

PI: Neate, Stephen M.

PI's E-mail: stephen.neate@ndsu.edu

Project ID: FY08-ST-079

FY07 ARS Agreement #: 59-0790-3-083

Research Category: BAR-CP/VDHR

Duration of Award: 1 Year

Project Title: Screening Hordeum Germplasm for Resistance to Fusarium Head Blight and DON Accumulation.

PROJECT 5 ABSTRACT

(1 Page Limit)

Fusarium Head Blight remains a severe threat to the barley and malting industry in the Upper Midwest of the US due to the few sources of resistance identified to date. The objective of this project is to accelerate screening unique barley germplasm for new resistance alleles to *Fusarium* head blight (FHB) and to facilitate their rapid transfer into adapted breeding germplasm. We will do this by screening in nurseries in Fargo and Langdon in North Dakota and Hangzhou in China. Data on FHB reaction and DON accumulation will be collected to identify lines with improved resistance compared to the currently grown varieties in the Midwest of the US. Previous nurseries conducted by the NDSU barley breeders and the Minnesota State University Breeders have shown that the most resistant lines in China were also the most resistant in the Midwest. By establishing winter nurseries in China we can obtain two field evaluations in the one year which will reduce the time needed to identify new sources of resistance.