



Pest e-alerts



Entomology and Plant Pathology, Oklahoma State University
127 Noble Research Center, Stillwater, OK74078
405.744.5527

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Wheat Disease Update

Bob Hunger, Extension Wheat Pathologist



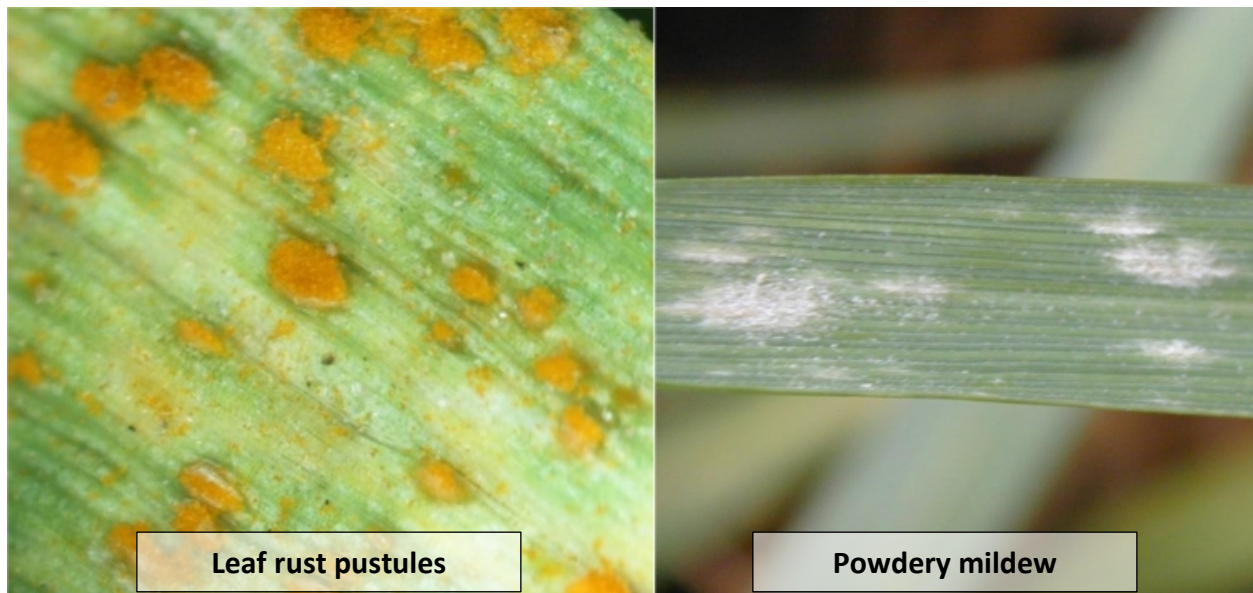
Wheat continued rapid development across Oklahoma this past week with yield potentials still looking outstanding. Yesterday I sprayed my foliar fungicide trial (Jagger), which ranged from boot (GS 10) to heads nearly fully emerged (GS 10.5). Overall I would place that trial at GS 10.2 (heads about $\frac{1}{4}$ emerged). This is 2-3 weeks earlier than I typically make this application. It strikes me from calls over this past week, that this is representative of where wheat is at across much of Oklahoma.

Stripe rust continues to be reported from across southwestern, central, and west central Oklahoma, but not as many reports from the north central and northwestern parts of the state. However, these reports indicate only scattered/light infections. With daytime temperatures into the 90s over the weekend (and 80s last week) and night temperatures in the 60s, stripe rust should be “shutting down.” It could be revived with strikingly cool temperatures and moisture, but I don’t see it being a major factor in most parts of Oklahoma this year.



Leaf rust also is being reported more frequently, but still in fairly low incidence and at a low severity. Around Stillwater, I can find pustules on susceptible varieties but mostly in the 10-15% severity range.

Powdery mildew is still a factor, at least on highly susceptible varieties. Jagger, which is in my foliar fungicide trial, has a severity of around 40-65% on leaves beneath the flag leaf. Some scattered powdery mildew pustules were visible on flag leaves.



Tan spot and Septoria/Stagonospora also can still be found on lower leaves, but are not moving up the canopy. A couple of wheat samples were received from northeastern (Rogers County) and north central OK (Noble County) with symptoms indicative of these leaf spotting diseases, and currently isolations are being made to confirm this diagnosis.

Over the last week, the Diagnostic Lab also had a sample from Kingfisher County that tested positive for wheat streak mosaic virus and High plains virus (Kingfisher County). As temperatures warm and wheat develops, these mite-transmitted virus diseases likely will become more prevalent.

Texas: Dr. Amir Ibrahim (Assoc. Prof, Small Grains Breeding and Genetics, Texas A&M), 29-Mar: Yellow rust [stripe rust] (YR) continues to develop and spread at McGregor, TX. Night temperatures are forecasted to range from 51 – 66o F during the next 10 days and new infections will continue to occur. YR has moved to the upper canopies of TAM 111 and 'Garrison', two varieties that were resistant during the 2010 epidemic. YR was rated as 50S on Garrison and 65S on FL-1 of TAM 111, whereas lines carrying Yr17, such as Jagger and Jagalene, have only trace amount. YR found this year at McGregor doesn't appear to attack Yr17.



