

CONTROL OF WESTERN TARNISHED PLANT BUG, *LYGUS HESPERUS*, WITH DOW AGROSCIENCES' SULFOXAFLOR INSECTICIDE IN COTTON

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Abstract

Sulfoxaflor is the first insecticide from the new sulfoximine chemical class. It was discovered by Dow AgroSciences scientists and is proprietary chemistry. This novel insecticide is active against a wide range of sap-feeding insects affecting cotton including aphids, plant bugs (*Lygus* spp.) and whitefly species. Previous Dow AgroSciences and university research studies indicate that sulfoxaflor is effective at low rates and provides fast acting and extended residual control of target pests. Efficacy against western tarnished plant bug (*Lygus hesperus*) in cotton was evaluated in 2009 in four private and public research trials. These trials were conducted in California, Arizona and Texas. Trials consisted of small replicated plots with four repetitions. Plots received one to three treatments of sulfoxaflor and commercial standards, and included an untreated check. Insect densities were estimated by sweep net sampling, with the exception of the Texas location, where a beat cloth was utilized.

Results revealed that sulfoxaflor insecticide at rates equal to or greater than 0.045 lb a.i./acre provided excellent plant bug control, comparable to flonicamid and acephate. No significant differences in cotton yield could be detected among treatments, with the exception of the Arizona location. In that study, plots from sulfoxaflor rates equal to or greater than 0.045 lb a.i./acre yielded among the highest tested. Sulfoxaflor has an excellent fit in IPM programs and will be a valuable rotational partner with other chemistries and as a tool to manage insect populations resistant to other insecticides. Registration of sulfoxaflor for U.S cotton is anticipated in 2012.