Wheat Tour Participants

Nearly 90 grain traders, government officials, reporters, millers and even a few farmers start the 2017 Wheat Quality Council's Hard Winter Wheat Tour on May 1. Over the three-day tour, they will canvass the state's wheat crop from Manhattan to Colby to Wichita and back again. Along the way, they will stop every 15 miles or so to estimate yields in wheat fields on their routes. At the end, the results will be compiled into a yield estimate average for the Kansas hard red winter wheat crop.

Scouts will be on the lookout for viral diseases, including Wheat Streak Mosaic Virus; stem, stripe and leaf rusts; some scattered poor emergence in parts of northwest Kansas; and some nitrogen and sulfur deficiencies.

Wheat Stem Rust

Wheat stem rust has been observed in Texas. Stem rust is generally considered the most damaging of the cereal rust diseases because it can infect leaves, stems and heads of the developing plants. It should be possible to manage the disease and reduce potential yield losses with foliar fungicides. While many popular Kansas varieties are resistant or moderately resistant to stem rust, it's still important to scout wheat and protect it against this devastating disease. (Read more at http://www.plantpath.k-state.edu/extension/publications/stem-rust-management-mf2989.pdf)

Wheat Streak Mosaic Virus

According to K-State Research and Extension's April 21, 2017 eUpdate, the most prevalent viral disease is wheat streak mosaic virus (WSMV), especially in the western portion of the state. While some fields are completely infected by the disease, many fields are actually only showing patches of infected plants across the field. likely the result of low levels of wheat curl mites blowing in from distant areas of higher mite populations. Viral diseases were most likely favored by the warm conditions experienced in the fall, winter and early spring, and by volunteer wheat not controlled before the growing season. Some fields in the affected area will ultimately be abandoned because of WSMV infection. WSMV has an average statewide impact of 2% yield loss.

Stripe Rust

Stripe rust is more severe in the southeast region of the state and has moved to the upper leaves in some fields. While recent weather conditions haven't been favorable for the spread of stripe rust, we aren't out of the woods yet. We know stripe rust is present at low levels in many fields in the state. There is still a moderate risk of Kansas having a serious problem with stripe rust this season.

Leaf Rust

Scouts will also be on the lookout for leaf rust and powdery mildew. Leaf rust was reported previously in south central and southeastern Kansas. Leaf rust has moved to the upper leaves in few areas, which is important because these leaves provide most of the resources the plants will use to produce grain. Any damage done to the upper leaves increases the risk of yield loss.

Powdery Mildew

Powdery mildew is becoming severe in fields planted to moderately susceptible and susceptible varieties. This early establishment of the disease is cause for concern, and growers should consider both rust and powdery mildew into their fungicide decisions.

Fungicides

Aerial applications of fungicide have already started across the state, and chances are, tour participants will once again see these planes during their three-day trek across Kansas and parts of

Nebraska, Colorado and Oklahoma. All fungicides are best applied before the disease becomes established or very early in the development of disease within the crop.

For fungicide recommendations, Erick DeWolf, K-State Research and Extension Plant Pathologist, says, "Fungicide products that combine multiple modes of action offer very good to excellent efficacy against stripe rust and other important foliar diseases in Kansas. Using a fungicide with a mixed mode of action can also help reduce the risk of fungicide resistance developing in a fungal population. I think growers have a lot of product options with very good or excellent efficacy on stripe rust and other leaf diseases. I suggest that growers consider efficacy ratings, cost and availability when selecting products to use on their farm."

K-State Research and Extension reminds farmers that it is essential to always consult the label when applying fungicides, since any label violations could have unwelcome consequences. In general, the triazole fungicides can be applied the latest.

DeWolf says, "While several fungicide products can be applied through the flowering stage, they have a 30-day preharvest interval, so producers have to keep that in mind and make sure they're not applying it so late that they will have to delay harvest to meet the preharvest interval. Other fungicides have a growth stage cut off that prevents application during and after the flowering stages of growth. (Read more at

https://webapp.agron.ksu.edu/agr_social/eu_article.throck?article_id=1338)

Freeze Damage Potential

According to the National Agricultural Statistics Service, the crop is ahead of schedule when compared to the five year average. For the week ending April 23, 2017, wheat in far southeast Kansas is flowering, with some fields even further along in the early stages of grain development. Eighty-two percent of the crop is jointed, behind 91% last year, but ahead of the five-year average of 70%. In addition, 25 percent is Kansas' winter wheat crop is headed, ahead of 20 last year and 17 average.

This means that when there are frosts or freezes, the crop is more vulnerable than it normally would be at this time of year. The effects of a freeze event to the wheat crop depend on how the event matches up with critical sensitive stages of crop development. Generally, temps below 32°F for a minimum of about two hours will cause damage to the crop. Damage doesn't show until about a week or ten days after a freeze event. Freeze injury during heading and flowering stages can cause severe yield consequences. Therefore, scouts will also be looking for any signs of freeze damage, which may include damage to the kernel or the lower stem. If there's any good news, it's that there is plenty of soil moisture in the south central area, which could help buffer the low temperatures to a certain extent, according to Romulo Lollato, K-State Wheat and Forages Extension Specialist. The extent of the damage from any freeze events won't be known until harvest.

Yield Potential

Agronomists have visited several different fields across the state. Many fields visited had good yield potential, especially in the central portion of the state. With recent freeze events, this could change. Fields in far northwest Kansas and in parts of southwest Kansas also had good yield potential when not infected by wheat streak mosaic virus.

For the week ending April 23, winter wheat condition in Kansas rated 4 percent very poor, 12 poor, 32 fair, 45 good, and 7 excellent. While the condition of the crop remains favorable, it is important to remember that planted acres were at a century-low, meaning that even with good yields, production will be down this year.

You do not have to be on the Wheat Quality Council's Hard Winter Wheat Tour to scout wheat fields and make your own estimates. To help, we have compiled the steps participants will use to estimate yields so you too can participate. Visit our website at www.kswheat.com to get a step-by-step tutorial for calculating yields using the same method as the tour participants.

You can follow along with participants on the Wheat Tour, who will be tweeting results straight from the field using #wheattour17.