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FY05 ARS Agreement #: 59-0790-4-115

Research Area: CBCC

Duration of Award: 1 Year

Project Title: Chemical and Biological Control of FHB on Wheat in Arkansas.

PROJECT 1 ABSTRACT

(1 Page Limit)

Fungicides and biocontrol agents will be evaluated under moderate FHB pressure to identify treatments that have potential for managing FHB on soft red winter wheat. Treatments will consist of those in the Uniform Test that is organized by the Chemical, Biological and Cultural Control Committee. Research will be conducted at the University Farm in Fayetteville, AR, on cultivar 'Pat' soft red winter wheat that has some FHB resistance and resistance to prevalent foliar diseases. The design will be a randomized complete block with six replications. Individual plots will be 5 ft x 15 ft. Plots will be inoculated at flag leaf emergence stage with corn kernels colonized with seven isolates of *Fusarium graminearum* and will be misted to provide a favorable environment for inoculum development and head infection. Fungicides and biologicals will be applied at flowering according to the protocols for the Uniform Test. Incidence and severity of FHB will be evaluated on 50 randomly selected heads per plot at soft dough stage and used to calculate FHB index. Plots will be harvested with a plot combine, and yield and test weight will be determined. Grain will be visually evaluated for the percentage of scabby kernels, and a 50-g sample from each plot will be sent to Pat Hart's lab at Michigan State for DON analysis. Data will be provided to the Chemical, Biological and Cultural Control Committee, and the results reported at the USWBSI Research Forum.