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Project Title: Evaluation of Barley for FHB Resistance in China.

PROJECT 2 ABSTRACT

(1 Page Limit)

The ultimate goal of this project is to identify malting barley cultivars resistant to Fusarium head blight. Breeding materials from six upper Midwest barley research programs and the ICARDA/CIMMYT barley breeding program will be screened in an off-season nursery at Zhejiang University – Hangzhou, China. This nursery has been used for screening upper Midwest barley germplasm since 1995 and about 3,500 total entries are screened each year. Materials to be screened in the 2005-06 nursery include accessions from barley collections outside the U.S. (NDSU and U of Minn.), lines developed through pre-breeding activities (NDSU, U of Minn., ICARDA/CIMMYT, and BARI), unique lines with single QTL for FHB resistance (USDA-ARS, U of Minn., NDSU/Washington State Univ.), and six-rowed lines derived through mutagenesis of CIho 4196 (NDSU/Washington State Univ.). Use of this nursery allows for an additional field screen for FHB resistance each year and screening of materials from all Midwest barley improvement programs at a common location where FHB is the only head blighting disease. This project addresses the research priorities of the Host Genetic Resources research program (i.e. discovery of novel sources of FHB resistance to U.S. populations of *Fusarium* in barley and generation of unique and adapted parental germplasm.