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Project ID: FY06-SC-113

FY05 ARS Agreement #: 59-0790-4-112

Research Area: FSTU

Duration of Award: 1 Year

Project Title: Malting Barley Deoxynivalenol Diagnostic Services.

PROJECT 1 ABSTRACT

(1 Page Limit)

The malting and brewing of *Fusarium* infected barley presents a number of processing, product quality and public health concerns. *Fusarium* infected barley also is unsuitable for human consumption and for some livestock. The ultimate solution to *Fusarium*-related problems is the development of FHB resistant barley cultivars. Testing for deoxynivalenol (DON) is an integral part of barley varietal development programs focusing on *Fusarium* resistance. DON testing, however, is a very expensive part of these programs, and thus can limit the number of lines, which may be screened within a given year. The primary objective of this project is to provide barley breeders and pathologists, working on the development of *Fusarium* resistant barley, with affordable, accurate and timely DON analysis. Funds requested will support the analysis (DON) of 11,544 barley samples from eight researchers in four states. Analysis of regional barley crop samples will provide annual information on DON levels. An inter-laboratory check service is offered as a means for improving the reproducibility of DON analyses between laboratories.