

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

Cover Page

Principle Investigator (PI):	Nathan Kleczewski
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Fiscal Year:	2018
USDA-ARS Agreement ID:	59-0206-8-211
USDA-ARS Agreement Title:	Integrated Management of Wheat in Illinois.
FY18 USDA-ARS Award Amount:	\$ 21,811
Recipient Organization:	The Board of Trustees of the University of Illinois Grants & Contracts Office 1901 S. First Street, Suite A Champaign, IL 61820
DUNS Number:	41544081
EIN:	37-6000511
Recipient Identifying Number or Account Number:	478609-802050-191000
Project/Grant Reporting Period:	7/1/18 - 6/30/19
Reporting Period End Date:	06/30/19

USWBSI Individual Project(s)

USWBSI Research Category*	Project Title	ARS Award Amount
MGMT	Integrated Management of Wheat in Illinois.	\$ 21,811
	FY18 Total ARS Award Amount	\$ 21,811



Principal Investigator 6/27/2019
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

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Project 1: *Integrated Management of Wheat in Illinois.*

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

The major goals of this project were to 1) assess efficacy of a new fungicide, Miravis Ace for FHB and DON suppression relative to existing fungicide standards, Prosaro and Caramba, 2) assess the timing window for Miravis Ace against commercial standards, 3) assess 1 and 2 under wheat cultivars of differing susceptibility to FHB

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

1) major activities- two inoculated sites were set up in Illinois: one located in Marion, IL and another in Champaign IL. Both sites followed the IMCP protocol. Disease was moderate at both sites. Marion was harvested the week of 6/17/19. Champaign plots will be harvested the week of July 1.

2) specific objectives. All plots were rated for FHB severity and samples will be assessed for FDK and DON as soon as all locations are harvested.

3) significant results: harvest data, DON, and FDK still need to be determined and data analyzed

4) key outcomes or other achievements: Both sites were useful in providing updates on the FHB situation in IL, and for making updates to the FHB prediction center website. Multiple articles on FHB management were posted on the Illinois field crop disease blog.

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

This project has allowed two undergraduate summer workers to experience field research and FHB research and data collection first hand. In addition, two undergraduate lab workers learned aseptic technique and production of inoculum for FHB research.

4. How have the results been disseminated to communities of interest? The Bulletin website, The Illinois Field Crop Disease website, the FHB Prediction Center, and planned talks to the Illinois Wheat Growers Association in August, 2019 and CCA trainings in October/November 2019.

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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?

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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 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

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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 (7/1/18 - 6/30/19). 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 presentation with an abstract:

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)

Journal publications.

Nothing to report

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

Other publications, conference papers and presentations.