator (Creator): Christy Sprague
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Pest Code	ERICA CHEAL AMBEL				ERICA CHEAL AMBEL				ERICA
Crop Type, Code	C, GLXMA				C, GLXMA				C, GLXMA
Rating Date	6-22-21	6-22-21	6-22-21	6-22-21	7-2-21	7-2-21	7-2-21	7-2-21	7-26-21
Rating Type	injury	control	control	control	injury	control	control	control	injury
Rating Unit	%	%	%	%	%	%	%	%	%
Trt-Eval Interval	32 DA-A	32 DA-A	32 DA-A	32 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A	66 DA-A

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	32 DA-A	32 DA-A	32 DA-A	32 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A	66 DA-A	66 DA-A
1	Liberty	32 fl oz/a	A		0	0	89	90	0	0	0	0	0	10
1	Roundup PowerMax	32 fl oz/a	A											
1	AMS	17 lb/100 gal	A											
2	Metribuzin	4 oz/a	A		0	53	95	88	0	61	90	86	0	72
2	Liberty	32 fl oz/a	A											
2	Roundup PowerMax	32 fl oz/a	A											
2	AMS	17 lb/100 gal	A											
3	Metribuzin	6 oz/a	A		0	68	90	95	0	83	91	91	0	95
3	Liberty	32 fl oz/a	A											
3	Roundup PowerMax	32 fl oz/a	A											
3	AMS	17 lb/100 gal	A											
4	Metribuzin	8 oz/a	A		0	77	100	93	0	81	100	91	0	91
4	Liberty	32 fl oz/a	A											
4	Roundup PowerMax	32 fl oz/a	A											
4	AMS	17 lb/100 gal	A											
5	Metribuzin	10 oz/a	A		0	98	100	95	0	92	100	93	0	99
5	Liberty	32 fl oz/a	A											
5	Roundup PowerMax	32 fl oz/a	A											
5	AMS	17 lb/100 gal	A											
6	Metribuzin	12 oz/a	A		0	95	100	98	0	94	100	99	0	98
6	Liberty	32 fl oz/a	A											
6	Roundup PowerMax	32 fl oz/a	A											
6	AMS	17 lb/100 gal	A											
7	Metribuzin	16 oz/a	A		0	100	100	100	0	100	100	100	0	100
7	Liberty	32 fl oz/a	A											
7	Roundup PowerMax	32 fl oz/a	A											
7	AMS	17 lb/100 gal	A											
LSD P=.05					.	11.6	8.8	11.9	.	12.3	12.7	10.3	.	7.8
Standard Deviation					0.0	7.8	5.9	8.0	0.0	8.3	8.6	6.9	0.0	5.2
CV					0.0	11.13	6.16	8.54	0.0	11.4	10.3	8.65	0.0	6.49

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Pest Code	ERICA			
Crop Type, Code	C, GLXMA	C, GLXMA	C, GLXMA	C, GLXMA
Rating Date	9-24-21	10-11-21	10-18-21	10-11-21
Rating Type	control	yield	lbs/plot	moisture
Rating Unit	%	bu/A		%
Trt-Eval Interval	126 DA-A	143 DA-A	150 DA-A	143 DA-A

Trt No.	Treatment Name	Rate Unit	Appl Code				
1	Liberty	32 fl oz/a	A	0	72.2	14.9	24.2
1	Roundup PowerMax	32 fl oz/a	A				
1	AMS	17 lb/100 gal	A				
2	Metribuzin	4 oz/a	A	59	75.8	15.7	19.1
2	Liberty	32 fl oz/a	A				
2	Roundup PowerMax	32 fl oz/a	A				
2	AMS	17 lb/100 gal	A				
3	Metribuzin	6 oz/a	A	84	76.6	15.8	19.8
3	Liberty	32 fl oz/a	A				
3	Roundup PowerMax	32 fl oz/a	A				
3	AMS	17 lb/100 gal	A				
4	Metribuzin	8 oz/a	A	88	83.4	17.2	19.7
4	Liberty	32 fl oz/a	A				
4	Roundup PowerMax	32 fl oz/a	A				
4	AMS	17 lb/100 gal	A				
5	Metribuzin	10 oz/a	A	98	76.3	15.8	18.2
5	Liberty	32 fl oz/a	A				
5	Roundup PowerMax	32 fl oz/a	A				
5	AMS	17 lb/100 gal	A				
6	Metribuzin	12 oz/a	A	91	80.1	16.5	20.5
6	Liberty	32 fl oz/a	A				
6	Roundup PowerMax	32 fl oz/a	A				
6	AMS	17 lb/100 gal	A				
7	Metribuzin	16 oz/a	A	100	79.3	16.4	19.3
7	Liberty	32 fl oz/a	A				
7	Roundup PowerMax	32 fl oz/a	A				
7	AMS	17 lb/100 gal	A				
LSD	P=.05			10.3	6.97	1.44	3.81
Standard Deviation				6.9	4.69	0.97	2.56
CV				9.33	6.04	6.04	12.75