

**U.S. Wheat and Barley Scab Initiative  
 FY00 Final Performance Report (approx. May 00 – April 01)  
 July 30, 2001**

**Cover Page**

<b>PI:</b>	<b>Mark Sorrells</b>
<b>Institution:</b>	<b>Cornell University</b>
<b>Address:</b>	<b>Department of Plant Breeding 252 Emerson Hall Ithaca, NY 14853</b>
<b>Email:</b>	<b>mes12@cornell.edu</b>
<b>Phone:</b>	<b>607-255-8092</b>
<b>Fax:</b>	<b>607-255-6683</b>
<b>Year:</b>	<b>FY2000 (approx. May 00 – April 01)</b>
<b>Grant Number:</b>	<b>59-0790-9-066</b>
<b>Grant Title:</b>	<b>Fusarium Head Blight Research</b>
<b>2000 ARS Award Amount:</b>	<b>\$14,634</b>

**Project**

<b>Program Area</b>	<b>Project Title</b>	<b>Requested Amount</b>
Variety Development & Uniform Nurseries	FHB resistant wheat variety development.	\$15,000.00
	<b>Requested Total</b>	<b>\$15,000.00<sup>1</sup></b>

\_\_\_\_\_  
Principal Investigator

\_\_\_\_\_  
Date

<sup>1</sup> Note: The Requested Total and the Award Amount are not equal.

**Project 1: FHB resistant wheat variety development.**

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

We had an excellent FHB evaluation nursery this past year. Last year, in our 1999 FHB nursery the infection rate was too low to distinguish differences between resistant and susceptible genotypes because of the extremely dry weather. Consistency of the evaluation in different environments is clearly a problem that needs work. It seems that the amount of water that is applied needs to be adjusted on a daily basis so that it is not too wet or too dry. This coming year we will make some adjustments to the timing and rate of misting. Lodging was a problem this year because of eyespot. We are looking at control measures for this disease. More rapid screening and evaluation methods are greatly needed.

2. What were the most significant accomplishments?

All early generation bulks from the first year of crossing resistant lines and current cultivars were advanced in the greenhouse. Two new sources of FHB resistance were selected from the Cornell FHB nursery (TW96273 and NY87048W-7388) to be used in our crossing block. We had an excellent season for FHB evaluation that helped us identify several new candidates for the cooperative FHB nursery. Therefore, we are on schedule with both our breeding and evaluation objectives. Our field evaluations worked very well this year and show good agreement with results from other states giving us confidence in the results. Clearly there are a number of lines that are showing reasonably good resistance now that can be released or used in crossing to pyramid resistance genes. We have been fortunate to have several highly resistant lines in the cooperative nursery.

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.

None