

Wheat Fungicide

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Wheat is greening up across Kansas and producers are preparing to topdress nitrogen or apply herbicides. We commonly receive questions about the value of including a fungicide in the mix with those applications. This can be an economical option, but there are a few things to remember. Research at K-State and in other regions continues to demonstrate that fungicides applied between flag leaf emergence and heading growth stages provide the largest level of yield protection against foliar diseases. The yield response to this later fungicide application is influenced by the level of disease risk (amount of disease and predicted weather conditions), variety resistance to the most threatening fungal diseases, crop yield potential, foliar fungicide efficacy, and other factors.

Fungicides can also be applied as an early application made between “spring green-up” and jointing. This application may provide some yield benefits in some fields and years but often doesn’t achieve the same level of yield protection as post-flag leaf emergence applications. Early fungicide applications may result in a yield advantage due to a reduction in early disease establishment in the lower canopy. This may be particularly true for “leaf spot diseases” such as tan spot or Septoria leaf blotch that survive in wheat residue and can establish early in the year. Yield benefits are most likely in wheat fields planted back into wheat stubble and when weather conditions are wet enough to favor fungal disease development. There can also be some rust suppression with early applications, particularly when disease levels are high later in the season. The challenge is that it is difficult to know if rust disease will be a threat during these early growth stages.

If you decide to make an early application, it is important to factor that into the full-season fungicide program. Many active ingredients have use restrictions, where a limited amount of an active ingredient can be applied during a single season. It is important to ensure that early fungicides do not limit options for fungicide applications at flag leaf (which have the potential for higher yield protection in conducive disease years). Some fungicides have special “2ee” labels that allow for lower-rate applications early in the season for winter wheat. Double-checking labels when choosing a fungicide product is always a good idea. Since the payoff for an early application is less certain than with later applications, it is perhaps best to consider using a low-cost fungicide for the early application and saving more expensive products, if desired, for the later application. Producers considering the use of split applications must pay close attention to label restrictions. Every active ingredient in a fungicide has a maximum total amount that can be applied during the season.

For example, if an early application of a generic form of tebuconazole is applied at 4 oz/acre, a subsequent application of any fungicide containing tebuconazole alone or in combination with other ingredients (e.g., premix) around heading could put you over the limit for the crop season. Thus, be sure to read the label to determine the maximum amount of a chemical that can be applied in a single season and the exact amount of a chemical(s) that is in a fungicide.

For information on the efficacy of different foliar fungicide products, refer to the K-State Research and Extension publication *Foliar Fungicide Efficacy Ratings for Wheat Disease Management 2024*, EP130.

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