

**USDA-ARS**  
**U.S. Wheat and Barley Scab Initiative**  
**FY19 Performance Report**  
**Due date: July 24, 2020**

**Cover Page**

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<b>Fiscal Year:</b>	2019
<b>USDA-ARS Agreement ID:</b>	59-0206-8-211
<b>USDA-ARS Agreement Title:</b>	Integrated Management of Wheat in Illinois
<b>FY19 USDA-ARS Award Amount:</b>	\$ 21,811
<b>Recipient Organization:</b>	The Board of Trustees of the University of Illinois Grants & Contracts Office 1901 S. First Street, Suite A Champaign, IL 61820
<b>DUNS Number:</b>	41544081
<b>EIN:</b>	37-6000511
<b>Recipient Identifying Number or Account Number:</b>	478609-802050-191000
<b>Project/Grant Reporting Period:</b>	7/1/19 - 6/30/20
<b>Reporting Period End Date:</b>	6/30/2020

**USWBSI Individual Project(s)**

<b>USWBSI Research Category*</b>	<b>Project Title</b>	<b>ARS Award Amount</b>
MGMT	Integrated Management of Wheat in Illinois	\$ 21,811
<b>FY19 Total ARS Award Amount</b>		<b>\$ 21,811</b>



Principal Investigator

July 28, 2020

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 research project?**

Assessing the utility of timings and Miravis Ace® on the integrated management of FHB and DON under IL conditions

**2. What was accomplished under these goals or objectives? (For each major goal/objective, address items a-b) below.)**

a) What were the major activities?

Two sites were established in IL. One in Marion, IL and one in Savoy IL. Savoy is a mist irrigated site and Marion is located in an area where FHB levels are often elevated as a result of higher than normal humidity. The IM standard protocol was followed, and data collected on FHB, all plots harvested, and FDK assessed from subsamples. Samples are being processed for shipment to MN for DON analyses.

b) What were the significant results?

Data have yet to be analyzed, and will be sent to PI Paul as is standard practice for this project.

c) List key outcomes or other achievements.

Both sites resulted in noticeable FHB and visual treatment differences. Overall this was one of the better years for FHB trials in IL

**3. Was this research impacted by the COVID-19 pandemic (i.e. university shutdowns, reduced or lack of support personnel, etc.)? If yes, please explain how this research was impacted or is continuing to be impacted.**

Yes. DON samples have been reduced and consequently, we will only be able to send off one site for DON assessment. We are focusing on the Urbana site, as it was misted and we expect more DON. We will store the remaining samples if they can be processed at a later date.

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

Undergraduate students worked on data collection, rating, and processing of samples.

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

Results are typically presented in our annual applied research guides as well as at the Illinois Wheat Growers Association Meeting, typically held in September. However, no invitations have been received likely as a result of the pandemic.

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## **Training of Next Generation Scientists**

**Instructions:** Please answer the following questions as it pertains to the FY19 award period (7/1/19 - 6/30/20). 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 FY19 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 FY19 award period?**

No

**If yes, how many?**

- 3. Have any post docs who worked for you during the FY19 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 FY19 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 FY19 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 FY19-FPR\_Instructions for detailed more instructions for listing publications/presentations about your work that resulted from all of the projects included in the FY19 grant award. Only citations for publications published (submitted or accepted) or presentations presented during the **award period (7/1/19 - 6/30/20)** should be included. If you did not publish/submit or present anything, state ‘Nothing to Report’ directly above the Journal publications section.

**NOTE:** Directly below each citation, you **must** indicate the Status (i.e. published, submitted, etc.) and whether acknowledgement of Federal support was indicated in the publication/presentation.

### **Journal publications.**

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

### **Other publications, conference papers and presentations.**

Paul, P.A., S. J. Ng, G. Bergstrom, K. Bissonnette, K. Bowen, C. Bradley, E. Byamukama, M. Chilvers, A. Collins, C. Cowger, H. Darby, E. DeWolf, R. Dill-Macky, P. Esker, A. Friskop, N. Kleczewski, A. Koehler, L. Madden, J. Marshall, H. Mehl, W. Moraes, M. Nagelkirk, N. Rawat, D. Smith, D. Telenko, S. Wegulo, and H. Young-Kelly. 2019. “Fusarium head blight management coordinated project: integrated management trials 2018-2019.” In: S. Canty, A. Hoffstetter, H. Campbell and R. Dill-Macky (Eds.), *Proceedings of the 2019 National Fusarium Head Blight Forum* (p. 19), Milwaukee, WI; December 8-10. University of Kentucky, Lexington, KY.

Status: Poster presented and paper published.

Acknowledgement of Federal Support: YES on both.

Paul, P.A., S. J. Ng, G. Bergstrom, K. Bissonnette, K. Bowen, C. Bradley, E. Byamukama, M. Chilvers, A. Collins, C. Cowger, H. Darby, E. DeWolf, R. Dill-Macky, P. Esker, A. Friskop, N. Kleczewski, A. Koehler, L. Madden, J. Marshall, H. Mehl, W. Moraes, M. Nagelkirk, N. Rawat, D. Smith, D. Telenko, S. Wegulo, and H. Young-Kelly. 2019. “Fusarium head blight management coordinated project: uniform fungicide trials 2018-2019.” In: S. Canty, A. Hoffstetter, H. Campbell and R. Dill-Macky (Eds.), *Proceedings of the 2019 National Fusarium Head Blight Forum* (p. 20), Milwaukee, WI; December 8-10. University of Kentucky, Lexington, KY.

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