

**USDA-ARS/
U.S. Wheat and Barley Scab Initiative
FY09 Final Performance Report
July 15, 2010**

Cover Page

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| Fiscal Year: | 2009 |
| USDA-ARS Agreement ID: | 59-0790-7-076 |
| USDA-ARS Agreement Title: | Uniform Trial for Integrated Control in FHB: Kentucky. |
| FY09- USDA-ARS Award Amount: | \$ 5,122 |

USWBSI Individual Project(s)

| USWBSI Research Category* | Project Title | ARS Adjusted Award Amount |
|----------------------------------|---|----------------------------------|
| MGMT | Uniform Trial for Integrated FHB Control: Kentucky. | \$ 5,122 |
| | Total Award Amount | \$ 5,122 |



June 3, 2010

Principal Investigator

Date

* MGMT – FHB Management
 FSTU – Food Safety, Toxicology, & Utilization of Mycotoxin-contaminated Grain
 GDER – Gene Discovery & Engineering Resistance
 PBG – Pathogen Biology & Genetics
 BAR-CP – Barley Coordinated Project
 DUR-CP – Durum Coordinated Project
 HWW-CP – Hard Winter Wheat Coordinated Project
 VDHR – Variety Development & Uniform Nurseries – Sub categories are below:
 SPR – Spring Wheat Region
 NWW – Northern Winter Wheat Region
 SWW – Southern Sinter Wheat Region

Project 1: *Uniform Trial for Integrated FHB Control: Kentucky.*

1. What major problem or issue is being resolved relevant to Fusarium head blight (scab) and how are you resolving it?

Integrated use of resistant varieties and fungicides to manage FHB and DON. A multi-state Uniform Trial on Integrated Control of FHB was established in 2007, and Kentucky is part of that trial, which involves a uniform protocol being used by all cooperators.

2. List the most important accomplishment and its impact (i.e. how is it being used) to minimize the threat of Fusarium head blight or to reduce mycotoxins. Complete both sections (repeat sections for each major accomplishment):

Accomplishment:

A uniform trial protocol, involving numerous states and wheat classes, was implemented in 2007. In 2009, Kentucky was part of this trial and conducted a study at the University of Kentucky Research and Education Center in Princeton, KY. Data were collected and sent to the Uniform Trial Coordinator, Dr. Pierce Paul, for inclusion in the trial summary report. This report was given during the 2009 USWBSI Forum and was included in the proceedings for the meeting. Results of studies have been incorporated into educational programs on the integrated use of resistance and fungicides to manage FHB/DON. Weather data associated with the study was made available to FHB epidemiologists for use in fine-tuning FHB pre-flowering predictive model for winter wheat.

Impact:

Many wheat producers in Kentucky have adopted integrated FHB management practices as a result of this project.

Include below a list of the publications, presentations, peer-reviewed articles, and non-peer reviewed articles written about your work that resulted from all of the projects included in the grant. Please reference each item using an accepted journal format. If you need more space, continue the list on the next page.

Hershman, D. E. 2009. Fusarium head blight and its management. TV tape, WBKO TV 6, Bowling Green KY, June 2, 2009.

Hershman, D. E. 2010. Integrated management of Fusarium head blight using fungicides and resistant varieties. 2009 UK Wheat Science Field Day, Princeton, Caldwell County, KY, May 19, 2010.

Hershman, D. E. 2010. New tool for assessing Fusarium head blight (head scab) and deoxynivalenol (DON) risk in wheat. Kentucky Pest News, no 1227, April 28, 2010.

Willyard, K., L. Madden, G. Berstrom, C. Bradley, A. Grybauskas, D. Hershman, M. McMullen, K. Ruden, L. Sweets, S. Wegulo, K. Wise, and P. Paul. 2009. Integrated management of FHB and DON in Small Grains: 2009 Coordinated Trials. Pages 95-99 in: Proceedings of 2009 National Fusarium Head Blight Forum, December 7-9, 2009, Orlando, FL.