

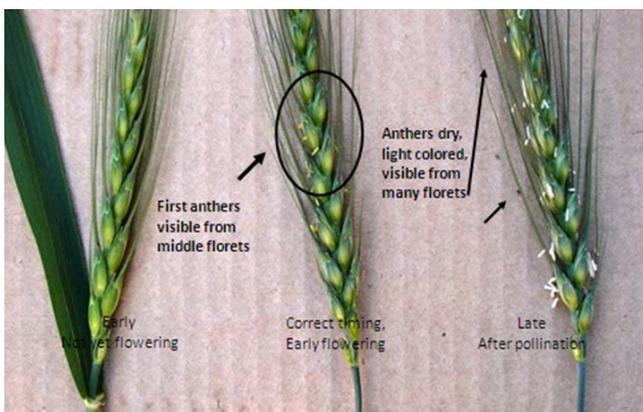
Fungicide Application Timing for Scab of Wheat

by Scott A. Eversgerd, Area Agronomist

Fusarium head blight (head scab) can be the most devastating disease of wheat when conditions are favorable, reducing both grain yield and quality. Quality losses can be due to lower test weights and production of a toxin (deoxynivalenol, or DON), by the head scab fungus. Both low test weight and contamination of the grain by DON can cause serious problems for producers and millers.

The fungal pathogen that causes Fusarium head blight in wheat (*Fusarium graminearum*, also known as *Gibberella zeae*) can also cause Gibberella stalk and ear rot in corn. Because corn is widely grown in rotation with wheat, the pathogen is already present in most fields, and disease development depends on prevailing weather patterns. Because wheat is susceptible to the disease during flowering, weather conditions from flowering through kernel development play a key role in the incidence and severity of scab. Moderate temperatures (75 to 85°F), prolonged high humidity, and prolonged wet periods favor disease development.

Timing of a fungicide application is very critical for successful management of Fusarium head blight. The ideal application timing to achieve around 50-60% control is exactly at GS stage 10.5.1. Growers should begin spraying when 75-100% of the wheat heads on the main stem are fully emerged (~ Feekes Growth Stages 10.3 to 10.51). In a normal year, that translates into about a 36-hour window for optimum timing; treating prior to or after that ideal window usually results in about a 10-20% loss in control for each day the window is missed.

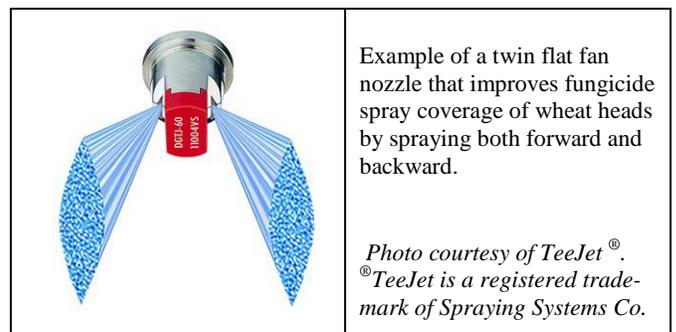


Wheat head appearance at ideal fungicide application timing for head scab. *Photo courtesy of Prairie Grains Magazine.*

A “full management” approach is necessary to achieve levels of control that will be acceptable to most growers.

- Plant wheat following soybeans to reduce the initial inoculum in the field (not having the corn residue on which the fungal spores survive).
- Plant wheat varieties that have an acceptable level of genetic tolerance to head scab. However, this does not mean such varieties will not benefit from a fungicide. Recent research has shown that applying fungicides to these varieties will actually get you closer to the 80-90% levels of control.
- Make very timely fungicide applications of the correct products.

Fungicide application methods are also very critical. Use a minimum of 10 gallons of water per acre as a carrier, preferably 15 to 20 gal. Also, use a twin flat fan nozzle that sprays a fan forwards and backwards at about a 60 degree angle. This will give much better coverage of the wheat head, the goal in this type of application.



Fungicides that are rated “good” for Fusarium head blight suppression are **Caramba™ 0.75 SL** and **Prosaro™ 421 SC**. (There are no fungicides rated very good or excellent for head scab.) Caramba 0.75 SL and Prosaro 421 SC will also help control leaf diseases, such as Septoria, rust, and powdery mildew, but the timing of the Fusarium head blight application may be too late for flag leaf protection. Check your local area for specific recommendations. Always read and follow the label directions.

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