



K-STATE
Research and Extension

Extension Agronomy

eUpdate

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These e-Updates are a regular weekly item from K-State Extension Agronomy and Steve Watson, Agronomy e-Update Editor. All of the Research and Extension faculty in Agronomy will be involved as sources from time to time. If you have any questions or suggestions for topics you'd like to have us address in this weekly update, contact Steve Watson, 785-532-7105 swatson@ksu.edu, Jim Shroyer, Crop Production Specialist 785-532-0397 jshroyer@ksu.edu, or Curtis Thompson, Extension Agronomy State Leader and Weed Management Specialist 785-532-3444 cthompso@ksu.edu.

1. Special Edition: Stripe rust alert..... 3

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Stripe rust has been found in several fields of wheat in southeast, south central, and north central Kansas. Given the forecast of cool and relatively wet conditions for the next seven days, this is a potentially significant situation for fields anywhere in Kansas planted to varieties susceptible to stripe rust. Intensive scouting of fields should begin now.

A couple calls were received Monday, April 20, from industry sources in southeast Kansas. They scouted wheat in Labette County and found stripe rust in several fields. A personal visit to one of the fields near Altamont on April 21 confirmed a heavy infection of stripe rust. There were several “hot spots” of stripe rust in the field and you could easily find stripe rust lesions on the flag leaves throughout the rest of the field.

A couple dozen other fields were examined by us and it was really hard to find stripe rust although it was present in most fields if you looked hard enough – but at a level of much less than 1% of the field infected. Most of the fields were Everest. Additional scouting on April 22nd found stripe rust in Allen, Bourbon, and Anderson counties. It is difficult to find lesions but if one looks long enough lesions can be found.

Other reports on April 22 indicate that stripe rust and leaf rust may also be active in Barber and Ottawa counties. We will be gathering additional information on these reports and follow up with more information soon in the next Agronomy eUpdate.



Figure 1. Stripe rust on wheat in field near Altamont in southeast Kansas, April 21. Photo by Doug Shoup, K-State Research and Extension.

It takes a couple weeks for stripe rust lesions to become visible after the initial infection. So the lesions we are seeing today are likely from the wet period of rain experienced on either the April 2nd or April 7th. In general, the nine counties in extreme southeast Kansas have been fairly wet. Although stripe rust can show up with cool, damp, and windy conditions anywhere, the greater rainfall in this part of the state could be why it is showing up there first.

What to do? The heavy infected field scouted April 21 was definitely was at a level to consider spraying now. In the fields with sparse infection, producers could remain in a “wait and see” mode but keep watching the progression of the disease closely. Stripe rust tends to slow or shut down when nighttime temperatures are above 60.

Where the wheat is beginning to head, the second generation of stripe rust may never really get off the ground if the weather begins to warm up and nighttime lows are in the 60’s. However, the outlook as of today for most of Kansas is for 10 days of cooler conditions, with low temperatures mostly in the 40’s (using the 10-day forecast tab on the web site www.weather.com). Under those conditions, stripe rust is likely to remain active.

www.weather.com	Altamont, KS 10 day outlook		
	Highs	Lows	Chance of Rain
22-Apr	63	45	0%
23-Apr	62	51	20%
24-Apr	73	58	60%
25-Apr	76	48	30%
26-Apr	76	55	10%
27-Apr	71	50	40%
28-Apr	70	47	20%
29-Apr	71	48	10%
30-Apr	76	48	20%
1-May	75	54	10%

In past years in southeast and east central Kansas, we have had at least initial infections of stripe rust show up on wheat anytime from mid-April through mid-May. In tests in southeast Kansas over the years, fungicides have not always resulted in significant yield gains despite these early initial infections of stripe rust. Historically, stripe rust has not been the most severe problem in southeast Kansas because the temperatures there are frequently unfavorable for the disease to remain active. Where a good yield response has been found to fungicide applications in southeast Kansas, the response is usually due more to the control of some other leaf disease rather than stripe rust.

In contrast, stripe rust has been proven to be quite damaging at times in central and western Kansas where lower nighttime temperatures often favor disease development. In these locations, controlling stripe rust with a well-timed fungicide application has resulted in some large yield increases some years – more than 10 percent.

The current wheat price is low, meaning it could take at least a 5-bushel yield response to a fungicide application to break even, but stripe rust is a disease that can be a very harmful and not one to take lightly.

It is critical that farmers check their fields soon for symptoms stripe rust and other diseases. Fields with the best yield potential should be the top priority for scouting. It is very unlikely that fungicides applications will be needed if the disease is absent or found at low levels prior to heading. However, if the disease continues to progress, fields with low disease now may need a fungicide application in the near future. Stripe rust can develop very quickly, so it is important to check field frequently as they approach the heading stages of growth. Fields where the stripe rust is present on the flag leaves prior to heading are likely to benefit from a fungicide application.

The watch word for now is “scout,” and scout often for stripe rust and other diseases.

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