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ARS Agreement #: 59-0206-2-082

Research Category: FST

Duration of Award: 1 Year

Project Title: Diagnostic Testing Services for Deoxynivalenol in the Eastern U.S.

PROJECT 1 ABSTRACT

(1 Page Limit)

Concerns about DON and related trichothecene mycotoxins continue to mount, and there is a need to support for USWBSI diagnostic laboratories in the U.S. Over the past five years, the USWBSI has provided funds for the Schmale Laboratory at Virginia Tech to conduct DON testing services for over 30,000 wheat and barley samples from USWBSI investigators in the eastern United States. FY13 samples that have been slated for testing at Virginia Tech are currently being received and processed. In this two-year USWBSI project, we propose to continue to provide diagnostic testing services for DON for up to 15,000 wheat and barley samples associated with USWBSI-supported research projects in the eastern U.S. Actual numbers of samples requiring testing by USWBSI investigators will be based on funding recommendations by the SC for both this pre-proposal and for related pre-proposals for each of the USWBSI investigators requiring services. 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. The proposed project will provide additional DON testing services for the USWBSI and continue to support the only USWBSI-associated DON testing lab in the eastern U.S. Schmale is committed to the long-term management of a successful and productive mycotoxin testing lab for the USWBSI. Niki McMaster continues to manage USWBSI testing services at Virginia Tech. The proposed work directly addresses the FY14-15 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 FY14-15 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; FY14 priorities for funding programs in these agencies.