U.S. Wheat and Barley Scab Initiative
FY02 Final Performance Report (approx. May 02 – April 03)
July 15, 2003

Cover Page

PI:	**Clay Sneller**
Institution:	**Ohio State University**
Address:	**Department of Horticulture and Crop Science** **OARDC** **1680 Madison Ave** **Wooster, OH 44691**
E-mail:	**sneller.5@osu.edu**
Phone:	**330-263-3843**
Fax:	**330-263-3841**
Year:	**FY2002 (approx. May 02 – April 03)**
Grant Number:	**59-0790-9-037**
Grant Title:	**Fusarium Head Blight Research**
FY02 ARS Award Amount:	**$ 74,146**

Project

Program Area	Project Title	USWBSI Recommended Amount
VDUN	FHB resistant germplasm adapted to Ohio and coordination of a Uniform nursery	$76,000
	Total Amount Recommended	**$76,000**

_____

Principal Investigator Date

Project 1: FHB resistant germplasm adapted to Ohio and coordination of a Uniform nursery

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

Infection by *Fusarium graminearum* reduces the yield and quality of a wheat crop. Growers need resistant varieties to minimize the damage from this disease. We are resolving the problem by developing soft red winter wheat varieties that are resistant to FHB.

2. What were the most significant accomplishments?

We coordinated the uniform testing of 42 wheat lines from 11 breeding programs. Several of these appeared to be very resistant to FHB and may be released by the developing institution.

We identified several Ohio State University breeding lines with resistance to FHB that is superior to that of Freedom or Ernie. This resistance derives from Chinese and OSU sources. Though not extensively tested in FY02, these lines had below average yield and resistance to other disease of these lines. In addition, we screened about 680 lines from the OSU variety development program for resistance to FHB. Disease pressure was low in the 2002 nurseries, though we were able to separate the checks and identify many lines with resistance. It remains to be seen how resistance these wil be under more severe pressure.

We made crosses with exotic sources of FHB resistance (CIMMYT, Yugoslavia, Brazil) to adapted, high yielding OSU lines and have advanced these populations

We created sets of near isogenic lines that will be used to test the value of FHB resistance genes from Ning 7840 and Freedom.

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.

Sneller, C., P.E. Lipps, and L. Herald. 2002. Northern Uniform Winter Wheat Scab Nursery (NUWWSN) Report on 2001-2002 Nursery. Horticulture and Crop Science Series 690. OARDC