SHARPPOD MORNINGGLORY *[IPOMOEA TRICHOCARPA VAR TRICHOCARPA ELL.]* CONTROL IN ROUNDUP READY FLEX[®] AND LIBERTYLINK[®] COTTON SYSTEMS G.D. Morgan T.W. Janak P.A. Baumann M.E. Matocha Texas AgriLife Extension Service College Station, TX

Abstract

Morningglory species are among the most common and troublesome weed species in the southern cotton producing states (Anonymous 2001). *Ipomoea* spp. account for the largest percentage (18.2%) of U.S. cotton crop lost due to weeds and are estimated to infest 500,000 acres of cotton in Texas (Byrd 1999). Although studies have been conducted to determine effective control of annual morningglory species, few deal with control of the perennial sharppod morningglory (*Ipomoea trichocarpa var. trichocarpa* Ell.). Furthermore, data is lacking for comparing sharppod morningglory control in two popular transgenic crop herbicide programs, Roundup Ready Flex[®] and LibertyLink[®] cottons. Research was conducted to determine the advantages of one herbicide program over the other while simultaneously evaluating control of sharppod morningglory by different treatments consisting of a combination of preemergence and postemergence herbicides. Field studies were conducted in 2006 and 2007 to assess sharppod morningglory control in Roundup Ready Flex[®] and LibertyLink[®] cotton systems with and without preemergence herbicides. Herbicides evaluated included glyphosate, glufosinate, prometryn, fluometuron, and diuron. Visual ratings of percent weed control and sharppod morningglory plant counts were taken to assess control.

Prometryn at 1.8 kg ai ha⁻¹ and fluometuron at 1.8 kg ai ha⁻¹ provided significant preemergence control (33-81%) of seedling sharppod morningglory. All rates of glyphosate (1.06 and 1.54 kg ai ha⁻¹) and glufosinate (0.45 and 0.6 kg ai ha⁻¹) controlled sharppod morningglory from 55 to 100% at both application timings. The addition of diuron at 1.12 kg ai ha⁻¹ to glyphosate and glufosinate at the late season application enhanced sharppod morningglory control by 3 to 16%. Additionally, in both years, no reduction in cotton yield was observed in the morningglory infested treatment when compared to the various herbicide treatments.