

ALABAMA WHEAT AND FEED GRAINS PRODUCERS
PROJECT SUMMARY
YEAR 2005

TITLE: Control and Detection of BYD in Wheat

INVESTIGATORS: Dr. Kira L. Bowen and Katherine B. Burch
Department of Entomology and Plant Pathology
209 Life Sciences Bldg
Auburn University, AL 36849-5409

FUNDS RECEIVED: \$3,950

SUMMARY:

Test 1: 'Pioneer 26R24' was planted at three locations in the state; Gulf Coast Res. and Exten. Center at Fairhope, Sand Mountain Res. and Exten. Center at Crossville and Tennessee Valley Res. and Exten. Center at Belle Mina. Plots were planted with seed treated with one of two products [Cruiser 5FS (Syngenta) and Gaucho XT (Gustafson)] or left without treatment, for a total of three treatments. To each seed treatment Warrior was applied to plots at 25-30 days after planting, mid-February, or not at all at Crossville and Belle Mina. Due to circumstances beyond our control, only a mid-March application was made at Fairhope. At all locations, incidence of barley yellow dwarf (BYD) tended to be reduced in seed-treated plots. At Crossville, BYD was significantly reduced by both foliar applications. No significant disease reduction was observed at the other locations, however, yields were improved at all locations due to foliar application. Quality was not affected by any treatment compared to the non-treated control.

Test 2: Three varieties of wheat ('AGS 2000', 'Coker 9152', and 'Pioneer 26R24') were planted at four locations in the state: Gulf Coast Res. and Exten. Center at Fairhope, Plant Breeding Unit at Tallassee, Prattville Experiment Field at Prattville, and Sand Mountain Res. and Exten. Center at Crossville. Plots were planted with seed treated Cruiser 5FS (Syngenta) or left without treatment, for a total of two treatments for each variety. To each seed treatment Warrior was applied to plots in mid-February or not at all. Disease onset and incidence was similar to 2004 at all locations except at Tallassee which was slightly later. Stand counts averaged over all cultivars were slightly improved at all locations with Cruiser treatment compared to the untreated control, though not significantly. Disease was significantly reduced with the foliar application at Crossville and non-significantly reduced at the other locations. While grain yields tended to be improved by seed treatment at each location, yields in Crossville were significantly improved by seed treatment and tended to be higher with the foliar treatment, though not significantly. Yield averages were damaged at Prattville by standing water in many plots. At the other locations, no significant improvement was observed with seed treatment, however, significant increases were observed with the foliar application. Quality was not affected by any treatment compared to the non-treated control. Preliminary results shared with professional plant pathologists via poster (2005 Phytopathology vol. 89 S:10)