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**FY03 ARS Agreement #: 59-0790-9-069**

**Research Area: CBC**

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**Project Title: Uniform Trial to Evaluate Efficacy of Fungicides and Biologicals Against Fusarium Head Blight**

## PROJECT 1 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 fungicide treatment 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 trial using 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. During the first few years of the Uniform Fungicide Trial both fungicides and biological control agents were tested in the same trial. Because of the additional work that was necessary in increasing some of the biological control agents and the more sensitive application requirements of the biological agents, the decision was made not to include biological control agents in the 2003 trial. For 2004 both fungicides and biologicals will be evaluated in the same uniform trial.

The first years of the Uniform Fungicide Trial resulted in changes in products labeled for use by producers. The strobilin fungicide Quadris received federal registration during the summer of 1999, the triazole fungicide Folicur was granted special exemptions for use in some states and the triazole fungicide Tilt was granted state labels for use against FHB. Valuable efficacy data on experimental or new fungicides such as Stratego (combination product of Tilt and Flint) and the strobilin fungicide BAS 500 have been obtained. Over the years of the Uniform Fungicide Trial, results in locations with FHB indicated favorable control with many of the tested products. Changes in application technology, which have improved fungicide efficacy, have also been incorporated into the Uniform Fungicide Trial.

Missouri has cooperated in the Uniform Fungicide Trial for a number of years. During the 2002-2003 season I volunteered to include two biological agents in the Missouri trial even though those biological agents were not included in the core set for the Uniform Fungicide Trial. The 2004 uniform evaluation of fungicides and biologicals will be conducted at the Bradford Research Farm located just east of Columbia, MO. Two winter wheat varieties were planted in the fall of 2003 so that applications of fungicides and biologicals can be made during the 2004-growing season.