

PROJECT SUMMARY JANUARY 2007

TITLE: Which aphids are bringing barley yellow dwarf into Alabama wheat fields?

INVESTIGATOR(S): Kathy L. Flanders, Associate Professor, Kira L. Bowen, Professor, Entomology and Plant Pathology; and Jimmy Jones, County Extension Coordinator, Henry Co.

Information from these studies will help us develop more precise economic thresholds for aphids in wheat. *Barley yellow dwarf virus* (and the related *Cereal yellow dwarf virus*) causes serious yield losses in wheat in Alabama. Each autumn, winged aphids fly into wheat fields. Some of these aphids are carrying barley yellow dwarf or cereal yellow dwarf virus from the summer hosts. The aphids feed on the wheat plants, and infect them with the viruses. Later in the season, aphids can spread the virus from these infected plants to other plants in the field. We don't know which aphids are responsible for bringing the viruses into Alabama wheat fields each year. We need to know this in order to develop more effective management recommendations for aphids and barley yellow dwarf disease. In the first year of a multi-year study, less than 1% of winged aphids captured in wheat fields were carrying yellow dwarf virus.