ASSESSMENT OF INTERLINE™ MIXTURES IN ENLIST COTTON™

J.A. Patterson
J.K. Norsworthy
Z.D. Lancaster
University of Arkansas
Fayetteville, AR
L.T. Barber
University of Arkansas – Extension
Lonoke, AR

Abstract

Palmer amaranth (*Amaranthus palmeri*) is one of the most damaging weeds found in cotton in the Midsouth. Due to its resilient nature and ability to become resistant to common herbicides, measures to effectively control Palmer amaranth must be taken. Previously, the use of glufosinate was limited to burndown treatments on non-crop areas and in no-till plantings, but the emergence of glufosinate-resistant crops increased in-crop use. Enlist cotton is resistant to glufosinate, 2,4-D, and glyphosate, providing growers with more weed control options. In 2018, a field experiment was conducted at the Lon Mann Cotton Research Station near Marianna, AR. The trial was implemented as a randomized complete block design with four replications. The objectives of the trial were to assess weed control differences between treatments containing a chloroacetamide herbicide and those without, to compare weed control with Intermoc™ to Interline + Moccasin II PLUS and Interline + Dual Magnum, and to evaluate weed control when Enlist One is added to Interline mixtures. The postemergence herbicides used in this experiment were Interline (glufosinate), Moccasin II PLUS (*S*-metolachlor), Warrant (acetochlor), Outlook (dimethenamid-P), Dual Magnum (*S*-metolachlor), Intermoc (glufosinate + *S*-metolachlor), and Enlist One (2,4-D choline). All treatments received a preemergence application of Cotoran (fluometuron). At three weeks after the postemergence application, Interline + Enlist One + Dual Magnum-containing treatments provided the best Palmer amaranth control at 98%. No more than 3% crop injury was observed across all treatments. Orthogonal contrasts showed that there were no differences between chloroacetamide-containing treatments and those without, nor were there differences between Intermoc-containing treatments and treatments with Moccasin II PLUS or Dual Magnum. There was a significant difference between Enlist One-containing treatments and those without (P=0.0039).