

FY20 USWBSI Project Abstract

PI: Thomas Baldwin

PI's E-mail: thomas.t.baldwin@ndsu.edu

Project ID: FY20-BA-015

ARS Agreement #: *New (NCE for FY20 for 59-0206-7-001)*

Research Category: BAR-CP

Duration of Award: 1 Year

Project Title: Identification, Characterization, & Development of Widely-adapted FHB-resistant Germplasm

PROJECT 2 ABSTRACT

(1 Page Limit)

Due to the variation for heading date, height, and other agro-morphological traits, it may be a good idea to do two backcrosses when developing biparental populations for determining the genetics of resistance to FHB and DON accumulation. Examples of FHB resistance QTL mapping are legion in the literature at this point, and not to very little progress has been made via QTL mapping. How do you propose to utilize the resistance alleles in 95SR316A once QTL are identified? A major oversight in this and other FHB mapping projects is the lack of consideration for any malt quality traits. How would you go about considering malting quality in your proposal? Combining FHB and foliar disease resistance is beneficial for the breeding community to broaden the adaptation of FHB resistance donors. The qPCR research is interesting. How well does this assay correlate with FHB symptoms and also DON accumulation? Can you provide estimates on the costs and throughput for using this assay of fungal biomass? Finally, it is great to see other cooperators assist in the evaluation of the Aberdeen germplasm for FHB resistance.