

**U.S. Wheat and Barley Scab Initiative
Annual Progress Report
September 18, 2000**

Cover Page

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Year:	FY2000
Grant Number:	59-0790-9-032
Grant Title:	Fusarium Head Blight Research
Amount Granted:	\$8,998.00

Project

Program Area	Objective	Requested Amount
Chemical & Biological Control	Identify safe, effective fungicides for FHB through evaluation across of wheat and/or barley varieties grown in relevant environments.	\$8,998.00
	Requested Total	\$8,998.00

Principal Investigator

Date

Project 1: Identify safe, effective fungicides for FHB through evaluation across of wheat and/or barley varieties grown in relevant environments.

1. What major problem or issue is being resolved and how are you resolving it?

Wheat producers in South Dakota and adjacent states have seen dramatic outbreaks of Fusarium head blight (FHB) in recent years. The 1999 epidemic in South Dakota produced FHB at the highest levels since 1996.

The problem is being addressed through examining new methods of managing Fusarium head blight through fungicide use. Fifteen treatments or treatment combinations were compared on two hard red spring wheat cultivars in three locations. The same fifteen treatments or treatment combinations were also applied to two hard red winter wheat cultivars.

2. Please provide a comparison of the actual accomplishments with the objectives established.

Results are incomplete. Indications are that there may be differences among the fungicide products tested. Of the two South Dakota environments in the test, Groton had much less Fusarium head blight develop than South Shore. However, the disease appeared later than normal. No FHB was apparent at two weeks after anthesis. Winter wheat at South Shore, SD developed Fusarium head blight, but there was no data collected.

3. What were the reasons established objectives were not met? If applicable.

Data analysis is not yet complete. Yield and test weights were just completed (9/14/00). Data collection is still underway for vomitoxin (DON) levels, Fusarium damaged kernels (FDK), and protein. Winter wheat at South Shore, SD developed Fusarium head blight, but the trial was abandoned because there was extensive loss of canopy due to root rot and competition from cheatgrass species.

4. What were the most significant accomplishments this past year?

Demonstrations of the effectiveness of fungicide treatments in suppressing scab and providing a side benefit of suppressing leaf disease was very successful for growers that toured the plots.

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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.

Draper, M.A. 1999. Managing wheat scab with fungicides. Ag Horizons Conference (The Annual Meeting of the SD Crop Improvement Association, SD Oilseed Council, SD Wheat Commission, and SD Seed Trade Association). December 13-15, 1999. Pierre, SD.

Draper, M.A. 1999. Managing disease risk in a no-till system. Annual Meeting of the South Dakota No-Till Association. December, 16, 1999. Mitchell, SD.

Draper, M.A. 2000. Root rots, leaf spots, leaf blights and disease prevention: From the ground up! Commercial pesticide applicator training session. January 18, 2000. Yankton, SD.

Draper, M.A. 2000. Root rots, leaf spots, leaf blights and disease prevention: From the ground up! Commercial pesticide applicator training session. January 19, 2000. Mitchell, SD.

Draper, M.A. 2000. Root rots, leaf spots, leaf blights and disease prevention: From the ground up! Commercial pesticide applicator training session. January 20, 2000. Rapid City, SD.

Draper, M.A. 2000. Root rots, leaf spots, leaf blights and disease prevention: From the ground up! Commercial pesticide applicator training session. January 25, 2000. Watertown, SD.

Draper, M.A. 2000. Root rots, leaf spots, leaf blights and disease prevention: From the ground up! Commercial pesticide applicator training session. January 26, 2000. Aberdeen, SD.

Draper, M.A. 2000. Root rots, leaf spots, leaf blights and disease prevention: From the ground up! Commercial pesticide applicator training session. January 27, 2000. Pierre, SD.

Draper, M.A. 2000. Root rots, leaf spots, leaf blights and disease prevention: From the ground up! Commercial pesticide applicator training session. January 28, 2000. Sioux Falls, SD.

Draper, M.A. 2000. Root rots, leaf spots, leaf blights and disease prevention: From the ground up! Commercial pesticide applicator training session. January 31, 2000. Brookings, SD.

Draper, M.A. 2000. Managing plant diseases in winter cereals. County crop clinic. February 1, 2000. Presho, SD.

Draper, M.A. 2000. Managing plant diseases in winter cereals. County crop clinic. February 7, 2000. Burke, SD.

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Draper, M.A. 2000. Managing plant diseases in cereals. County crop clinic. February 15, 2000. Onida, SD.

Draper, M.A. 2000. Managing plant diseases in cereals. County crop clinic. March 9, 2000. Bristol, SD.

Draper, M.A. 2000. Managing plant diseases in cereals. County crop clinic.

Draper, M.A. 2000. Managing Fusarium head blight (scab) with fungicides. Poster presented at APS NC Division Meeting, June 16-18, 2000. Columbus, OH.

Draper, M.A. 2000. Managing scab and leaf disease in wheat. Brookings crops tour. June 21, 2000. Brookings, SD.

Draper, M.A. 2000. Managing scab and leaf disease in wheat. NE Farm crops tour. July 7, 2000. South Shore, SD.

Draper, M.A. 2000. Managing scab and leaf disease in wheat. Brown County crops tour. July 10, 2000. Groton, SD.