Sent May 11, 2023

U.S. Wheat and Barley Scab Initiative

FHB Tool Talk

Dear Extension Workers, Consultants, and Growers Organizations,

"What are best practices for fungicide timing in order to reduce Fusarium Head Blight?" is a question we get asked frequently at the U.S. Wheat and Barley Scab Initiative (USWBSI).

We're excited and pleased to be sharing a new study that provides comparison and guidance for barley growers (and we intend to provide similar guidance for other grain classes in the future):

A 4-year study in the journal *Plant Disease* provides new information about the best time to spray winter barley for FHB reduction.



Photo: J. Ransom, NDSU

Awn tipping	50% head emergence	100% head emergence	100% + 6 days
	Feekes 10.3	Feekes 10.5	

Key Takeaways:

Three winter barley varieties with different levels of FHB resistance were planted and inoculated by spreading *Fusarium*-infected corn kernels.

- Three fungicides were compared: propiconazole + pydiflumetofen (Miravis® Ace), prothioconazole + tebuconazole (Prosaro®), and metconazole (Caramba®).
- Three timings for fungicide application were compared: when the barley crop was 50% headed (GS 55), 100% headed (GS 59), or 6 days after 100% headed.
- Across the 3 varieties and over 4 years, deoxynivalenol (DON) and percent *Fusarium*-infected kernels were most reduced compared to the unsprayed control by applying fungicide at the latest timing – 6 days after 100% headed.
- On average, applications at the 50% headed timing led to DON levels as high as those in the unsprayed control.

In Summary: If FHB risk is moderate to high around the time barley is heading, it makes sense to apply one of the most effective fungicides. About 6 days after 100% head emergence is the best time to apply an FHB-targeted fungicide to winter barley, based on research results.

If you are able to access *Plant Disease,* you can read the whole paper here:

Cowger, C., Read, Q. D., Clark, L., & Dong, Y. (2023). Optimal timing of fungicide application to manage fusarium head blight in winter barley. *Plant Disease*. https://doi.org/10.1094/pdis-01-23-0021-re

Thank you for reading! Feel free to forward this message to people in your community. Anyone can register for Tool Talk here.

Provide any questions or comments to nfo@scabusa.org.

Sincerely,

USWBSI Networking and Facilitation Office (NFO) Team



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This email was sent to all participants in previous educational or professional programing with the U.S. Wheat and Barley Scab Initiative. The USWBSI is housed in the Department of Plant Pathology at the University of Minnesota Department of Plant Pathology, 1991 Upper Buford Circle, St. Paul, MN, 55108, USA. The University of Minnesota is an equal opportunity educator and employer.

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