

News Article

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Fungicide Application Decision Nearing for NE Indiana Wheat

A potentially serious situation is brewing this year with wheat in Indiana, with opportunities for many northeast Indiana producers to act in time to protect their crop.

At the time of this writing (May 22, 2020), most of Indiana is at high risk for development of Fusarium Head Blight (Scab), according to the Fusarium Head Blight Prediction Center, housed at Penn State University.

“Rainy, wet conditions will favor many fungal diseases in wheat.” said Purdue’s field crops pathologist, Darcy Telenko, in a recent article for the Purdue *Pest & Crop Newsletter*. “These include – stripe rust and Septoria leaf spot.”

“During flowering (anthesis) warm, wet weather with high relative humidity will favor the development of Fusarium head blight (scab),” she said. “Fusarium head blight (FHB) is caused by the fungus *Fusarium graminearum*.” She said that it infects wheat during flowering, beginning at Feekes 10.5.1. Symptoms of FHB will appear as bleached spikelets on the head later in the season. Infection can lead to small or shriveled grain kernels referred to as “tombstones.” In addition to shriveled grain, this fungus can produce mycotoxins such as deoxynivalenol (DON), which can accumulate in the infected grain.

According to Purdue Extension’s *Wheat Field Guide*, this fungus survives through the winter in infected corn residue. High humidity and frequent rainfall promote the production and dispersal of spores from residue. The wind can blow spores onto wheat plants. Warm, humid weather promotes infection and secondary spread.

According to the Fusarium Head Blight Prediction Center, the fungus attacks the grain directly and can result in serious yield losses. Symptoms of disease include tan or brown colored lesions that may include single spikelets or large sections of the wheat head.

Flowering dates will generally occur chronologically from southern Indiana to northern Indiana. Feekes 10 is the general term for the boot stage of wheat, where the developing grain head swells and is visible in the leaf sheath directly below the flag leaf. The further decimals refer to various sequential growth stages of wheat. Feekes 10.5.1 refers to the beginning flowering growth stage of wheat. Purdue Extension publication ID-448, “Wheat Field Guide,” describes these stages:

*10.1 – awns visible, grain heads emerging

*10.3 – heading half complete

*10.5 – heading complete

*10.5.1 – beginning flowering (at this growth stage, pollen-containing anthers are visible on the wheat head)

*10.5.3 – flowering and pollination complete

“A fungicide application might be considered if a Fusarium head blight (FHB) susceptible variety is planted, or if you are worried about scab on your farm,” said Telenko. “These applications should be made at Feekes 10.5.1, or early flowering to suppress FHB.” She added that fungicides recommended for FHB and DON include Prosaro, Caramba, Proline, and Miravis Ace. The use of products containing strobilurin fungicides may result in higher levels of DON accumulation in grain when damaged by FHB. She said that these are not labelled for FHB management. To aid in product selection, Telenko referenced fungicide efficacy ratings, available from the Crop Protection Network, <https://cropprotectionnetwork.org/>.

More information is available by accessing the free publications, *Managing Wheat by Growth Stage*, ID-422-W, and *Fusarium Head Blight (Head Scab)*, BP-33-W, available online at Purdue Extension’s *Education Store*, at www.edustore.purdue.edu.

Find the May 20 article referenced above by Telenko in the Purdue Plant & Pest newsletter: <https://extension.entm.purdue.edu/newsletters/pestandcrop/>. Find the Fusarium Head Blight prediction center at <http://www.wheatscab.psu.edu/>.

Samples can always be submitted to the Purdue Plant Pest Diagnostic Lab for disease identification and confirmation. <https://ag.purdue.edu/btny/ppdl/Pages/default.aspx>.