

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

Trial ID: NTS03-20 Study Dir.: Sprague, Powell, Stiles  
 Conducted: Campus T-18 Investigator: Christy Sprague

**Planting Date:** May-23-2020 **Row Spacing:** 30 IN  
**Variety:** AG26X8 **No. of Reps:** 4  
**Population:** 156000 seeds/A **% OM:** 2.5  
**Soil Type:** L loam **pH:** 5.8  
**Plot Size:** 10 X 35 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	STEME	Common chickweed	Stellaria media
2	TAROF	Dandelion	Taraxacum officinale
3	ERICA	Horseweed	Erigeron canadensis
4	LAMPU	Purple deadnettle	Lamium purpureum
5	POAAN	Annual bluegrass	Poa annua
Crop	Code	Common Name	
1	GLXMA	Soybean	

**Application Description**

**Application Timing:** A PRE  
**Date Treated:** May-23-2020  
**Time Treated:** 5:05 PM  
**% Cloud Cover:** 55  
**Air Temp., Unit:** 77 F  
**% Relative Humidity:** 72  
**Wind Speed/Unit/Dir:** 8.5 mph E  
**Soil Temp, Unit:** 68 F  
**Leaf Moist/Dew Presence (Y/N):** 4  
**Soil Moist:** 4

**Crop Stage at Each Application**

**A**  
**Crop 1 Name:** GLXMA  
**Height:**  
**Stage:**

**Weed Stage at Each Application**

**A**  
**Weed 1 Name:** STEME  
**Height:** 13 "  
**Stage:** flower  
**Weed 2 Name:** TAROF  
**Height:** 8 "  
**Stage:** flower  
**Weed 3 Name:** ERICA  
**Height:** 1-3 " (2)  
**Stage:** many  
**Weed 4 Name:** LAMPU  
**Height:** 1-3 " (2)  
**Stage:** flower  
**Weed 5 Name:** POAAN  
**Height:** 6 "  
**Stage:**

**Weed Density**

Date:	1	2	3	4	5
	May-23-2020	May-23-2020	May-23-2020	May-23-2020	May-23-2020
<b>Weed Name:</b>	STEME	TAROF	ERICA	LAMPU	POAAN
<b>Density:</b>	7 FT2	1 FT2	5 FT2	1 FT2	4 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

**Comments:** A broadcast treatment of Roundup PowerMax at 32 fl oz/A + AMS was applied POST to the entire trial on July 1.

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 Protocol ID: SOY02-19 Investigator (Creator): Christy Sprague  
 Project ID: Study Director: Sprague, Powell, Stiles  
 Sponsor Contact:

Pest Code				STEME	TAROF	ERICA	AMBEL
Crop Type, Code	C	GLXMA	C	GLXMA			
Rating Date	Jun-12-2020	Jun-17-2020	Jun-17-2020	Jun-17-2020	Jun-17-2020	Jun-17-2020	Jun-17-2020
Rating Type	injury	injury	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	20 DA-A	25 DA-A	25 DA-A	25 DA-A	25 DA-A	25 DA-A	25 DA-A
Number of Decimals	0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Appl	Appl			
		Rate Unit	Timing	Code			
1	Untreated				0	0	0
2	Metribuzin	4 oz/a	PRE	A	0	0	0
	Liberty	32 fl oz/a	PRE	A	100	100	100
	Roundup PowerMax	32 fl oz/a	PRE	A			
	AMS	17 lb/100 gal	PRE	A			
3	Metribuzin	6 oz/a	PRE	A	0	0	0
	Liberty	32 fl oz/a	PRE	A	100	100	99
	Roundup PowerMax	32 fl oz/a	PRE	A			
	AMS	17 lb/100 gal	PRE	A			
4	Metribuzin	8 oz/a	PRE	A	0	0	0
	Liberty	32 fl oz/a	PRE	A	100	100	100
	Roundup PowerMax	32 fl oz/a	PRE	A			
	AMS	17 lb/100 gal	PRE	A			
5	Metribuzin	10 oz/a	PRE	A	0	0	0
	Liberty	32 fl oz/a	PRE	A	100	100	99
	Roundup PowerMax	32 fl oz/a	PRE	A			
	AMS	17 lb/100 gal	PRE	A			
6	Metribuzin	12 oz/a	PRE	A	0	0	0
	Liberty	32 fl oz/a	PRE	A	100	100	100
	Roundup PowerMax	32 fl oz/a	PRE	A			
	AMS	17 lb/100 gal	PRE	A			
7	Metribuzin	16 oz/a	PRE	A	0	6	0
	Liberty	32 fl oz/a	PRE	A	100	100	100
	Roundup PowerMax	32 fl oz/a	PRE	A			
	AMS	17 lb/100 gal	PRE	A			
	LSD P=.05					1.9	2.0
	Standard Deviation				0.0	1.3	1.4
	CV				0.0	156.6	0.0

Could not calculate LSD (% mean diff) for columns 1,3,4,6,12,13 because error mean square = 0.

