

Management of Waterhemp with Group 15 Herbicides in Soybeans

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Objective

To determine the effect of Group 15 (acetamide) herbicides in LibertyLink soybeans

Background

Crop Year: 2018

Location: North of St. Marys, OH

County/Town: Auglaize

Soil Type: Blount Silt Loam

Drainage: Systematic

Previous Crop: Soybean

Tillage: None

Planting Date: May 11, 2018

Nitrogen: None

Seeding Rate: 180,000

Harvest Date: Not harvested

Methods

A weed control trial was established in LibertyLink soybeans. The design was a single factor randomized complete block having 4 replications. The plot size was 9 feet wide by 35 feet in length. The five Group 15 herbicides applied preemergence were Dual II Magnum (1.5 pt/A), Parallel (1.47 pt/A), Outlook (18 fl oz/A), Warrant (1.5 qt/A), and Zidua (2.5 oz/A).

Glyphosate was applied to the trial area in late April to control annual bluegrass and other winter annual weeds. Interline was applied at 34 fluid ounces/A in the burndown on May 8, 2018. Ammonium sulfate was added to all Interline treatments at 3 pounds/A. The Group 15 herbicides were applied on May 8, 2018. The postemergence Interline was applied at 34 fl oz/A to 8 to 10 inch waterhemp on June 25, 2018.

All treatments were applied with a carbon dioxide propelled 4 nozzle handheld research plot sprayer with a spray width of 6.67 feet. Turbo Teejet 11002 nozzles were used. Spray pressure was 48 pounds per square inch. The spray volume applied was 20 gallons per acre. Travel speed was 3 miles per hour.

LibertyLink ProHarvest soybeans were planted on May 11, 2018 in 15-inch rows.

Results

Table 1. Percent Control of Waterhemp on June 25, 2018 (Before the Postemergence Application) and on August 2, 2018 (38 days after the Postemergence Application).

	June 25	August 2
	%	%
Zidua (2.5 oz/A)	95 A	100 A



Warrant (1.5 qt/A)	77 B	96 A
Dual II Magnum (1.5 pt/A)	59 C	96 A
Outlook (18 fl oz/A)	56 C	99 A
Parallel (1.47 pt/A)	53 C	99 A

Means Separated by LSD at 0.05

Summary

Glyphosate-resistant waterhemp is increasing in frequency in Auglaize County, Ohio. LibertyLink soybeans with an application of Liberty are an excellent alternative tool to controlling glyphosate-resistant waterhemp. On May 8, 2018 waterhemp was just emerging. The waterhemp continued to emerge until early August.

Zidua provided the greatest waterhemp control on June 25, 2018 followed way back by Warrant. The application of Interline controlled nearly all emerged waterhemp regardless of the effectiveness of the soil-applied herbicide.

These herbicides were applied postemergence as well, but due to poor control of the waterhemp at the time of the application, effective data could not be retrieved other than the amount of soybean injury to these treatments. Zidua caused the greatest soybean injury at 18%, followed by Dual II Magnum at 17% which was similar. Warrant caused the least injury at 7%. The Parallel and Outlook were in between these three herbicides.

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