

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

Cover Page

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Year:	FY2000
Grant Number:	
Grant Title:	Fusarium Head Blight Research
Amount Granted:	\$10,000.00

Project

Program Area	Objective	Requested Amount
Germplasm	Coordinate screening spring wheat parents for scab resistance in a uniform nursery and facilitate germplasm exchange	\$10,000.00
	Requested Total	\$10,000.00

Principle Investigator

Date

Year 2000

PI: Robert Busch

Grant: Spring Wheat Uniform Scab Nursery

Project 1: Coordinate screening spring wheat parents for scab resistance in a uniform nursery and facilitate germplasm exchange

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

The problem of testing scab resistant germplasm over environments is addressed in the Northern Midwest area including North Dakota, South Dakota, Minnesota, Manitoba (Ag. Canada), Saskatchewan (Ag. Canada), AgriPro, and Western Plant Breeders. Hard spring wheat and durum lines are grown in tow locations in Minnesota, one location in South Dakota, two locations in North Dakota, and one location in Manitoba. This nursery is primarily for developed scab resistant germplasm to exchange germplasm for use as parents and to obtain a number of locations in one year since scab resistance is subject to large genotype x environment interactions. However, in 2000, resistant germplasm from the introduction nursery of Dr. Yue Jin in South Dakota was tested as well to provide additional information on these carefully selected possible new sources of resistance. This is a continuation of regional cooperation among researcher, both public and private in the upper Midwest that was initiated in 1995 and has proven to be very valuable to cooperating researchers. The funding helps cover some of the expenses involved in coordinating the nursery, combining data, processing the report and sending the results to collaborators and other interested persons.

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

The actual accomplishments are the same as the objectives. Data will be combined and provided to the collaborators. Information will also be made available electronically via the U.S. Wheat and Barley Scab Initiative Website.

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

Not applicable

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

Minnesota added a more northern location to this nursery, located at Crookston, MN. This location is in the Red River Valley of the North and represents a major area for scab and wheat production. Scab is a difficult disease to assess, and the *right amount* of disease is needed to allow maximum differential among entries. The readings are usually confounded by heading date so special precautions are needed for data collection. Data analyses must be evaluated by heading date to determine possible biases caused by differential heading. New germplasm from the Spring Wheat Germplasm Scab

Year 2000

PI: Robert Busch

Grant: Spring Wheat Uniform Scab Nursery

Introduction Nursery at South Dakota were included in the nursery for the first time. Possibly this germplasm may contribute to high levels of resistance in the future.

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.

This project is not designed to produce peer reviewed articles. It is to supply information about germplasm to spring wheat researchers.

BUSCH, R., LINKERT, G., and MATTHIESEN, L. 1999. 1999 Uniform regional Scab Nursery for Spring Wheat Parents. 10 pages. Sent to about 25 persons. Also put on the U.S. Scab Initiative Website