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**Project ID:** 0506-NE-100

**FY04 ARS Agreement #:** 59-0790-3-083

**Research Area:** GIE

**Duration of Award:** 1 Year

**Project Title:** FHB Resistance Screening of Unique Barley Germplasm from the Dutch Centre for Genetic Resources.

### PROJECT 3 ABSTRACT

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Fusarium head blight is a severe threat to the barley and malting industry in the Upper Midwest of the US. Although resistance is the most economic means of managing the disease few sources of resistance have been identified to date and the majority have been in 2-row barley which is not the type preferred by most of the brewing industry.

The objective of this project is to screen unique barley germplasm for resistance to *Fusarium* head blight (FHB) in screening 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.

In addition greenhouse testing of accessions for resistance will take place. Data on FHB reaction and DON accumulation will be collected.