

PLANT DISEASE AND INSECT ADVISORY



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Stripe Rust Found In Oklahoma - Wheat Disease Update Bob Hunger, Extension Plant Pathologist

On March 22nd, I visited variety trials and fields in central Oklahoma near Apache (about 25 miles north of Lawton), and in southwestern Oklahoma near Frederick, Tipton, and Altus.

At nearly all of the stops I made, I saw aphids (greenbugs or bird cherry-oat aphids), signs of aphid feeding, aphid predators, and spots of what I believe was barley yellow dwarf virus. Additionally, I saw **leaf rust pustules on lower leaves in most of the fields or plots**. More specifically, at:

Apache, OK:

- I saw very **little evidence of wheat soilborne mosaic or wheat spindle streak mosaic**, where these two diseases have typically been observed in the past.
- There was moderate to **severe powdery mildew** in the trials and fields. I was in several fields of Jagalene that were severely mildewed, with the mildew completely covering the lower stems and leaves. Upper leaves were chlorotic and had sporulating mildew pustules. This wheat did not yet have the flag leaf emerging, but after the losses attributed last year due to mildew, these fields are likely candidates to be sprayed this year.
- In a field of 2174 I **found pustules of wheat stripe rust on the lowest leaves**. These leaves were quite yellow but still alive, and appeared to be harboring pustules containing viable spores.

Southwestern OK:

- One field that Aaron Henson (Tillman County Extension Educator) took me to was **severely infected with septoria**. The wheat was earlier than stage 8, with the top of the canopy appearing from the road to be frost-burned. However, instead of frost the cause was septoria.
- Another field I visited with Aaron in Tillman County was **heavily infested with tan spot**. This was a no-till field, and the residue was covered with the fruiting bodies (pseudothecia) of the tan spot fungus. (photo at right)
- A field of Tomahawk wheat that was just approaching growth stage 8 was **heavily infested with stripe rust**. Again, the top of the canopy appeared frost-burned, but examination revealed this discoloration was due to stripe rust. (photo next page).
- Many plots in trials at the Altus station were moderately infected with stripe rust and/or leaf rust, and as stated above, I saw either aphids or evidence of aphid feeding as well as predators (lady beetle larvae or lady beetles).





Updates from other states:

- TEXAS – Monday, March 21: I just returned from looking at wheat nurseries across Texas. I found leaf rust and stripe rust in every nursery I looked at. Severities ranged from a trace in the Panhandle to severe in south Texas and some locations in northcentral. The relative severity of leaf rust versus stripe rust differed from location to location. Powdery mildew was at moderate levels in some "extra lush" locations, but severities were much less than what we saw last year. Winter wheat is jointing in most locations and the early varieties will start to head this week in south Texas. Yield potential is generally good across the state. I have heard of several reports of fungicide applications, but I don't really know how prevalent this has been. None of the currently popular varieties are resistant to the prevalent leaf rust races. The stripe rust resistance in Jagger, Jagelene, Cutter, and TAM 111 is still effective. Dr. Jackie Rudd, Associate Professor, Wheat Breeding, Texas A&M Agricultural Research Center
- NEBRASKA - Tue, 22 Mar 2005: It looks like leaf rust overwintered in southern Nebraska as we have had some reports of orange pustules present on the lower more protected leaves. This is in an area that has a significant leaf rust outbreak last fall and because of good fall moisture and a long fall some of the wheat in that area put on a lot of growth before winter. We did have some below zero periods last winter but those occurred when the wheat had good snow cover so those lower leaves stayed green all winter. – John E. Watkins, University of Nebraska

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