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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Year:	**FY2001 (approx. May 01 – April 02)**
Grant Number:	**59-0790-9-063**
Grant Title:	**Fusarium Head Blight Research**
FY01 ARS Award Amount:	**$ 95,743**

Project

Program Area	Project Title	Requested Amount
Food Safety	Malting Barley Deoxynivalenol Diagnostic Services	$ 98,353
	Total Amount Requested	**$ 98,353**

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Principal Investigator Date

(Form – FPR01)

Project 1: Malting Barley Deoxynivalenol Diagnostic Services

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

DON analytical services are provided to eight collaborating researchers at four barley varietal development programs. These programs require the analysis of approximately 5000-7000 samples/year, and the major issue is to provide these (barley) DON analytical services in a cost effective, timely and accurate manner. Funds provided by the US Wheat and Barley scab initiative have allowed us to hire additional personnel, and to subsidize the cost of analysis.

2. What were the most significant accomplishments?

A chemist I laboratory assistant (USWBSI funded) was hired in October 2001, and has been trained in most aspects of the DON laboratory. This individual assists the chemist III (state funded) laboratory supervisor

A total of 7,686 samples from the 2001 crop were analyzed during FY2001. These included 7,089 from barley breeders/pathologists, 64 from other barley researchers/industry, 297 from the regional crop survey, 188 samples from malt quality research, and 48 inter-laboratory collaborative samples. Analysis of breeders' samples was >85% complete by March 1 2002 , which meets the objective of timely reporting.

The inter-laboratory DON barley and malt check sample service, established by the NDSU-Cereal Science DON Diagnostic laboratory in the fall of 2000, was expanded to include 15 members (from 8 in 2000). Monthly samples of barley and malt are mailed to each of the cooperating laboratories.

New statistical quality control procedures were implemented by the NDSU-Cereal Science DON Diagnostic laboratory in 2000, as a means of improving repeatability/reproducibility of results.

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.

Wolf-Hall, C.E. and P. Schwarz. Mycotoxins and fermentation beer production. *In Mycotoxins and Food Safety*, J. DeVries, M. Trucksess, and L. Jackson (Eds.), Kluwer/Plenum Publishing, NY., 2002.

Schwarz, P.B., Jones, B. L., and Steffenson, B.J. Enzymes associated with *Fusarium* infection of barley. *J. Am. Soc. Brew. Chem* 60(3):_____, 2002.