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Project Title: Applied Management of Fusarium Head Blight in Kentucky

PROJECT 1 ABSTRACT
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More than one management tool for Fusarium head blight (FHB) and deoxynivalenol (DON) is available to wheat growers in Kentucky. The most important tools available are moderately-resistant cultivars and fungicides applied at the proper timing. Ideally, when these different management practices are deployed together, losses from FHB will be reduced compared to using only one of the management practices.

The overall project goal is to improve management of FHB and DON. The specific objectives of the proposed study are: 1) evaluate the integrated effects of fungicide treatment and genetic resistance on FHB and DON in all major grain classes, with emphasis on a new fungicide, Miravis Ace®; 2) compare the efficacy of Miravis Ace when applied at heading or at anthesis to that of standard anthesis application of Prosaro® or Caramba®; 3) generate data to further quantify the economic benefit of FHB/DON management strategies; 4) develop more robust "best-management practices" for FHB and DON; and 5) generate data to validate and advance the development of FHB and DON risk prediction models.

Two trials will be conducted, which include a non-irrigated "integrated management" trial and a mist-irrigated "uniform fungicide trial". The trials will be conducted at the University of Kentucky Research and Education Center in Princeton, KY. The integrated management trial will evaluate different fungicides and fungicide application timings on three cultivars that differ in their susceptibility to FHB, and the uniform fungicide trial will evaluate several fungicides and application timings on a FHB-susceptible cultivar in a mist-irrigated environment to encourage high FHB and DON levels.

Stakeholders in Kentucky and across the nation will benefit from these nationally-coordinated trials. Results from these trials will be used in local, regional, and national meetings to educate stakeholders on the importance of integrating management practices for the greatest FHB and DON reduction.