

**USDA-ARS/
U.S. Wheat and Barley Scab Initiative
FY08 Final Performance Report (approx. May 08 – April 09)
July 15, 2009**

Cover Page

| | |
|------------------------------------|--|
| PI: | David Van Sanford |
| Institution: | University of Kentucky |
| Address: | Department of Plant Science 327 Plant Science Bldg. Lexington, KY 40546-0312 |
| E-mail: | dvs@email.uky.edu |
| Phone: | 859-257-5020 ext. 80770 |
| Fax: | 859-257-7125 |
| Fiscal Year: | 2008 |
| USDA-ARS Agreement ID: | 59-0790-6-056 |
| USDA-ARS Agreement Title: | U.S. Wheat & Barley Scab Initiative Networking and Facilitation Office, and Website. |
| FY08 USDA-ARS Award Amount: | \$ 163,916 |

USWBSI Individual Project(s)

| USWBSI Research Category* | Project Title | ARS Adjusted Award Amount |
|----------------------------------|--|----------------------------------|
| EC-HQ | U.S. Wheat & Barley Scab Initiative's Networking and Facilitation Office, and Website. | \$163,916 |
| | Total Award Amount | \$ 163,916 |



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
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: *U.S. Wheat & Barley Scab Initiative's Networking and Facilitation Office, and Website.*

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

Scab affects the industries and people involved in virtually every stage of the production, processing, and distribution systems of five market classes of wheat and barley across the U.S. The Networking and Facilitation Office (NFO) has been in existence since 1999. The goal of the NFO is to minimize the barriers to the success of the U.S. Wheat & Barley Scab Initiative arising from the administrative burdens and communication challenges. In FY08, there were 84 researchers working in 28 institutions (including ARS, CIMMYT and ICARDA) across 26 states, Mexico and Syria. The NFO is addressing this problem by 1) helping scientists and all interested parties, who in the past may have problems communicating with each other, to learn from each other by facilitating communications and communication system development; 2) identifying and implementing an internet-based communication and collaboration mechanisms; and 3) acting as a center of accountability and a rapid clearing house of scab-related information. The NFO provides administrative support to the various committees, as well as being responsible for the organization of the Initiative's annual scientific conference. Finally, the NFO facilitates the annual resolution of a comprehensive national research plan and budget, and represents the Initiative's only 'fixed' asset.

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 (1): One of the NFO's most important accomplishments was the successful facilitation of the development of the USWBSI's FY09 Research Plan and Budget, which was approved by USDA-ARS in February. See attached table (1) which includes meetings, conference calls, etc. facilitated by the NFO that lead to the FY09 Research Plan and Budget.

Impact: One-hundred and thirty-eight research projects across five research areas (FHB Management, Food Safety, Toxicology and Utilization of Mycotoxin-contaminated Grain, Gene Discovery and Engineering Resistance, and Variety Development and Host Resistance (organized around three regional FHB nurseries)), two commodity-based coordinated projects (Barley and Hard Winter Wheat), and the USWBSI Headquarters (Office and Website), received funding in the amount of \$4,956,802 to continue the fight against FHB.

Table 1. Summary of Meetings, Conference Calls and Workshops facilitated by the Networking & Facilitation Office (NFO) during FY08.

| Committee | # of Meetings/ Conference Call (CC) | Description/Purpose of Meeting |
|---|--|---|
| Steering Committee (SC) | 2 Meetings | 4-18-08: Semi-Annual Meeting 12-4-08: Semi-Annual Meeting – Review FY09 Research Plan and Budget |
| Executive Committee (EC) | 4 Meetings 1 CC | Meetings: 4-17-08: Prep-meeting prior to the SC’s meeting on 4-18-09 12-1-08: EC met with review panels to discuss their recommendations; 12-2-08: EC finalizes recommendation on FY09 Research Plan and Budget. 12-4-09: follow-up of Annual Forum and USWBSI’s recommendation for FY09 Research Plan and Budget. 8-28-08 Conference Call: Discuss USWBSI Business – Annual Research Plan and Budget, setting of Working Caps, and program for Annual Forum. |
| Review Panels (RP) | RP – 8 CC | Review Panels (5 total) - Discuss FY09 Funding Recommendations |
| Research-based Planning Meetings and Conference Calls | 7 Workshops/ Planning Meetings and 1 CC | 5-8-08 – Durum Coordinated Project Planning Meeting, Fargo, ND 6-3-08 – Barley Coordinated Project Planning Meeting, Fort Collins, CO 7-27-08 – FHB Management/Pathogen Biology Genetics Joint Meetings , Minneapolis, MN (both groups met separately and then together for 3 total meetings) 8-7-08 – HWW Coordinated Project Conference Call 3-10-09 – VDHR – Soft Winter Wheat Coordinated Project Planning Meeting, Wooster, OH (Northern and Southern met together) 3-24-09 – Durum Coordinated Project Planning Meeting, Fargo, ND |