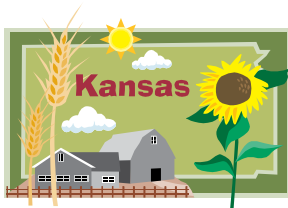
Wheat leaf rust (LR) is spreading very fast in South Texas. It was rated as 100S on 'TAM 110', 'TAM 112', 'Jagger', and 'Jagelene' in College Station. It has also started to develop at McGregor. In a recent visit to Castroville, Jackie Rudd reported that LR was near 100S on FL of Jagger and Jagalene; 20S on TAM 112; and trace on TAM 111 FL but considerable in the lower canopy.

Texas (cont'd): Dr. Jackie Rudd (Professor/Wheat Breeder, Texas A&M University) 29-Mar: I drove from Amarillo to Castroville last week with stops along the way. Good plant development, head-rows are lush but no lodging. Most plants are late boot to early flowering. Powdery mildew still heavy in lower and mid-canopy and some on flag leaf of highly susceptible. Leaf rust was near 100S on flag leaf of Jagger and Jagelene; 20S on TAM 112, trace S on TAM 111 flag leaf but considerable in lower canopy. I did not see any stripe rust in the plots, spreader, or head-rows that I walked – there might some in other parts of the field.

Texas (cont'd): Jim Swart (Entomologist (IPM), Texas AgriLife Extension), 29-Mar: The wheat crop is maturing rapidly under these warmer than normal growing conditions. The earliest maturing varieties are flowering (Feekes 10.5.1), and the later varieties are midway between full flag leaf emergence (Feekes 9) and the boot stage (Feekes 10). In my almost 30 years working in this region, this is the best overall wheat crop I have seen. At this writing, the long term weather forecast does not predict temperatures to dip much below 50° F, so the threat of a late freeze is rapidly diminishing.

Stripe rust has been widespread in our susceptible Patton SRWW fungicide block, but infection has been low in most commercial varieties. The only commercial variety that is quite susceptible to this disease is Terral 8558. Most of the growers that plant this variety have already sprayed their wheat with tebuconazole, so they are well ahead of the infection. The tebuconazole treatment will provide 35 days of leaf protection from this pest, sufficient time for the plant to complete the grain filling process.

The only leaf rust infection observed so far is in Jackpot HRWW. Active pustules were found on the lower leaves in our research plots two days ago.



Kansas: Dr. Erick De Wolf (Wheat Extension Pathologist, Kansas State University), 29-Mar: The wheat crop in Kansas ranges between the jointing to boot stage of growth. I suspect some wheat in Southeast Kansas is already be heading. This is 2 or 3 weeks ahead of normal crop development.

Just a quick update on the stripe rust situation in KS. Stripe rust was also found in research plots near Manhattan, KS (Northeast, KS) today (3/29/12). The variety for this find is 2137, which is known to be MS-S to stripe rust. Growth stage was flag leaf emergence. Stripe rust was observed in Sedgwick County (South Central, KS) yesterday (March 28). Gary Cramer, Extension Agent for Kansas State University, reported the find. Gary indicates that low levels of

stripe rust in the mid canopy of a production field west of Wichita. The wheat in this field was near flag leaf emergence at the time stripe rust was detected. The grower indicated that this field was planted with the variety "Everest". Everest was considered moderately resistant to stripe rust in 2010 when KS experienced a severe epidemic. My discussion with Bob Bowden, USDA wheat rust specialist here in Manhattan, suggests that Everest often develops some symptoms of stripe rust but the reaction type has been moderately resistant in previous years. I will do additional scouting and checking for infections this next week.

Leaf rust was detected in research plots near Manhattan (Northeast, KS) today (March 29th). The incidence of leaf rust was very low (<1%) in these plots. The wheat in this field was at flag leaf emergence and leaf rust was found in the mid-canopy. The infection was on an older variety "2137" that is known to be susceptible to leaf rust. No reports of stem rust to date in Kansas.

Severe tan spot was reported in Riley county(Northeast, KS), and powdery mildew continues to increase in many areas.

Aphids are present at considerable numbers in Southeast Kansas and have also been observed near Manhattan.

Arkansas: Dr. Gene Milus (Professor/Wheat Pathologist, University of Arkansas) 29-Mar: Among lines in the Arkansas variety test, growth stages range from flag leaf emerged to flowering complete at Stuttgart and Marianna and flag leaf emerging to early flowering at Keiser. Most lines are at boot stage.



Stripe rust has slowed considerable on contemporary varieties listed as susceptible. However, compared to Croplan Genetics 514W (~90% severity and susceptible infection type Newport), all contemporary varieties have a useful level of resistance. Reactions at Newport confirmed that this year's stripe rust is avirulent on Yr17.

Septoria and Stagonospora leaf blotches are moving up on some varieties at most locations. A trace of leaf rust and BYD was found here and there.

Dr. Richard Grantham
Director, Plant Disease and Insect Diagnostic Laboratory

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