

**PI:** Alyssa Koehler

**PI's E-mail:** [akoehler@udel.edu](mailto:akoehler@udel.edu)

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**Research Category:** MGMT

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**Project Title:** Evaluation of FHB Management Strategies in DE following the MGMT CP Standard Protocol

## PROJECT 1 ABSTRACT

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Winter wheat and malting barley are important crops to growers of Delaware. In recent years, environmental conditions have been highly conducive for Fusarium Head Blight. Many growers utilize risk model forecasting and rely on the application of fungicides when environmental conditions set up a high risk for FHB. The release of a new fungicide, Miravis<sup>®</sup> Ace, has drawn attention from growers and there is need for local data on recommended application timing and product performance. This project seeks to follow the FHB Management Coordinated Project (MGMT\_CP) to address the following objectives:

- 1) Evaluate the integrated effects of fungicide treatment and genetic resistance on FHB and DON in wheat with emphasis on a new fungicide, Miravis Ace.  
Expected Outcome: Regional product performance data for comparison of control provided by host resistance, fungicides, or both.
- 2) Compare the efficacy of Miravis Ace when applied at early heading, anthesis, or after anthesis to a standard anthesis application of Prostar<sup>®</sup> or Caramba<sup>®</sup>.  
Expected Outcome: Improved application-timing recommendations and efficacy data on various application timings of the new product, Miravis Ace.
- 3) Generate data to further quantify the economic benefit of FHB/DON management strategies.  
Expected Outcome: Increased data to support management decisions made by stakeholders.
- 4) Disseminate data to producers and stakeholders through extension outreach programming.  
Expected Outcome: Increase dispersion and utilization of new data through in person and digital communication platforms

Following the MGMT\_CP, two winter wheat cultivars will be evaluated in an inoculated, non-irrigated plot to assess fungicide performance on susceptible and moderately resistant varieties. Using a susceptible variety, a second inoculated wheat field will be established to analyze efficacy of the new fungicide, Miravis Ace, and compare performance at different timings to previous fungicide standards. A uniform fungicide trial will be conducted in malting barley to analyze the efficacy of Miravis Ace at different timings. Data will include FHB incidence and severity, flag leaf disease severity, yield, test weight, kernels damaged by FHB, and DON level. Results will be presented at regional small grains meetings and grower training events. Updates on disease risk, product efficacy, and optimal application periods will be shared through the University of Delaware's Weekly Crop Update, social media platforms, and publications like Plant Disease Management Reports. Data generated from this project will inform FHB management strategies and provide growers with valuable information to manage a perennial threat to winter wheat and malting barley production in the Mid-Atlantic.