

FY21 USWBSI Project Abstract

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Project ID: FY20-IM-008

ARS Agreement #: 59-0206-0-122

Research Category: MGMT

Duration of Award: 1 Year

Project Title: Integrated Management Strategies and Fungicide Testing for FHB and DON in Small Grains

PROJECT 1 ABSTRACT

(1 Page Limit)

Recent research with effective demethylation inhibitors has shown that the application window has widened and fungicide applications made 3-7 days after anthesis initiation in wheat or post-heading in barley provide adequate FHB and DON suppression. A new non-triazole fungicide (Adepidyn – SDHI) was labeled for scab suppression and preliminary research suggests similar scab suppression when compared to industry standards metconazole and prothioconazole. However, further research is needed to determine if the application timing of the new SDHI aligns with current recommendations. Small grain research trials will be established several locations in North Dakota (Carrington, Fargo, Langdon, and Nesson Valley). A total of eight integrated management trials and five uniform fungicide trials will be conducted on either spring barley, spring durum, and hard red spring wheat. The integrated management trials will use at least two varieties varying in susceptibility with one of the varieties being a recent release. Each location will record scab index, FDK, DON concentration, yield and test weight. Data will be compiled for each small grain market class and subsequently used in a meta-analysis. The results will help update current fungicide efficacy and timing recommendations for FHB and DON for small grain growers in ND and the United States.