

**USDA-ARS/
U.S. Wheat and Barley Scab Initiative
FY15 Final Performance Report
Due date: July 15, 2016**

Cover Page

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Phone:	208-397-4162 ext.241
Fiscal Year:	2015
USDA-ARS Agreement ID:	N/A
USDA-ARS Agreement Title:	Evaluation of Barley Breeding Lines for FHB Resistance in Controlled Field Nursery in Idaho.
FY15 USDA-ARS Award Amount:	\$ 15,000

USWBSI Individual Project(s)

USWBSI Research Category*	Project Title	ARS Award Amount
BAR-CP	Field Nursery Establishment for Fusarium Head Blight Resistance Evaluation of Barley Breeding Lines in Idaho.	\$ 15,000
	FY15 Total ARS Award Amount	\$ 15,000

7-11-2016

Principal Investigator

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: *Field Nursery Establishment for Fusarium Head Blight Resistance Evaluation of Barley Breeding Lines in Idaho.*

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

The major goals are:

- 1) To help establishment of the FHB screening nursery at Aberdeen location, Idaho.
- 2) To evaluate the Aberdeen barley breeding lines for the resistance.

2. What was accomplished under these goals?

- 1) major activities: Participated the Aberdeen FHB screening nursery establishment by actively participate the field design, planting, field management, inoculation, scoring, and result report.
- 2) specific objectives: To evaluate the FHB resistance for the barley breeding lines in Aberdeen, Idaho.
- 3) significant results: In 2015, the Aberdeen nursery worked. Barley lines evaluated at Aberdeen nursery were scored for the infection and DON measurement.
- 4) key outcomes or other achievements: Two of top malting barley elite lines showed resistance and low DON in the limited testing.

Average Scab Infection (%) and DON (PPM) Langdon and Fargo, ND, 2014 and 2015

Line	Scab (%)	DON(PPM)	Barley Type
2Ab09-X06M002-17	2.7	10.3	2-row malt
2Ab07-X031098-31	3.9	11.5	2-row malt
Harrington	5.4	16.0	2-row malt check
2Ab11-X08F246-9	2.8	7.5	2-row malt
Colon	13.8	20.7	2-row malt resistant check

Average Scab Infection (%) and DON (PPM) Aberdeen, 2015

Line	Scab (%)	Barley Type
2Ab09-X06M002-17	1.8	2-row malt
2Ab07-X031098-31	3.0	2-row malt
Harrington	4.0	2-row malt check
2Ab11-X08F246-9	1.8	2-row malt
Colon	8.0	2-row malt resistant check

3. What opportunities for training and professional development has the project provided? No

4. How have the results been disseminated to communities of interest? Presented at the Scab annual meeting.

Nothing to Report

Training of Next Generation Scientists

Instructions: Please answer the following questions as it pertains to the FY15 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 FY15 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 FY15 award period? No**

If yes, how many?

- 3. Have any post docs who worked for you during the FY15 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 FY15 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?

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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 FY15 award period. All columns must be completed for each listed germplasm/cultivar. Use the key below the table for Grain Class abbreviations. *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

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Publications, Conference Papers, and Presentations

Refer to the FY15-FPR_Instructions for listing publications/presentations about your work that resulted from all of the projects included in the FY15 grant. If you did not have any publications or presentations, state 'Nothing to Report' directly above the Journal publications section.

Nothing to Report

Journal publications.

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

Other publications, conference papers and presentations.