

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:	59-0790-9-066
FY03 ARS Agreement Title:	Fusarium Head Blight Resistant Wheat Variety Development - Cornell.
FY03 ARS Award Amount:	\$ 13,659

USWBSI Individual Project(s)

USWBSI Research Area*	Project Title	ARS Adjusted Award Amount
VDUN	Fusarium Head Blight Resistant Wheat Variety Development - Cornell.	\$ 13,659
	Total Amount Recommended	\$ 13,659

Principal Investigator

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: *Fusarium Head Blight Resistant Wheat Variety Development - Cornell.*

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

Our improved irrigation system reduced the variation in our Fusarium Head Blight Evaluation nursery. The rate of infection was improved the past year also; however, higher rates of infection would better differentiate varieties. Lodging was minimized by reducing planting density. Other diseases such as Septoria Glume Blotch are still confounding the scores. Also, because of the variation in tiller number for different varieties, we have to count all of the spikes in each plot to get percent infection. This can be extremely time consuming, especially when lodging occurs. Consistency of the evaluation in different environments is clearly a problem that needs additional work. More rapid and accurate screening and evaluation methods are still needed.

2. What were the most significant accomplishments?

We have used new sources of germplasm from the other cooperating programs in our breeding program. These new genotypes are very valuable and potentially will enhance the disease resistance of new varieties. We have expanded the size of our irrigation system to accommodate more breeding lines and populations. We now have a reasonably reliable protocol for estimating resistance to FHB for current varieties and experimental lines.

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FY03 Final Performance Report

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

Field Days

2003 Small Grains Management Field Day

2003 Plant Breeding Field Day

Informal Publications

2003 Cornell Small Grains Variety Trial Results

2003 Cornell Guided for Integrated Field Crop Management