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**Project ID: FY11-UT-001**

**FY10 ARS Agreement #: 59-0206-9-078**

**Research Category: MGMT**

**Duration of Award: 1 Year**

**Project Title: Uniform Trial to Evaluate Efficacy of Biologicals against FHB.**

## **PROJECT 2 ABSTRACT**

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In order to identify fungicides and biological products that are effective in minimizing damage from Fusarium head blight (FHB), uniform trials for FHB control have been established in spring wheat/barley regions and in winter wheat regions of the United States. The establishment of a uniform trial consisting of a core set of treatments across a number of states allows evaluation of products and application methods for consistency of performance over a wide number of environments and across grain types affected by FHB. Also, because FHB does not occur every year in every location, having multiple sites for the uniform trial increases the chance of favorable results at some locations each year.

The first years of the Uniform Fungicide Trial resulted in changes in products labeled for use for the management of FHB by producers. Over the years of the Uniform Fungicide and Biologicals Trials, results in locations with FHB indicated favorable control with many of the tested products. Changes in application technology, which have improved efficacy, have also been incorporated into the Uniform Trials.

The University of Missouri has cooperated in the Uniform Fungicide and Biological Trials for a number of years. The 2008 Uniform Evaluation of Fungicides and Biologicals was conducted at the Bradford Research Center east of Columbia, MO. Conditions were quite favorable for the development of Fusarium head blight and good results were obtained in both the Uniform Fungicide Trial and the Uniform Biological Trial. Since then Missouri has cooperated in the Uniform Biologicals portion of this project. The last three seasons have been favorable for the development of Fusarium head blight and results from the trial have been beneficial.

The proposal for the 2010-2011 season is to continue participation in the Uniform Biological Control Agent Trial. Two winter wheat varieties of varying susceptibility to FHB were planted during the fall of 2010 so that applications of biologicals can be made during the 2011 growing season.

This proposal is directly in line with goal #3 of the FHB Management Research Area, i.e. to develop the next generation of management tools for FHB/DON control. The Uniform Biological Trial evaluates biological control agents that are close to marker use against registered products with the objective of finding more effective products to use in managing FHB and thus reducing DON levels in grain.