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Project ID: FY11-BR-022

FY10 ARS Agreement #: 59-0206-9-076

Research Category: MGMT

Duration of Award: 1 Year

Project Title: Influence of FHB Management Practices on Mycotoxins in Wheat Straw.

PROJECT 2 ABSTRACT

(1 Page Limit)

The overall goal of the proposed research is to develop a better understanding of the importance of *Fusarium*-related mycotoxins in wheat straw, and to devise management practices that will reduce the levels of these mycotoxins in wheat straw. The objectives of the proposed research are to: i) identify and determine the levels of *Fusarium*-related mycotoxins present in wheat straw from *Fusarium* head blight (FHB) field research trials in Illinois; and ii) determine the effect of FHB host resistance, foliar fungicides, and previous crop stubble on the level of *Fusarium*-related mycotoxins present in wheat straw.

Fusarium-related mycotoxins present in wheat straw can be a threat to livestock production. When wheat straw bedding that contains mycotoxins is ingested by certain animals (i.e. pigs), the animals can become ill. Methods to reduce *Fusarium*-related mycotoxins that develop in wheat straw in the field have not been intensively studied. Focusing on one of the major goals of the U. S. Wheat & Barley Scab Initiative, to develop management tools to control *Fusarium*-related mycotoxins (such as deoxynivalenol - DON), this proposed research project will investigate methods to reduce mycotoxins in wheat straw. Wheat straw samples from field research trials that evaluate *Fusarium* head blight (FHB) management practices will be collected and analyzed for trichothecene mycotoxins such as DON, zearalenone, T-2 toxin, and nivalenol. The specific FHB management practices that will be evaluated in these trials are host resistance, foliar fungicide, and non-host previous crop.

The proposed research will help researchers develop a better understanding of the effects of FHB management practices on mycotoxin levels present in wheat straw. The results will be used to devise management tactics that can be used to reduce mycotoxin levels in wheat straw.