

**U.S. Wheat and Barley Scab Initiative
Annual Progress Report
September 15, 1999**

Cover Page

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Year:	FY1999
Grant Number:	59-0790-9-039
Grant Title:	Fusarium Head Blight Research
Amount Granted:	\$4,878.00

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.	\$4,000
Chemical & Biological Control	Develop and implement systems for disseminating research information in a timely fashion to producers.	\$1,000
	Requested Total	\$5,000¹

Principle Investigator

Date

¹ Note: The Requested Total and the Amount Granted are not equal.

Project 1: Identify safe, effective fungicides for FHB through evaluation across a range 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?

The immediate problem that producers are faced with in the Mid-Atlantic production area is that there are no effective tools to manage a Fusarium Head Blight outbreak. Furthermore, production practices that increase the risk of FHB outbreaks are becoming more popular. There are only a few cultivars of soft red winter wheat purported to have some resistance. However these are only slightly better than susceptible cultivars and are inadequate in a severe epidemic. Fungicides have been shown on occasion to provide some efficacy but materials and parameters for their application need to be investigated to determine if adequate levels of control can be achieved consistently. Field trials examining registered and experimental fungicides, and application timing are being conducted to determine if fungicidal controls can be implemented.

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

Field trials were conducted using a soft red winter wheat cultivar that was inoculated with the causal agent of Fusarium Head Blight. Irrigation just prior to and several days after inoculation was used to provide a favorable environment for infection. However a severe drought greatly hampered the investigation and only low levels of infection were obtained. Disease levels in fungicide treated plots were similar to inoculated check plots. This may have been due to lack of resolution because of low levels of infection or lack of efficacy for these products and time of application.

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

Severe drought conditions greatly reduced disease development even though supplemental irrigation was applied.

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

Fungicide treatments even at low levels of disease have only a limited capacity to manage Fusarium Head Blight epidemics.

Project 2: Develop and implement systems for disseminating research information in a timely fashion to producers.

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

Dissemination of research-based disease management information to producers in a timely fashion is critical to implementation of best management practices. Results from field trials are disseminated and discussed at field days, county and regional Extension meetings, local agri-business field personnel training schools and Extension publications.

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

Dissemination of results as indicated above has been accomplished.

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

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

Dissemination of results at field days, county and regional Extension meetings and at local agri-business field personnel training schools.

Year: 1999

Progress Report

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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.

Timing of fungicide applications for Fusarium head blight management of winter wheat.

A.P. Grybauskas, Department of Natural Resource Sciences and Landscape Architecture, University of Maryland, College Park, MD. Phytopathology 89:S30. Publication no. P- 1999-0212-AMA.