

**U.S. Wheat and Barley Scab Initiative
 FY01 Final Performance Report (approx. May 01 – April 02)
 July 15, 2002**

Cover Page

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Grant Number:	59-0790-9-046
Grant Title:	Fusarium Head Blight Research
FY01 ARS Award Amount:	\$ 17,522

Project

Program Area	Project Title	Requested Amount
Variety/Uniform	Development of Scab Resistant Wheat Cultivars adapted to the Southeastern, US.	\$ 18,000
	Total Amount Requested	\$ 18,000

Principal Investigator

Date

Project 1: Development of Scab Resistant Wheat Cultivars adapted to the Southeastern, US.

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

The major problem is the development of soft red winter wheat cultivars with scab resistance and improved yield potential for commercial use that are adapted to the lower Southeastern United States. Most scab resistance sources are not adapted to the Southeast and are susceptible to other major pathogens (leaf rust and powdery mildew). Adapted cultivars and elite lines adapted to the Southeast are being crossed with both domestic and foreign sources of Type II scab resistance. Type II resistance is being transferred into elite lines.

Several scab sources from China, Argentina, CIMMYT, and soft red winter wheat cultivars have been used as parents. Segregating populations from these crosses of scab resistant germplasm with adapted cultivars and elite lines were evaluated in the field. Single and three-way crosses and backcross of scab resistant sources were made with adapted elite material to develop additional breeding populations. Five advanced breeding lines were entered in the 2002 Southern Fusarium Nursery.

2. What were the most significant accomplishments?

Fifty elite lines from the breeding program were evaluated for scab resistance in Georgia. Lines were identified with good Type II scab resistance. These lines also have good leaf rust and powdery mildew resistance. Double haploid lines derived from crosses are being developed.

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.

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