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

Cover Page

<table>
<thead>
<tr>
<th>PI:</th>
<th>Olin Anderson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution:</td>
<td>USDA-ARS</td>
</tr>
</tbody>
</table>
| Address:             | Genomics and Gene Discovery (GGD)  
                      | 800 Buchanan St.  
                      | Albany, CA  94710 |
| E-mail:              | olin.anderson@ars.usda.gov |
| Phone:               | 510-559-5773  |
| Fax:                 | 510-559-5777  |
| Fiscal Year:         | 2009          |
| USDA-ARS Agreement ID: | NA           |
| USDA-ARS Agreement Title: | Maintain and Improve the U.S. Wheat & Barley Scab Initiative's Website. |
| FY09- USDA-ARS Award Amount: | $ 38,500 |

USWBSI Individual Project(s)

<table>
<thead>
<tr>
<th>USWBSI Research Category*</th>
<th>Project Title</th>
<th>ARS Adjusted Award Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC-HQ</td>
<td>USWBSI's Networking and Facilitation Office, and Website.</td>
<td>$ 38,500</td>
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<td></td>
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<tr>
<td>Total Award Amount</td>
<td></td>
<td>$ 38,500</td>
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</tbody>
</table>

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

Information sharing and access are key to the success of the Scab community. The U.S. Wheat & Barley Scab Initiative provides a publicly accessible server that hosts a comprehensive suite of services and applications to facilitate data access and dissemination. These applications and services are provided by server programs that are created by the project's webmaster and programmer. Several open source and commercial applications are also used and heavily customized to meet the goals of the U.S. Wheat & Barley Scab Initiative.

The driving factors during the development of applications and services is ease of use for all users, increasing data access, and providing faster distribution of the latest scab related information. Services available to the public that allow for this include features such as mass mailing lists, image libraries, discussion boards, blogs, and access to the USWBSI database, just to name a few. The centralized nature of these services also provides for easier public access and rapid feature development.

This project is directly associated with the following two FY09 Projects:

<table>
<thead>
<tr>
<th>Project Title – Project ID</th>
<th>Principal Investigator</th>
<th>ARS ID/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hosting the Manager of the USWBSI's Networking and Facilitation Office - FY09-VA-017</td>
<td>Kells, James</td>
<td>59-0206-9-057/Michigan State University</td>
</tr>
<tr>
<td>U.S. Wheat &amp; Barley Scab Initiative’s Networking and Facilitation Office, and Website.- FY09-VA-017</td>
<td>Van Sanford, David</td>
<td>59-0790-6-056/University of Kentucky</td>
</tr>
</tbody>
</table>

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):** Developed an FHB Alert system that is link to the FHB Forecasting Tool (http://www.wheatscab.psu.edu/riskTool_2010.html). Commentary posted to the forecasting tool by state specialist is sent out to regional/national based list serves, posted on the USWBSI’s blog site (http://scabusa.org/modules/wordpress/), and sent as text messages (SMS) to cell phones. Producers, crop consultants, grain processors and others can sign up for the alerts by going to the following web site address: http://scabusa.org/fhb_alert.php.

**Impact (1):** The purpose of the alert system is to give growers and affiliated industry personnel better advanced notice of potential outbreaks and the risk of scab in their area, thus allowing for timely treatment of fields with fungicides.
Accomplishment (2): Upgraded the Xoops content management software that controls all features of the USWBSI web site. The base software was installed from the latest release onto a development system to minimize downtime on the live server. Newer versions of the various modules that are used to provide services and features were installed for compatibility along with new modules for better system security and anti-spam protection. Backups of the old data were then reincorporated into the new setup. Once the system was successfully tested on the development system the whole package was moved to the production server for live use.

Impact (2): The new software version provides better security for the server computer as well as the information that it contains. There is also a new feature that prevents forms but being abused by malicious attackers. Additionally the new software is more stable and has fewer bugs. It is also compatible with more modules that may be incorporated in the future.

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.

Non-Peer Reviewed:


Forum Proceedings:


Proceedings are available in PDF format on the USWBSI’s Website at: [http://www.scabusa.org/forum.html#forum09](http://www.scabusa.org/forum.html#forum09)

USWBSI Newsletters:


(Form FPR09)
Press Releases:

9-24-09 News Release: One-Stop Scab Management Website Now Operational
06-12-09 News Release: Midwest Scab a ‘Good News, Bad News' Scenario.

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