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FY10 ARS Agreement #: 59-0790-7-078

Research Category: FSTU

Duration of Award: 1 Year

Project Title: Diagnostic Testing Services for Deoxynivalenol in the Eastern United States.

PROJECT 1 ABSTRACT

(1 Page Limit)

Concerns about DON continue to mount, and there is a growing need to support USWBSI diagnostic laboratories for mycotoxins in the U.S. Over the past three years, the USWBSI has provided funds for the Schmale Laboratory at Virginia Tech to conduct DON testing services for nearly 20,000 wheat and barley samples from USWBSI investigators in the eastern United States. In this one-year USWBSI project, we propose to continue to provide diagnostic testing services for DON for 6,500 wheat and barley samples associated with USWBSI-supported research projects in the eastern U.S. The investigators and their estimated DON testing allocations that will be supported by this work have been posted here: http://www.uky.edu/Ag/Wheat/wheat_breeding/USWBSI/vt_testinglab_schmale.html. The ultimate goal of our research is to reduce DON contamination in wheat and barley. The specific objectives of the proposed research are to (1) provide analytical services necessary to develop new cultivars of wheat and barley with reduced potential for DON contamination and to (2) facilitate DON testing that will improve chemical and cultural practices necessary to reduce DON contamination in wheat and barley. Schmale hired a new full-time research associate (Niki McMaster) in August, 2010. Niki McMaster and Diane Reaver visited Michelle Mostrom's lab and Paul Schwartz's lab the week of September 20, 2010. The proposed work directly addresses the FY11 FSTU priority to 'provide analytical support for DON/trichothecene quantitation for Initiative's stakeholders. Schmale will meet with stakeholders in VA to discuss new diagnostic technologies for DON and related management strategies for FHB, an effort aligned with the FY11 FSTU priority to 'provide requisite information on DON/trichothecene safety issues to producers, millers, researchers, risk assessors, and regulators. Results from this project will help leverage future research support from agencies such as NSF and USDA-CSREES. New analytical technologies for detecting and quantifying mycotoxins in food and feed will be developed and implemented; FY11 priorities for funding programs in these agencies.