Project Abstract

Project Title:	**Integrated Management of Fusarium Head Blight in Kansas**	
Principal Investigator:	**Kelsey Andersen Onofre**	**Kansas State University**
Co-Investigator:	**Erick De Wolf**	**Kansas State University**
Co-Investigator:	**Romulo Lollato**	**Kansas State University**
Co-Investigator:	**Jessica Rupp**	**Kansas State University**

Fusarium head blight (FHB), and the associated mycotoxin deoxynivalenol (DON), remains an important yield limiting disease for producers in Kansas. It is essential to evaluate new fungicide products and varieties for the control of FHB and DON. The goal of this project is to evaluate two new products (Prosaro Pro® and Sphaere®x) that were recently labeled for the control of FHB, when compared to the industry standard products: Caramba®, Prosaro®, and Miravis Ace®. The objectives of this project are to 1) evaluate the integrated effects of fungicide treatment and genetic resistance on FHB and DON in hard red winter wheat in Kansas, with emphasis on new combinations of the fungicides, Prosaro Pro, and Sphaerex and 2) Compare the efficacy of Prosaro Pro and Sphaerex with Prosaro, Caramba, and Miravis Ace in Kansas.

For the first objective, we anticipate that these newly labeled fungicides will provide percent control of FHB and DON that is as good as or better than that provided by Prosaro. We anticipate that these products will provide even more control when combined with the best available resistance for our region. For the second objective we anticipate that these two products will perform as well as Prosaro, Caramba, and Miravis Ace when applied at Feekes 10.5.1. Field trials for Objective 1 will be established in two locations in Kansas (Manhattan and Belleville) with three varieties (WB4458 = S; Bob Dole = I; Zenda = MR) and the following fungicide treatments at Feekes 10.5.1: 1) inoculated check, 2) non-inoculated check, 3) Prosaro, 4) Miravis Ace, 5) Prosaro Pro, and 6) Sphaerex. Plots will be inoculated at Feekes 10.5.1 following fungicide treatments. For Objective 2, two field locations will be established in Manhattan and Parsons, KS. A single, susceptible variety (KanMark) will be planted and plots will be inoculated with a spore suspension and mist irrigated. The following treatments will be evaluated: 1) inoculated check, 2) Prosaro, 3) Caramba, 4) Miravis Ace, 5) Prosaro Pro, 6) Sphaerex, 7) Miravis Ace fb tebuconazole; 8) Miravis Ace fb Prosaro Pro, 9) Miravis Ace fb Sphaerex and 10) Tebuconazole fb Miravis Ace. Each treatment (excluding checks) will have at least one application made at Feekes 10.5.1 with additional applications made before or after flowering. Findings from these trials will be shared with Kansas wheat producers, extension agents, and industry professionals at extension programs throughout the duration of the project.