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Pest Code			ERICA	ANGR	CHEAL	AMBEL	STEME		
Crop Type, Code	C GLXMA							C GLXMA	
Rating Date	Jul-1-2020		Jul-1-2020	Jul-1-2020	Jul-1-2020	Jul-1-2020	Jul-1-2020	Jul-13-2020	
Rating Type	injury		control	control	control	control	control	injury	
Rating Unit	percent		percent	percent	percent	percent	percent	percent	
Trt-Eval Interval	39 DA-A		39 DA-A	39 DA-A	39 DA-A	39 DA-A	39 DA-A	13 DA-B	
Number of Decimals	0		0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Appl Unit	Appl Timing	Code				
1	Untreated					0	0	0	0
2	Metribuzin	4 oz/a	PRE	A		0	95	48	68
	Liberty	32 fl oz/a	PRE	A					
	Roundup PowerMax	32 fl oz/a	PRE	A					
	AMS	17 lb/100 gal	PRE	A					
3	Metribuzin	6 oz/a	PRE	A		0	86	63	70
	Liberty	32 fl oz/a	PRE	A					
	Roundup PowerMax	32 fl oz/a	PRE	A					
	AMS	17 lb/100 gal	PRE	A					
4	Metribuzin	8 oz/a	PRE	A		0	100	75	93
	Liberty	32 fl oz/a	PRE	A					
	Roundup PowerMax	32 fl oz/a	PRE	A					
	AMS	17 lb/100 gal	PRE	A					
5	Metribuzin	10 oz/a	PRE	A		0	100	73	94
	Liberty	32 fl oz/a	PRE	A					
	Roundup PowerMax	32 fl oz/a	PRE	A					
	AMS	17 lb/100 gal	PRE	A					
6	Metribuzin	12 oz/a	PRE	A		0	100	79	95
	Liberty	32 fl oz/a	PRE	A					
	Roundup PowerMax	32 fl oz/a	PRE	A					
	AMS	17 lb/100 gal	PRE	A					
7	Metribuzin	16 oz/a	PRE	A		3	100	96	86
	Liberty	32 fl oz/a	PRE	A					
	Roundup PowerMax	32 fl oz/a	PRE	A					
	AMS	17 lb/100 gal	PRE	A					
	LSD P=.05					1.2	11.0	26.6	13.5
	Standard Deviation					0.8	7.4	17.9	9.1
	CV					198.34	8.95	29.06	12.58
									3.2
									2.2
									0.0
									0.0

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Pest Code			ERICA	ERICA			
Crop Type, Code					C GLXMA	C GLXMA	
Rating Date			Jul-13-2020	Oct-13-2020	Oct-14-2020	Oct-14-2020	
Rating Type			control	control	moisture	yield	
Rating Unit			percent	percent	percent	bu/acre	
Trt-Eval Interval			13 DA-B	88 DA-B	89 DA-B	144 DA-A	
Number of Decimals			0	0	1	1	
Trt No.	Treatment Name	Rate	Appl	Appl			
		Rate Unit	Timing	Code			
1	Untreated				0	8	15.6 55.6
2	Metribuzin	4 oz/a	PRE	A	93	91	15.2 69.8
	Liberty	32 fl oz/a	PRE	A			
	Roundup PowerMax	32 fl oz/a	PRE	A			
	AMS	17 lb/100 gal	PRE	A			
3	Metribuzin	6 oz/a	PRE	A	83	85	15.0 68.6
	Liberty	32 fl oz/a	PRE	A			
	Roundup PowerMax	32 fl oz/a	PRE	A			
	AMS	17 lb/100 gal	PRE	A			
4	Metribuzin	8 oz/a	PRE	A	100	98	15.0 67.1
	Liberty	32 fl oz/a	PRE	A			
	Roundup PowerMax	32 fl oz/a	PRE	A			
	AMS	17 lb/100 gal	PRE	A			
5	Metribuzin	10 oz/a	PRE	A	100	100	15.1 68.8
	Liberty	32 fl oz/a	PRE	A			
	Roundup PowerMax	32 fl oz/a	PRE	A			
	AMS	17 lb/100 gal	PRE	A			
6	Metribuzin	12 oz/a	PRE	A	100	100	15.1 67.4
	Liberty	32 fl oz/a	PRE	A			
	Roundup PowerMax	32 fl oz/a	PRE	A			
	AMS	17 lb/100 gal	PRE	A			
7	Metribuzin	16 oz/a	PRE	A	100	100	15.2 68.7
	Liberty	32 fl oz/a	PRE	A			
	Roundup PowerMax	32 fl oz/a	PRE	A			
	AMS	17 lb/100 gal	PRE	A			
	LSD P=.05				8.1	7.9	0.37 4.47
	Standard Deviation				5.4	5.3	0.25 3.01
	CV				6.6	6.42	1.63 4.52