Delayed Application of Herbicides for Soybean

RFR-A1860

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Introduction

Soybean varieties tolerant to dicamba herbicides became available in 2017. Dicamba-tolerant soybean varieties are genetically modified to tolerate preemergence and postemergence applications of dicamba herbicides.

Dicamba herbicides offer a new option for weed control in soybean. Application of dicamba herbicide in soybean will provide broadleaf weed control without crop injury.

The herbicide application season made the timely application of dicamba herbicides difficult in 2018, because rainfall and wet fields prevented herbicide application in late June. A study was needed to compare standard soybean herbicides (fomesafen) with a new herbicide system (dicamba) in soybean.

This study was conducted to compare dicamba herbicides to fomesafen herbicides for the control of waterhemp when weed sizes are larger than recommended height.

Materials and Methods

The research area was soybean in 2017. The research area was tilled with a field finisher and planted to Asgrow variety AG20X7 at 140,000 seeds/acre June 4, 2018.

Herbicide treatments were applied July 6, 2018, with a CO2 backpack sprayer, which delivered 20 gallons/acre at 40 PSI with 8002 flat fan nozzles. Nine treatments, one untreated check and three replications were included. The waterhemp in this study was 10 inches high at the treatment date. The dicamba herbicide product was Engenia herbicide and the fomesafen product was Flexstar.

Results and Discussion

Applications of glyphosate, dicamba, and fomesafen were more than 90 percent effective in the control of waterhemp in this study. Apparently, the waterhemp in the study area was susceptible to glyphosate and fomesafen.

Many area farm fields have waterhemp populations not controlled effectively with glyphosate or fomesafen.

This study demonstrates dicamba can effectively control waterhemp populations when weed size exceeds the label recommendations of a three-to-four-inch height. However, the likelihood of off target movement of dicamba increases as the application dates are delayed.