



REVISITING METRIBUZIN IN SOYBEANS

TRIAL OVERVIEW

- As herbicide resistance to sites of action (SOA) Groups 2 (ALS Inhibitors), 9 (EPSP Synthase inhibitors), and 14 (PPO inhibitors) is increasing, additional herbicide SOAs are needed to control resistant weeds and to reduce selection pressure.
- Metribuzin, a PSII inhibitor (Group 26), is one potential option for broadleaf weed management in soybeans.

RESEARCH OBJECTIVE

- Evaluate weed management and soybean injury at multiple rates of metribuzin across soybean products.

Location	Soil Type	Planting Date	Application Date	pH
Mapleton, MN	Silty Clay Loam	5/17/16	5/17/16	6.7
Huxley, IA	Clay Loam	5/20/16	5/20/16	6.1
Janesville, WI	Silt Loam	5/20/16	5/20/16	7.0

SITE NOTES: Soybean injury ratings were taken at Huxley, IA and Mapleton, MN. In Janesville, WI, no soybean injury was observed; therefore ratings were not taken. Although injury was influenced by soybean product, it was averaged across the different soybean products for succinctness of this report. In addition, weed control ratings were conducted at Mapleton, MN. Plot size was 20 feet x 60 feet with 3 replications. Row spacing was 30 inches.

Table 1. The effect of metribuzin rate on soybean weed management in Mapleton, MN in 2016.

Metribuzin Rate (lb ai/acre)	21 Days After Treatment (DAT)			35 Days After Treatment (DAT)			50 Days After Treatment (DAT)		
	Lambsquarters	Common Waterhemp*	Velvetleaf	Lambsquarters	Common Waterhemp*	Velvetleaf	Lambsquarters	Common Waterhemp*	Velvetleaf
	----- % Control -----								
0.25	78	88	82	63	72	60	57	73	35
0.375	93	95	93	88	88	94	81	85	90
0.75	98	100	97	96	97	96	91	96	90

*The majority of common waterhemp population at the Mapleton, MN research site was glyphosate-resistant.

UNDERSTANDING THE RESULTS

- As metribuzin rates increased, so did residual weed control for all three broadleaf weed species.
- Soybean injury from metribuzin was similar between 0.25 and 0.375 lb ai/acre, but was greater at 0.75 lb ai/acre.
- In general, soybeans grew out of injury symptoms at Huxley, IA and Mapleton, MN by 40 days after treatment.
- Injury symptoms of chlorosis and necrosis occurred between the veins on the older soybean leaves.
- Metribuzin application rates of 0.375 and 0.75 lb ai/acre provided residual control the three broadleaf weed species with 80% control or more 50 days after treatment.



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WHAT DOES THIS MEAN FOR YOUR FARM?

- Metribuzin is a possible herbicide option to add an additional SOA to a weed management program.
- Warrant® herbicide and Rowel® herbicide are additional residual herbicides that may be considered in a tankmix to improve preemergence weed management.
- Reduced weed control was observed at lower metribuzin rates between 21 and 35 days after treatment; therefore, the application of an additional postemergence residual herbicide (such as Warrant herbicide or Warrant® Ultra herbicide) is recommended to help achieve an overlapping residual program
- Metribuzin injury to soybeans may be more likely on calcareous soils (high pH).
- Soybean products may vary in their response to metribuzin; contact your local Territory Agronomist for additional information.

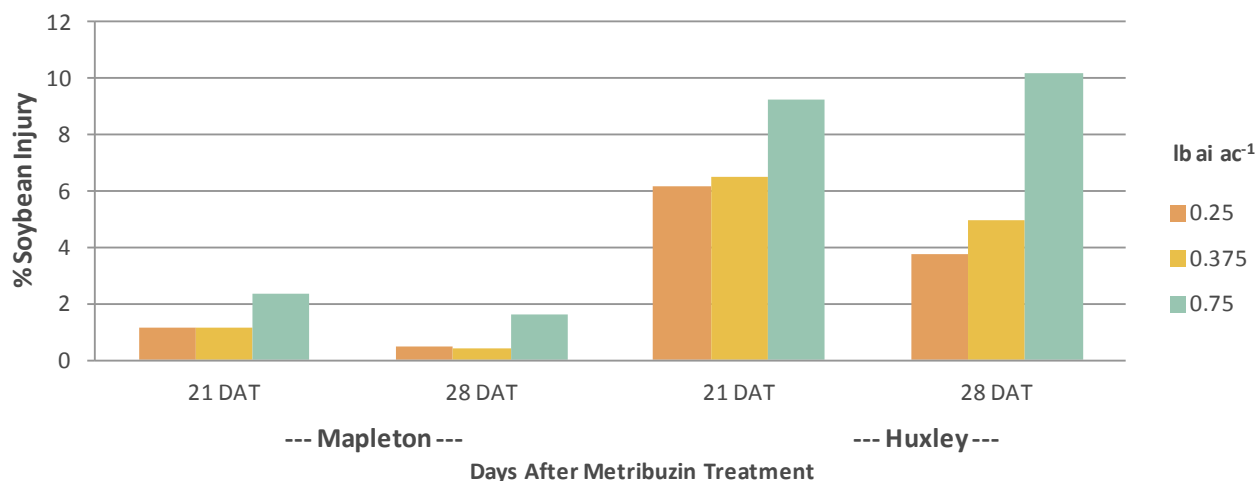


Figure 1. Soybean injury at multiple metribuzin rates.



Figure 2. Soybean with Metribuzin injury in Mapleton, MN in 2016.



Figure 3. Soybean plants with Metribuzin injury in Mapleton, MN in 2016.

LEGAL STATEMENT

The information discussed in this report is from a single site, non-replicated demonstration. This informational piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this information accordingly.

Individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.

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