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**Project ID: FY07-SW-008**

**FY06 ARS Agreement #: 59-0790-4-125**

**Research Area: CBCC**

**Duration of Award: 1 Year**

**Project Title: Evaluation of Integrated Management Strategies for Fusarium Head Blight.**

### **PROJECT 1 ABSTRACT**

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The severity of Fusarium head blight (FHB) epidemics in the United States has caused enormous yield and quality losses in both wheat and barley over the last decade. The development of this disease is dependent on host genetics, a range of environmental conditions, the prevalence of the causal fungus and the survival and spread of the causal fungus. Control of this disease has been difficult because of the complex nature of the host/pathogen interaction. Management of FHB and the associated mycotoxin DON have not been achieved by any single control measure. An integrated approach is critical to attaining the best possible control of FHB in any given environment.

As a result of a workshop sponsored by the Chemical, Biological and Cultural Control Research Area, a protocol for a multi-state project focusing on integrated management strategies for FHB was developed. The research portion of this project would involve multi-state trials evaluating crop sequence, variety selection and fungicide application as an integrated management program for FHB. Timely dissemination of the research results is also a priority of this project.

The University of Missouri would cooperate in this multi-state project following the protocol developed by a subcommittee from the workshop participants with slight adjustments to accommodate site conditions at the Bradford Research Center.

This proposal is directly in line with priorities and goals of the Chemical, Biological and Cultural Control Research Area, i.e. "Integrated Disease Management: evaluation of methods and strategies for disease management including determination of the influence of modern crop management practices on disease development and the selection of best disease control systems that can be used in concert. These methodologies may include, but not limited to variety selection, tillage practices, crop rotations and chemical/biological control inputs."