

PI: Carl Bradley

PI's E-mail: carlbrad@illinois.edu

Project ID: FY14-IM-008

ARS Agreement #: 59-0206-5-007

Research Category: MGMT

Duration of Award: 1 Year

Project Title: Integrated Management Strategies for Scab in Illinois.

PROJECT 1 ABSTRACT

(1 Page Limit)

Several management tools for Fusarium head blight (FHB) of wheat are available to growers, and include fungicides and moderately-resistant cultivars. Ideally, when these practices are integrated, losses from FHB will be reduced compared to using only one of the management practices.

The objectives of the proposed study are: 1) demonstrate that integrated management is the most effective and economical means of reducing losses to FHB/DON; and 2) increase grower adoption of integrated strategies to control FHB.

Trials will be conducted at two locations at university research farms in Illinois (Urbana and Dixon Springs). The effects of fungicide application timing and wheat cultivar (cultivars ranging in susceptibility to FHB) will be evaluated for their effects on FHB and deoxynivalenol (DON) levels in harvested grain in *F. graminearum*-inoculated and non-inoculated areas.

PI: Carl Bradley

PI's E-mail: carlbrad@illinois.edu

Project ID: FY14-UT-003

ARS Agreement #: 59-0206-4-024

Research Category: MGMT

Duration of Award: 1 Year

Project Title: Uniform Fungicide Tests for Control of Fusarium Head Blight in Illinois.

PROJECT 2 ABSTRACT

(1 Page Limit)

The goal of this study is to test the efficacy of fungicides across multiple locations in Illinois for their effects on Fusarium head blight (FHB) control and their ability to reduce deoxynivalenol (DON) levels in harvested soft red winter wheat grain. These trials will include the uniform fungicide treatments that will be evaluated in similar studies across multiple states.

Like many other states in the Midwest, when the conditions are favorable for FHB in Illinois, losses can be devastating. In Illinois, a portion of the wheat is drilled into corn stubble, which increases the chance for FHB, since corn is another host for the FHB pathogen, *Fusarium graminearum*. Although some wheat cultivars are available that have partial resistance to FHB, fungicides are still one of the necessary tools that growers need to help manage this disease. Illinois received a section 18 emergency exemption for tebuconazole fungicide in many of the previous seasons to help growers control FHB. Data collected from the multi-state uniform fungicide trials have helped Illinois (and other states) receive this section 18 exemption from U.S. EPA. As of 2014, many fungicides (including metconazole, prothioconazole, and tebuconazole) have received full section 3 registrations on wheat in the U.S. It is important for Illinois wheat growers to have access to results from unbiased regional fungicide trials that will help them make informed decisions about managing FHB with fungicides; results of these proposed trials will provide them with that information.

This proposal addresses priority numbers 2 and 3 of the USWBSI's FHB Management Research Area Action Plan: 2.) Enhance communication and end user education/outreach; and 3.) Develop the next generation of management tools for FHB/DON control. Funds provided through the USWBSI will be used to leverage additional support from agrichemical companies that will allow testing of additional fungicides, rates, and/or application timings beyond those in the uniform fungicide trials.