

Guidelines for Wheat Disease Foliar Fungicide Use

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At the time of putting this column together for print, I do not have any verified reports of wheat diseases in the county, but it is time to be scouting for them and possibly making a spray decision. Strip rust has been verified in Kansas. The following information should help you with that task. Research conducted by K-State indicates that a single fungicide application made to susceptible wheat varieties when the risk of disease is high will often result in a 4 percent to 13 percent yield increase with an average increase of approximately 10 percent relative to wheat that remained untreated. A lower yield response is likely if the disease remains at low levels or is absent. The following guidelines will help maximize the potential for effective disease management and a positive yield response.

Application timing. In general, the largest reductions in disease severity and greatest increases in wheat yield or grain quality occur when fungicides are applied between full extension of the flag leaves and anthesis (when the male flower parts have just begin to emerge). Applications intended for the management of glume blotch or head scab should be made between the beginning of anthesis and 50 percent flowering. Always consult the product label for specific growth stage restrictions and preharvest intervals (PHI) before making fungicide application.

Pay attention to disease scouting reports. The risk of severe disease and yield loss is greatest when foliar diseases become established early and result in consistent disease pressure throughout the growing season. Discovery of low disease levels within a field or regional reports of disease outbreaks when the local wheat crop is between jointing and flag leaf emergence, is a valuable indicator of an elevated disease risk and potential yield loss.

Know the vulnerabilities of varieties. Growing wheat varieties that are susceptible to leaf rust, stripe rust, tan spot, or powdery mildew increases the risk of severe disease and yield loss. Fungicides are most likely to improve yield when applied to varieties that are susceptible to one or more of these common diseases. Varieties with moderate or high levels of resistance to these diseases are less likely to benefit from a fungicide application. For more information, refer to *Wheat Variety Disease and Insect Ratings*, MF991 and *Evaluating the Need for Wheat Foliar Fungicides*, MF3057. Another good resource is the *Foliar Fungicide Efficacy Ratings for Wheat Disease Management 2017*, EP130. The Wheat Production Handbook is C529.

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