TOLERANCE OF XTENDFLEX AND ENLIST COTTON VARIETIES TO INTERMOC

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Abstract

Intermoc™ herbicide is a recently labelled premix of glufosinate and *S*-metolachlor from UPL. The recommended field rate of Intermoc is 64 fl. oz/A, which contains glufosinate at 0.54 lb. ai/A and *S*-metolachlor at 1.25 lb. ai/A. The premix is equivalent to 30 oz/A of Interline™ herbicide and 1.25 pt/A of Moccasin™ herbicide. Injury to cotton has been observed when glufosinate and *S*-metolachlor are applied together in the form of necrotic speckling. Additionally, several examples of differences in varietal tolerances to herbicides exist, including soybean to metribuzin and differential tolerance of Widestrike cotton varieties to glufosinate. Thus, a field trial was conducted in 2018 to evaluate cotton varietal tolerance to applications of Intermoc. The experiment was a randomized complete block design 2-factor factorial, with the first factor being variety and the second factor being Intermoc rate. Six cotton varieties; NG 3729 B2XF, NG 3406 B2XF, DP 1518 B2XF, PHY 330 W3FE, PHY 340 W3FE, and Stoneville 4949 GLT were cone planted into raised beds. Intermoc was applied at 64 fl. oz/A and 128 fl. oz/A at the 1- and 4-leaf cotton growth stage. A nontreated check was included for each variety. Visible injury ratings were recorded 1, 2, and 3 weeks after each application, percent groundcover was taken 3 weeks after the initial application, and seedcotton yield was measured at harvest. XtendFlex® varieties were more sensitive to applications of Intermoc than the Pytogen and Stoneville varieties. XtendFlex cotton was injured 18 to 25% one week after the 1-leaf application and 20 to 26% injury was observed one week after the 4-leaf application. Based on this research, caution should be used when applying to Intermoc to XtendFlex cotton and applications to 1-leaf cotton are not recommended if effective alternatives are available.