EVALUATION OF MULTIPLE BRAKE TANK MIXES FOR RESIDUAL HERBICIDE EFFICACY WITH AND WITHOUT PRE-PLANT INCORPORATED VALOR

O.W France
J.K. Norsworthy
G.L. Lawson
M.C. Castner
M.M. Houston
University of Arkansas
Fayetteville, AR

Abstract

As weed accessions with multiple-resistance, such as Palmer amaranth (*Amaranthus palmeri*), become more prevalent, the use of weed control programs with multiple sites of action is paramount. This trial compares the weed control of various cotton-compatible residual herbicides, including fluridone, fluometuron, prometryn, acetochlor, and *S*-metolachlor, with and without the addition of pre-plant incorporated (PPL) flumioxazin. Percent control ratings of Palmer amaranth, tall morningglory (*Ipomoea purpurea*), and barnyardgrass (*Echinochloa crus-gali*) were taken weekly, with an average of nine percent greater control of Palmer amaranth achieved in plots not receiving flumioxazin PPI versus those that did not. Tall morningglory saw an average of eighteen percent greater control according to the first two weeks of rating for plots not receiving flumioxazin. For plots receiving fluridone, based on the first two weeks of ratings, Palmer amaranth control was increased by fifty-six percent over plots not receiving fluridone. Plots receiving acetochlor as a pre-emergent application had consistently greater weed control compared when compared with plots not receiving acetochlor. Yield data was not taken in this trial.