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**Project ID: FY09-IM-043**

**FY08 ARS Agreement #: New**

**Research Category: MGMT/IM-CP**

**Duration of Award: 1 Year**

**Project Title: Integrated Management of Fusarium Head Blight and Deoxynivalenol in Indiana.**

### **PROJECT 1 ABSTRACT**

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Fusarium Head Blight (FHB) levels on wheat vary each year in Indiana but the disease is consistently present and of concern to growers. Indiana wheat acreage has increased substantially over the last several years, increasing the need for effective FHB and deoxynivalenol (DON) management programs. Cultivars with moderate resistance to FHB do not always provide desirable levels of disease control in certain environments, and fungicides have become an important component in FHB and DON management plans in the region. An integrated approach that combines genetic resistance and fungicide application is desirable to achieve optimal management of FHB. This multi-year project will test the hypothesis that a fungicide application in combination with genetic resistance will provide a greater level of FHB and DON control than either management technique alone. This research will also serve as a location in a cooperative multi-state study comparing the effects of fungicide treatment and genetic resistance for FHB and DON control across different environments and wheat types.

The proposed research will be conducted at the Purdue Agricultural Center for Research and Education in West Lafayette, Indiana. Effects of previous crop, fungicide, and cultivar resistance will be examined to determine their effects on FHB development and DON accumulation in grain. This information will improve recommendations for FHB and DON management for growers in Indiana. Information obtained from this research will also contribute to knowledge on integrated management of FHB across differential environmental locations in the Midwest.