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

Cover Page

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Year:	**FY2000**
Grant Number:	**59-0790-9-046**
Grant Title:	**Fusarium Head Blight Research**
Amount Granted:	**$18,000.00**

Project

Program Area	Objective	Requested Amount
Variety Development & Uniform Nurseries	Accelerate development of resistant varieties.	$15,000.00
	Requested Total	$15,000.00[1]

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Principal Investigator Date

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

Project 1: Accelerate development of resistant varieties.

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

   The major issue is the development of resistant wheat scab varieties that are adapted to the southeastern U.S. Presently, most resistance sources to wheat scab are in material (Chinese and Mexican lines) which do not have the yield potential, resistant to other diseases (leaf rust, powdery mildew, and septoria nodorum) or insect resistance (Hessian fly) for use in the Southeastern U.S. Varieties that are released from the University of Georgia are also being grown in areas with a high incidence of scab. We are crossing adapted varieties and lines to the Southeast with both domestic and foreign sources of wheat scab resistance. We are developing varieties with scab resistance that can be widely adapted.

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

   Single and three-way crosses with Chinese material were made to develop several new breeding populations. We have expanded our field evaluation of F2 and F3 bulk populations. Additional, three-way populations are being developed in the greenhouse crossing.
   Four advanced breeding lines were entered in the 2000 Southern Fusarium Nusery.
   A procedure for evaluation of lines to scab is continuing to be refined. Breeding lines both spring and winter types were successfully grown in Georgia for evaluation.

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

   Not applicable

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

Breeding lines from both spring and winter types can be successfully evaluated in the lower Southeast for scab. One Georgia breeding line entered in the 2000 Southern Fusarium Nursery had some level of scab resistance. Several adapted breeding populations have been made with several sources of scab resistance. We were able to visit CIMMYT and to observe their germplasm and evaluation procedure for scab.

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.

No publication to report at this time.