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Home » Volume 12 / 2008 »

Evaluation of Trifloxysulfuron plus Prometryn for Weed Control in Cotton (*Gossypium hirsutum* L.)

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Glyphosate-resistant cotton (Gossypium hirsutum L.) has been widely accepted by cotton producers. Because of topical application restrictions, postemergence-directed (PD) or late postemergence-directed (LAYBY) applications are typically needed to obtain season long weed control. Trifloxysulfuron and prometryn are each broad-spectrum herbicides used for PD weed control in cotton and are currently marketed as a premix. The objective of this study was to evaluate weed control efficacy of trifloxysulfuron plus prometryn in PD and LAYBY weed control programs following alyphosate or alyphosate plus s-metolachlor applied early postemergence over-the-top (EPOST). Field studies were conducted at the Black Belt Branch Experiment Station in Brooksville, MS, in 2002 and 2003 and at the R.R. Foil Plant Science Research Center in Starkville, MS, in 2003. Studies were conducted in areas with naturally occurring populations of pitted morningglory (Ipomoea lacunosa L.), entireleaf morningglory (Ipomoea hederacea var. integriuscula Gray), and large crabgrass [Digitaria sanguinalis (L.) Scop.] Visual weed control ratings were taken 14 and 21 to 28 d after PD and LAYBY applications. Results of these studies indicate no differences in pitted morningglory, entireleaf morningglory, or large crabgrass control between glyphosate alone or glyphosate plus smetolachlor applied EPOST followed by the premix of trifloxysulfuron plus prometryn. Furthermore, application of trifloxysulfuron plus prometryn PD or LAYBY resulted in greater control than glyphosate applied alone or in combination with s-metolachlor applied EPOST. Trifloxysulfuron plus prometryn provided effective control of weed species that were larger in size, providing producers with another tool to control several problem weeds in cotton production.

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