

PI: Brian Steffenson

PI's E-mail: bsteffen@umn.edu

Project ID: FY14-BA-008

ARS Agreement #: 59-0206-1-119

Research Category: BAR-CP

Duration of Award: 1 Year

Project Title: Mapping Loci Conferring Resistance to FHB and DON Accumulation in Barley.

PROJECT 1 ABSTRACT

(1 Page Limit)

Our overall goal is to reduce the losses caused by Fusarium head blight (FHB), especially quality discounts due to the accumulation of mycotoxins such as deoxynivalenol (DON). This can be best achieved by identifying and incorporating into barley cultivars genes that confer a high level of resistance to FHB and the accumulation of mycotoxins. Our specific objectives for this proposal are to determine the number, effect, and chromosomal position of FHB resistance loci in a select barley accession (PI350725) using the advanced backcross QTL method. This research addresses Objective #2 (Map novel QTL for resistance to FHB in barley) of the USWBSI Research Area “Variety Development and Host Resistance” (VDHR), but is also an essential and important step toward Objective #4 (Develop new barley varieties with enhanced resistance to FHB and lower DON). The outputs from this work will fulfill the USWBSI primary goal to “develop as quickly as possible effective control measures that minimize the threat of Fusarium head blight, including the reduction of mycotoxins, to the producers, processors, and consumers of wheat and barley.