

FY19 USWBSI Project Abstract

PI: Emmanuel Byamukama

PI's E-mail: emmanuel.byamukama@sdstate.edu

Project ID: FY18-IM-005

ARS Agreement #: 59-0206-8-192

Research Category: MGMT

Duration of Award: 1 Year

Project Title: Fungicide Efficacy in FHB/DON Management for Hard Red Winter and Spring Wheat in SD

PROJECT 1 ABSTRACT

(1 Page Limit)

Fusarium head blight (FHB), caused by *Fusarium graminearum*, remains one of the major concerns producers are facing in both hard red winter and spring wheat in South Dakota. The main management approaches for FHB and its mycotoxin deoxynivalenol (DON) are using moderately resistant cultivars and fungicide application at anthesis. Triazole fungicides are the recommended class of fungicides because of their efficacy against FHB and DON. However, *F. graminearum* isolates that are insensitive to triazole fungicides have been reported in a few states in the U.S. Recently, a new fungicide product, Miravis Ace[®] (Adepidyn; Pydiflumetofen) has been developed that has a SDHI mode of action and can be applied at heading. It is important to determine the efficacy of this product in both susceptible and moderately resistant cultivars in comparison with traditional fungicides for FHB and DON management in order to avail growers unbiased, research-based information. We propose to determine: 1) The efficacy of Miravis Ace applied at heading for FHB and DON management. 2) Efficacy of Miravis Ace fungicide treatment at flowering for FHB and DON management in wheat. We will also include traditional fungicide treatments, namely Prosaro[®] for comparison with Miravis Ace. Information generated from this research will help improve FHB and DON management through timely application of efficacious fungicides. Such information will be communicated to stakeholders through extension articles, newsletters, field days, and radio talk shows.