

## FY26 Summary - OU-6-031

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| <b>Principal Investigator:</b>   | <b>Daren Mueller</b>                                                                 |
| <b>PI Institution:</b>           | Iowa State University                                                                |
| <b>USWBSI Title:</b>             | Expanding Fusarium Head Blight Outreach – A Partnership with Crop Protection Network |
| <b>USWBSI Research Category:</b> | OUT                                                                                  |

Fusarium head blight (FHB), or scab, is a major disease of wheat and barley that reduces yield, lowers grain quality, and contaminates grain with mycotoxins. These impacts create significant economic losses and market challenges for farmers and the grain industry. As production systems and climate conditions evolve, there is a growing need for accessible, science-based information to support effective disease management. This project will expand and modernize FHB outreach by leveraging the Crop Protection Network (CPN), a multi-state and international collaboration that delivers research-based crop protection resources. The effort aligns with national priorities by increasing awareness of FHB, promoting integrated disease management, and supporting informed decision-making for farmers and agricultural professionals. Key activities include development of a return-on-investment (ROI) tool for fungicide use based on multi-year uniform fungicide trial data from the United States and Canada. This tool will help farmers evaluate profitability across regions, wheat classes, and disease risk scenarios. Existing FHB publications will be updated to reflect current science, and new resources will be created, including guidance on post-harvest grain handling, disease severity estimation tools, and integration of FHB forecasting into CPN's disease prediction platform. The project will also deliver annual webinars featuring regionally relevant research updates and management recommendations. Updated national estimates of yield losses from FHB and other major wheat diseases will be compiled and shared to highlight disease impacts over time. To ensure accountability and continuous improvement, project outcomes will be evaluated through annual farmer surveys measuring changes in knowledge, attitudes, and management practices. Results will be summarized in publicly available impact reports and short videos designed to communicate value to stakeholders. All tools and resources will be widely distributed through CPN's established communication channels, including digital platforms, newsletters, social media, and Extension partnerships. By combining data-driven tools, updated educational materials, and coordinated outreach, this project will enhance disease management decisions, reduce losses, and improve the economic sustainability of wheat and barley production systems.