PI: Heather Kelly
PI's E-mail: youngkelly@utk.edu
Project ID: FY20-IM-009
ARS Agreement #: *New*
Research Category: MGMT
Duration of Award: 1 Year
Project Title: Integrated Management of FHB and DON in Soft Red Winter Wheat in Tennessee

PROJECT 1 ABSTRACT

(1 Page Limit)

While Fusarium Head Blight (FHB) epidemics have not been the norm in Tennessee, there has been a couple of seasons that the cool, wet weather have resulted in a number of fields with high FHB and DON levels. With FHB being an infrequent disease issue in Tennessee producers need to utilize integrated management strategies to not only manage disease but to also avoid unnecessary fungicide applications. FHB integrated management strategies include the utilization of varieties with moderate resistance and timely fungicide applications around anthesis guided by FHB forecast model (www.wheatscab.psu.edu). Producers will more quickly adopt integrated strategies when the benefits are demonstrated across varieties and weather conditions in Tennessee. Tennessee produces soft red winter wheat for a variety of products. Experiments will be conducted at the West Tennessee and Milan Research and Education Centers in Jackson and Milan, TN. Experiments will be conducted at an on-farm location in Jackson, TN and Milan Research and Education Centers. Experiments will include trials using cultivars with different levels of resistance to FHB and multiple different fungicides and timings. Specifically comparing Demethylation Inhibitors (DMI) fungicides to a new Succinate Dehydrogenase Inhibitor + DMI fungicide, Miravis® Ace (Adepidyn; Pydiflumetofen + Difenoconazole). FHB, DON, FDK, foliar diseases severity, yield, and test weight data will be collected in all trials. Meta-analysis will be used to conduct a quantitative synthesis of the data. Results from these trials will allow us to evaluate the efficacy of Miravis Ace at different rates and application timings relative to the industry standards Prosaro® and Caramba®, as well as generate data for validation and refinement of the FHB risk assessment tool.