

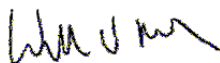
**USDA-ARS/
U.S. Wheat and Barley Scab Initiative
FY11 Final Performance Report
One-Year No Cost Extension (NCE) through FY12
July 16, 2013**

Cover Page

PI:	William Kirk
Institution:	Michigan State University
Address:	Department of Botany & Plant Pathology 35 Plant Biology Building East Lansing, MI 48824
E-mail:	kirkw@msu.edu
Phone:	517-353-4481
Fax:	517-353-4940
Fiscal Year:	FY11 (NCE for FY12)
USDA-ARS Agreement ID:	59-0206-9-089
USDA-ARS Agreement Title:	Uniform Fungicide and Biocontrol Agent Tests for Control of Fusarium Head Blight and Deoxynivalenol.
FY11 USDA-ARS Award Amount:	\$ 6,878

USWBSI Individual Project(s)

USWBSI Research Category*	Project Title	ARS Award Amount
MGMT	Uniform Fungicide and Biocontrol Agent Tests for Control of Fusarium Head Blight.	\$ 6,878
	Total ARS Award Amount	\$ 6,878



Principal Investigator

6/17/13

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 Soft Winter Wheat Region
 SWW – Southern Soft Red Winter Wheat Region

Project 1: *Uniform Fungicide and Biocontrol Agent Tests for Control of Fusarium Head Blight.*

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

The research evaluated products (fungicides and biofungicides) for potential registration by providing supporting documentation for Section 18 registration (if necessary) or for the registration of new products; and provided an additional testing site for the uniform trials in Michigan. Test results provided information to producers locally and nationwide on what products are providing the greatest disease control and improvement in yield and quality. The test results can supply necessary information for this purpose.

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:

The trials in MI established that the fungicides tested all reduced head scab but did not eliminate the disease. The biofungicides were largely ineffective even under light infection pressure.

Impact:

The data contributed to a fungicide efficacy document that the industry now uses routinely in extension advisory efforts. Growers can choose an appropriate fungicide(s) and appropriate timing of application to minimize the impact of Fusarium head blight and DON accumulation and maximize crop health and profit.

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.

1. Bradley, C. A., Adee, E. A., Ebelhar, S. A., Dill-Macky, R., Bergstrom, G.C. Wiersma, J. J., Grybauskas, A. P., Kirk, W. W., McMullen, M. P., Halley, S., Milus, E. A., Osborne, L. E., Ruden, K. R., Wise, K.A. Conley, S.P. and Esker P.D. 2011. Effects of Triazole, Strobilurin, and Triazole + Strobilurin Fungicides on Fusarium Head Blight and Associated Mycotoxins. Proceedings of the National Fusarium Head Blight Forum, St. Louis, MS, p. 76.
2. Bradley, C. A., Adee, E. A., Ebelhar, S. A., Dill-Macky, R., Wiersma, J. J., Grybauskas, A. P., Kirk, W. W., McMullen, M. P., Halley, S., Milus, E. A., Osborne, L. E., Ruden, K. R., and Young, B. G. 2010. Multi-state uniform fungicide evaluations for control of Fusarium head blight and associated mycotoxins. Proceedings of the National Fusarium Head Blight Forum, Milwaukee, WI, p. 74.
3. Yuen, G.Y., C.C. Jochum, S.A. Halley, K. Misek, L.E. Sweets, W. Kirk and D.A. Schisler. 2009. Results of 2009 Uniform Biological Control Trials. In: S. Canty, A. Clark, J. Mundell, E. Walton, D. Ellis and D. Van Sanford (Eds.), Proceedings of the National Fusarium Head Blight Forum; 2009 Dec 7-9; Orlando, FL. Lexington, KY: University of Kentucky. pp. 101-105.
4. Kirk, W.W., R.L. Schafer. 2012. Evaluation of foliar fungicides treatments for control of head scab and winter wheat foliar diseases, Clarksville, MI, 2010/11. 6:FC030
5. Kirk, W.W., R.L. Schafer, P. Tumbalam. 2010. Evaluation of foliar fungicides treatments for control of winter wheat foliar diseases, Clarksville MI, 2008/09. 4:CF022