

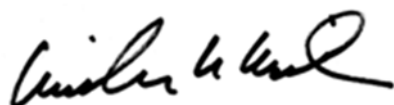
**USDA-ARS/  
U.S. Wheat and Barley Scab Initiative  
FY14 Final Performance Report  
June 15, 2016**

**Cover Page**

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<b>Fiscal Year:</b>	FY14
<b>USDA-ARS Agreement ID:</b>	59-0206-5-001
<b>USDA-ARS Agreement Title:</b>	Economic Impact of USWBSI's Impact on Reducing FHB
<b>FY14 USDA-ARS Award Amount:</b>	\$ 73,608

**USWBSI Individual Project(s)**

<b>USWBSI Research Category*</b>	<b>Project Title</b>	<b>ARS Award Amount</b>
EC-HQ	Economic Impact of USWBSI's Impact on Reducing FHB.	\$ 73,608
	<b>FY14 Total ARS Award Amount</b>	<b>\$ 73,608</b>



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Principal Investigator

6/14/2016  
\_\_\_\_\_  
Date

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

**Project 1:** *Economic Impact of USWBSI's Impact on Reducing FHB.*

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

Fusarium raises costs and risks for growers, inducing them to use more costly management practices and/or shifting to other crops. It reduces the quantity produced, raises prices and increases premiums for non-fusarium wheat, meaning higher costs, risks and more complicated logistics for domestic processors and importers, and finally, it raises costs of breeding.

FHB impacts also have resulted in growers shifting production to less risky crops/crop rotations. While changes in cropping patterns have been influenced by many factors, increased risk of FHB is an important factor. Finally, the longer-term prospective impacts of the proposed CODEX Alimentarius (International Food Regulations) regulations regarding DON are important and if adopted would have drastic impacts on the US wheat industry.

Work to date (through January 2016) focused on Objectives 1 and 2 (of 5) of this project. These are to: 1) Estimate the economic value of crop losses suffered by wheat and barley producers without (1993 to 1996) and with (1997 to 2013) fungicide uses and some management practices; and to 2) Estimate the economic value of crop losses suffered by U.S. wheat producers without (1993 to 1996) and with (1997 to 2013) moderate FHB resistant wheat varieties developed by universities funded by the initiative. This includes impacts of fungicide use and management practices from objective one. The economic value of crop loss from both time periods will be used to estimate the benefits of the USWBSI.

**2. List the most important accomplishments and their impact (i.e. how are they being used) to minimize the threat of Fusarium Head Blight or to reduce mycotoxins. Complete both sections; repeat sections for each major accomplishment:**

**Accomplishment:** Data were collected and developed for these two objectives. This was fairly elaborate. Data were assembled by year from each of the affected states for the hard red spring (HRS), durum (dur), hard red winter (HRW) and soft red winter (SRW) wheat classes. This included data on: area planted, yields, predicted yields and yield deviations due to scab, prices as well as use and effect of varieties planted, fungicide use and other farm management practices. In addition, the models were developed and specified, and, preliminary results were determined.

The preliminary results were presented to the Executive Committee on two occasions, as work in progress.

**Impact:** Not applicable at this time.

### **Training of Next Generation Scientists**

**Instructions:** Please answer the following questions as it pertains to the FY14 award period. The term “support” below includes any level of benefit to the student, ranging from full stipend plus tuition to the situation where the student’s stipend was paid from other funds, but who learned how to rate scab in a misted nursery paid for by the USWBSI, and anything in between.

- 1. Did any graduate students in your research program supported by funding from your USWBSI grant earn their MS degree during the FY14 award period?**

No

**If yes, how many?**

- 2. Did any graduate students in your research program supported by funding from your USWBSI grant earn their Ph.D. degree during the FY14 award period?**

No

**If yes, how many?**

- 3. Have any post docs who worked for you during the FY14 award period and were supported by funding from your USWBSI grant taken faculty positions with universities?**

Not applicable.

**If yes, how many?**

- 4. Have any post docs who worked for you during the FY14 award period and were supported by funding from your USWBSI grant gone on to take positions with private ag-related companies or federal agencies?**

Not applicable

**If yes, how many?**

FY14 (Jan. 27, 2014 – Jan. 26, 2015)  
PI: Wilson, William  
USDA-ARS Agreement #: 59-0206-5-001

FY14 Final Performance Report

**Include below a list of all germplasm or cultivars released with full or partial support of the USWBSI during the FY14 award period. List the release notice or publication. Briefly describe the level of FHB resistance. *If not applicable because your grant did NOT include any VDHR-related projects, enter N/A below.***

Not applicable

**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 FY14 grant. Please reference each item using an accepted journal format. If you need more space, continue the list on the next page.**

Not applicable. The results are expected to be completed in summer/fall 2016 and results presented at the annual meeting in December 2017.