

USDA-ARS / USWBSI
FY03 Final Performance Report (approx. May 03 – April 04)
July 15, 2004

Cover Page

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Year:	FY2003 (approx. May 03 – April 04)
FY03 ARS Agreement ID:	59-0790-9-030
FY03 ARS Agreement Title:	Diagnostic services for Vomitoxin (DON) in Wheat.
FY03 ARS Award Amount:	\$ 82,566

USWBSI Individual Project(s)

USWBSI Research Area *	Project Title	ARS Adjusted Award Amount
FSTU	Diagnostic Services for Vomitoxin (DON) in Wheat.	\$ 82,566
	Total Amount Recommended	\$ 82,566

M.S.Mostrom
Principal Investigator

6 July 2004
Date

* BIO – Biotechnology
 CBC – Chemical & Biological Control
 EDM – Epidemiology & Disease Management
 FSTU – Food Safety, Toxicology, & Utilization
 GIE – Germplasm Introduction & Enhancement
 VDUN – Variety Development & Uniform Nurseries

Project 1: *Diagnostic Services for Vomitoxin (DON) in Wheat.*

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

The occurrence of *Fusarium* Head Blight (FHB) or ‘scab’ is an important fungal disease of cereal crops, including wheat and barley. Under certain environmental conditions and stress, the fungus can produce mycotoxins, including deoxynivalenol (DON) or vomitoxin, in cereals. Guidelines in the usage of cereals contaminated with vomitoxin exist for animal feeds and human foods, and above specified vomitoxin levels the wheat and barley may be unacceptable for processing into foods or feeds.

The primary focus of the U.S. Wheat and Barley Scab Initiative (USWBSI) is to mitigate FHB through various methods, including the use of selective plant breeding and fungicides. This grant provided vomitoxin analyses of samples for research scientists involved in these projects for the USWBSI.

2. What were the most significant accomplishments?

The laboratory completed vomitoxin analyses on over 5000 (n= 5066) ground feed samples. The samples were submitted from numerous scientist in eight states, including North and South Dakota, Nebraska, Kansas, Montana, Colorado, Missouri, and Arkansas. The laboratory also performed broad spectrum analysis for 15 *Fusarium* mycotoxins by GC/MS when requested on samples and did quality assessment on control pool cereal samples.

The laboratory participated in the check sample system to compare analytical data from vomitoxin analyses with laboratories in Michigan, North Dakota, Minnesota, and New York.

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PI: Mostrom, Michelle

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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 your grant. Please reference each item using an accepted journal format. If you need more space, continue the list on the next page.

Gillespie J, Schwarz P, Mostrom MS, Tacke B, Dong Y, Hart P, Munn B. Update on USWBSI DON diagnostic laboratories, *2003 National Fusarium Head Blight Forum Proceedings*, Bloomington, MN. December 13-15, 2003.