Accomplishment (2): In December of 2008, the NFO working with the Forum Organizing Committee facilitated the USWBSI’s annual scientific Forum, which was held in Indianapolis, IN. Over 190 crop scientists (including research associates, research technicians and graduate students), growers, and industry representatives from across the nation and around the world, as well as area leaders of the U.S. wheat and barley industry, attended the 2009 National FHB Forum. Research results and findings were presented to the forum participants in the form of invited talks (19), and poster (100) presentations accompanied by abstracts or papers published in the Forum proceedings. One afternoon was devoted to group discussions designed around the USWBSI’s five research areas and three commodity-based coordinated projects reviewing their section of the USWBSI’s Action Plan. There were also mini breakout sessions covering the following topics:

- FHB Management – Fungicide and Biocontrol Uniform Trials

- FHB Disease Forecasting Models; and
- Technicians and Graduate Students

Impact (2):

The annual Forum is the primary mechanism whereby USWBSI scientists and stakeholders come together to discuss both the progress being made, as well as problems that interfere, with the successful combat against this devastating disease.

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.

Forum Proceedings:

Canty, S., A. Clark, J. Mundell, E. Walton and D. Van Sanford (Eds.). 2008. Proceedings from the 2008 National Fusarium Head Blight Forum, Indianapolis, IN; December 2-4. University of Kentucky, Lexington, KY.

Proceedings are available in PDF format on the USWBSI's Website
(<http://www.scabusa.org/forum.html#forum08>)

Invited Talks:

Van Sanford, David. 2008. Breeding FHB-Resistant Soft Winter Wheat: Progress and Prospects. 3rd International Symposium on Fusarium Head Blight and 10th European Fusarium Seminar. Szeged, Hungary. September 1-5, 2008.

Peer Reviewed:

Brown-Guedira, Gina, Carl Griffey, Fred Kolb, Anne McKendry, J. Paul Murphy and David Van Sanford. 2008. Breeding FHB-Soft Winter Wheat: Progress and Prospects. In Zoltan Dertesz (Eds), Cereal Research Communications, 36.B. P. 31-35. Budapest, Hungary: Akademiai Kiado

Non-Peer Reviewed:

Van Sanford. 2009. *The 2009 Southern SWW Scab Epidemic: Has the USWBSI Made a Difference?* Posted June 15, 2009 on U.S. Wheat & Barley Scab Initiative's Website: http://scabusa.org/pdfs/s-sww09_epidemic_uswbsi-impact.pdf.

Newsletters:

Lilleboe, D., S. Canty, and D. Van Sanford (Eds.). Spring 2009. *Fusarium Focus*. U.S. Wheat & Barley Scab Initiative. Volume 9, Issue 1.

Lilleboe, D., S. Canty, and D. Van Sanford (Eds.). Fall 2008. *Fusarium Focus*. U.S. Wheat & Barley Scab Initiative. Volume 8, Issue 2.

All Newsletters are available in PDF format on the USWBSI's Website (<http://www.scabusa.org/news.html#newsletters>).

Press Releases:

[06-12-09 News Release](#): Midwest Scab a 'Good News, Bad News' Scenario.

[06-04-09 News Release](#): Serious Scab Problems in Southern Wheat States.

All Press Releases are available in PDF format on the USWBSI's Website (http://scabusa.org/news.html#press_rel).

If your FY08 USDA-ARS Grant contained a VDHR-related project, include below a list all germplasm or cultivars released with full or partial support of the USWBSI. List the release notice or publication. Briefly describe the level of FHB resistance. If this is not applicable (i.e. no VDHR-related project) to your FY08 grant, please insert 'Not Applicable' below.

Not applicable.

This project is directly associated with the following two FY08 Projects:

| <u>Project Title – Project ID</u> | <u>Principal Investigator</u> | <u>ARS ID/Institution</u> |
|--|--------------------------------------|---|
| Maintain and Improve the U.S. Wheat & Barley Scab Initiative's Website - FY08-VA-008 | Anderson, Olin | NA/USDA-ARS |
| Hosting the Manager of the USWBSI's Networking and Facilitation Office - FY08-VA-008 | Kells, James | 59-0790-4-128/Michigan State University |