

Project Abstract

Project Title:	Fungicide and variety evaluation for FHB management in wheat in South Dakota	
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Fusarium head blight (FHB, scab) is a major production constraint for both hard red winter and spring wheat in South Dakota. Fungicide application is one of the major management strategies that growers are using to manage FHB, in addition to planting moderately FHB resistant cultivars. However, efficacy information for new FHB management fungicides in South Dakota is not available and this would help growers in making fungicide application decisions. ProsaroPro® and Sphaerex® are new fungicides whose efficacy against FHB is not well known in South Dakota. Moreover, a new winter variety “SDAndes” and a new spring wheat variety “Driver” have been recently released. It is important to obtain information on the response of these varieties to FHB when integrated with fungicide application. We propose to determine: 1) Efficacy of ProsaroPro applied at flowering for FHB and DON management 2) Efficacy of Sphaerex fungicide treatment at wheat flowering for FHB and DON management, and 3) Efficacy of Sphaerex applied at flowering followed by Tebuconazole 4 days post-flowering.

The overall goal of the proposed research is to generate information that will help growers make FHB management decisions that are effective and profitable. This research will also contribute to the goals of the USWBSI namely validating the integrated management strategies with next generation of wheat varieties in multiple production environments and evaluating flexibility of fungicide application timing within the context of the integrated management strategies. Trials will be established for both winter and spring hard red wheat classes at two locations. one of the two locations will be misted and inoculated to increase the chances of FHB development and severity. FHB will be assessed in all the plots at soft dough and DON content will be determined in plot grain samples collected at harvest. We anticipate that the new fungicides ProsaroPro and Sphaerex will perform at acceptable levels against FHB and DON comparable to the industry standard fungicides Prosaro and Caramba®. Information generated from this research help improve FHB and DON management through timely application of efficacious fungicides. Information will be communicated to stakeholders through extension articles, newsletters, field days, social media, and radio talk shows.