

**AERIAL APPLICATION OF DOW AGROSCIENCES' TRANSFORM™ WG (SULFOXAFLO)
INSECTICIDE FOR PLANT BUG (*LYGUS LINEOLARIS*) CONTROL IN COTTON**

L.C. Walton

R.A. Haygood

M.W. Siebert

J.D. Thomas

Dow AgroSciences LLC

Indianapolis, IN

A. L. Catchot

Mississippi State University,

Mississippi State, MS

T. Miller

Miller Entomological Services,

Drew, MS

Abstract

Sulfoxaflor is the first insecticide from the new sulfoximine chemical class. It was discovered by Dow AgroSciences (DAS) scientists and is proprietary DAS chemistry. This novel insecticide is active against a wide range of sap-feeding insects affecting cotton including aphids, plant bugs (*Lygus spp.*) and whiteflies. Sulfoxaflor will be sold under the trade name Transform™ with cotton registration anticipated in 2012. Efficacy experiments against tarnished plant bug (*Lygus lineolaris*) applied by ground equipment have been ongoing since 2006 in MS., LA., AR., and TN.

In 2011, an experiment was conducted to assess Transform efficacy by aerial application. Sequential applications of Transform at 1.5 and 2.25 oz/acre were compared to a standard program of acephate (0.8 oz product/acre) plus Diamond (5 oz product/acre) followed by Endigo (5 oz product/acre). Treatment applications were made with an Ag Tractor 602 turbine with air speed of 150 MPH calibrated to deliver 3 GPA at 23 PSI using CP nozzles.

Transform applied at 1.5 or 2.25 oz/acre was highly effective for plant bug control with both rates equal to the commercial standards in reducing plant bug numbers. Transform was much more effective for control of cotton aphids (*Aphis gossypii* Glover) compared to the commercial standard. This research indicates that Transform can be applied with aerial equipment to provide control of plant bugs and aphids equal to or superior than a standard insecticide program.

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Sulfoxaflor is not yet registered with the U.S. EPA. Federal registration is pending. This communication is intended to provide technical information only and is not an offer for the sale of product.