

Post Rock Extension District Column
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What is the disease outlook for the 2023 wheat crop?

Wow, the wheat has really “greened” up with the warm temperatures and with the moisture that we have been fortunate to receive. Let’s hope that we continue to get the much needed moisture!

So, what is the outlook for wheat diseases for this spring? Leaf and Stripe Rust are some of the most important concerns in the state and annually cause more yield loss than most other diseases of wheat and often become established in Texas and Oklahoma before spreading north to Kansas. According to Dr. Kelsey Andersen Onofre, KSU Extension Plant Pathologist, on March 6, Amir Ibrahim, Texas A&M AgriLife Research, reported stripe rust in a disease observation nursery in Castroville, TX where the disease is allowed to develop naturally. However, at this time, there have been no stripe rust observations in Oklahoma or Kansas. The stripe rust pathogen typically does not survive in Kansas over the winter, but can survive in Texas through the winter months. Because of this, weather conditions in Texas in the fall and early spring can be important predictors of how bad stripe rust will be in Kansas. **However, be prepared to scout your wheat in the near future. This is especially true again for this year with the good market prices for wheat.**

For most fields, growers should focus on evaluating the need for a wheat fungicide application, later in the spring, between flag leaf emergence and flowering. This will allow the fungicide application to protect the flag leaf which is critical for grain filling.

Onofre points out that the moisture patterns for 2022-23 indicate there was some moisture in Texas in the fall which may have been favorable for rust development. However, conditions have been dry through the early spring, which likely suppressed the early stages of disease development and spread.

What does that mean for us? We likely will have below-average levels of spores that arrive in Kansas during our critical growth stages, and a lower risk of severe yield losses to stripe rust this year. Remembering this is just a piece of the puzzle in determining risk. The severity of stripe rust in Kansas after it is first detected will largely be driven by local weather conditions and the varieties that are planted in the state. **Once stripe rust is detected in Kansas, cool evenings and extended periods of canopy moisture will be necessary for disease establishment at levels that would result in yield loss.**

The disease situation can change rapidly, and it is important to continue to watch for signs of disease development as the season progresses. We will continue to update on stripe rust occurrence and weather

outlook as we move toward critical growth stages for fungicide applications in Kansas over the next several weeks.

So, what about leaf rust? There has been no reports of leaf rust in Oklahoma or Kansas yet. Some of the varieties that are resistant to leaf rust include Bob Dole, KS Dallas, KS Hatchett, LCS Chrome or WB 4792. Susceptible to moderately susceptible varieties include, LCS Revere, SY Benefit and T-158. So, producers will need to watch for signs of leaf and stripe rust as we approach flag leaf emergence in Kansas during April.

Tan spot is another wheat disease that may show up soon, especially in fields with continuous wheat which allows the fungus to buildup on the wheat residue over the winter. The initial symptoms of tan spot are small dark brown spots that expand to become tan elliptical or diamond-shaped lesions with a yellow halo.

Wheat Streak Mosaic is yet another viral disease that has emerged as a serious problem in all parts of Kansas in some years. This disease is spread by the wheat curl mite which volunteer wheat is a host. Most of the diseases favor the cool and wet conditions that could occur in the spring. So be on the lookout for any of these diseases.

K-State Research and Extension has an excellent publication entitled, **“Wheat Disease ID Book”** that is available either online or at any of our Post Rock Extension District Offices in Beloit, Lincoln, Mankato, Osborne, or Smith Center.

For more information on **disease management in your wheat**, contact me at any of our Post Rock Extension District Offices.

Post Rock Extension District of K-State Research and Extension serves Jewell, Lincoln, Mitchell, Osborne, and Smith counties. Sandra may be contacted at swick@ksu.edu or by calling Smith Center, 282-6823, Beloit 738-3597, Lincoln 524-4432, Mankato 378-3174, or Osborne 346-2521. Join us on Facebook at “Post Rock Extension” along with our “Ag News Roundup” every Friday. Also remember our website is www.postrock.ksu.edu and my twitter account is @PRDcrops.