

PI: Hershman, Donald

PI's E-mail: dhershma@uky.edu

Project ID: FY07-HE-010

FY06 ARS Agreement #: New

Research Area: CBCC

Duration of Award: 1 Year

Project Title: Uniform Trial for Integrated Control in FHB:Kentucky

PROJECT 1 ABSTRACT

(1 Page Limit)

Using foliar fungicides or disease resistance alone, have not provided acceptable FHB and DON control results in many situations. The best available fungicides currently only provide for FHB/DON suppression (~40-50% disease control) and highly FHB-resistant wheat varieties are currently unavailable. Conceptually, integrated control would maximize the strengths of specific disease control methods, while minimizing their weaknesses. The result should be more complete FHB/DON control. Integrated pest management (IPM) methods have been around for many years in a variety of pest-crop systems. However, until recently, insufficient information existed for developing an integrated FHB/DON control program. Work funded by the USWBSI since 1998 has resulted in the identification of fungicides and moderately resistant wheat varieties which can be used to develop an integrated approach to FHB/DON control. Thus, a National Uniform Trial on Integrated Control of FHB has been initiated. The objectives of this trial are to 1) evaluate the benefits of combining host resistance (one susceptible and two resistant varieties) and fungicides (non-treated vs. Prosaro-treated) for FHB/DON management; and 2) generate data aimed at increasing grower adoption of integrated FHB management strategies. The strategy is to decrease the overall risk of FHB epidemics in the U.S. through enhanced grower adoption of integrated FHB/DON management programs. In addition, disease and weather data will be given to the coordinator of the FHB Prediction Tool with the aim of increasing the reliability and accuracy of the tool. Once refined, this FHB Prediction Tool will be used by advanced wheat producers to determine if and when it is appropriate to apply a fungicide. Knowing when to deploy a pesticide, or not, is part and parcel of any integrated pest control program.

Kentucky will participate in a multi-state, multi-year study to evaluate the benefits of combining host resistance and fungicides for FHB/DON management. As part of a Uniform Trial, Kentucky will conduct two tests, both located at the Spindletop Research Farm in Lexington, KY.