

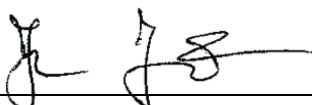
**USDA-ARS/
U.S. Wheat and Barley Scab Initiative
FY18 Performance Report
Due date: July 12, 2019**

Cover Page

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Fiscal Year:	2018
USDA-ARS Agreement ID:	N/A
USDA-ARS Agreement Title:	Curation of Data for USWBSI's Breeder Database.
FY18 USDA-ARS Award Amount:	\$ 9,310

USWBSI Individual Project(s)

USWBSI Research Category*	Project Title	ARS Award Amount
EC-HQ	U.S. Wheat & Barley Scab Initiative's Networking & Facilitation Office and Website.	\$ 9,310
	FY18 Total ARS Award Amount	\$ 9,310


Principal Investigator

22 July, 2019
Date

* MGMT – FHB Management
 FST – Food Safety & Toxicology
 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
 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: *U.S. Wheat & Barley Scab Initiative's Networking & Facilitation Office and Website.*

1. What are the major goals and objectives of the project?

The sole purpose of this project is to facilitate uploading and troubleshooting of wheat and barley data from USWBSI public breeding programs to the Breeder's Database (BrDbase).

2. What was accomplished under these goals? *Address items 1-4) below for each goal or objective.*

1) major activities

The data contained in the Wheat Breeder's Database (formerly <http://triticeaetoolbox.org/bd/>) was transferred over to T3/Wheat (<https://triticeaetoolbox.org/wheat/>) and the standalone Wheat Breeder's Database was retired. The same process occurred for the Barley Breeder's Database (<https://triticeaetoolbox.org/bdb/>) to T3/Barley (<https://triticeaetoolbox.org/barley/>).

2) specific objectives

a. curating data

We strive to stay in touch with breeders involved in scab nurseries to obtain their data and make it available and useful to all.

b. uploading data

The wheat database now contains a total of 86,841 FHB observations documented in 488 trials, and the barley database contains a total of 72,254 FHB observations across 251 trials.

c. developing tutorials

Two new tutorials have been developed recently. The first on using the wheat genome and exome-sequenced parents to design primers. The second on connecting to a knowledge base, KNetMiner, from results on T3.

d. transferring barley data to T3/Barley

Accomplished (see above).

3) significant results

The wheat phenotype data produced from the project is now contained within a larger database that holds both phenotype data and genotype data.

4) key outcomes or other achievements

Breeders are able to analyze their data in the context of the broader range of phenotypic data that is available in T3/Wheat, and can now benefit from the genotypic data available in T3/Wheat.

3. What opportunities for training and professional development has the project provided?

The T3 curator last provided remote training for breeders during the 2017 National Fusarium Head Blight Forum. We will renew these efforts in the near future.

4. How have the results been disseminated to communities of interest?

The data in T3 is publicly available online and around 1,000 unique sessions are logged on T3 each month. A breakout session was held at the 2016 National Fusarium Head Blight Forum to instruct participants on how to access data in T3 and how to contribute data to the database.

Training of Next Generation Scientists

Instructions: Please answer the following questions as it pertains to the FY18 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 FY18 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 FY18 award period? No**

If yes, how many?

- 3. Have any post docs who worked for you during the FY18 award period and were supported by funding from your USWBSI grant taken faculty positions with universities? No**

If yes, how many?

- 4. Have any post docs who worked for you during the FY18 award period and were supported by funding from your USWBSI grant gone on to take positions with private ag-related companies or federal agencies? No**

If yes, how many?

Release of Germplasm/Cultivars

Instructions: In the table below, list all germplasm and/or cultivars released with full or partial support through the USWBSI during the FY18 award period. All columns must be completed for each listed germplasm/cultivar. Use the key below the table for Grain Class abbreviations.

NOTE: Leave blank if you have nothing to report or if your grant did NOT include any VDHR-related projects.

Name of Germplasm/Cultivar	Grain Class	FHB Resistance (S, MS, MR, R, where R represents your most resistant check)	FHB Rating (0-9)	Year Released

Add rows if needed.

NOTE: List the associated release notice or publication under the appropriate sub-section in the 'Publications' section of the FPR.

Abbreviations for Grain Classes

- Barley - BAR
- Durum - DUR
- Hard Red Winter - HRW
- Hard White Winter - HWW
- Hard Red Spring - HRS
- Soft Red Winter - SRW
- Soft White Winter - SWW

Publications, Conference Papers, and Presentations

Instructions: Refer to the FY18-FPR_Instructions for detailed instructions for listing publications/presentations about your work that resulted from all of the projects included in the FY18 grant. Only include citations for publications submitted or presentations given during your award period. If you did not have any publications or presentations, state ‘Nothing to Report’ directly above the Journal publications section.

NOTE: Directly below each reference/citation, you must indicate the Status (i.e. published, submitted, etc.) and whether acknowledgement of Federal support was indicated in publication/presentation. See example below for a poster presented at the FHB Forum:

Conley, E.J., and J.A. Anderson. 2018. Accuracy of Genome-Wide Prediction for Fusarium Head Blight Associated Traits in a Spring Wheat Breeding Program. In: Proceedings of the XXIV International Plant & Animal Genome Conference, San Diego, CA.

Status: Abstract Published and Poster Presented

Acknowledgement of Federal Support: YES (poster), NO (abstract)

Nothing to report.

Journal publications.

Books or other non-periodical, one-time publications.

Other publications, conference papers and presentations.