



**Extension**

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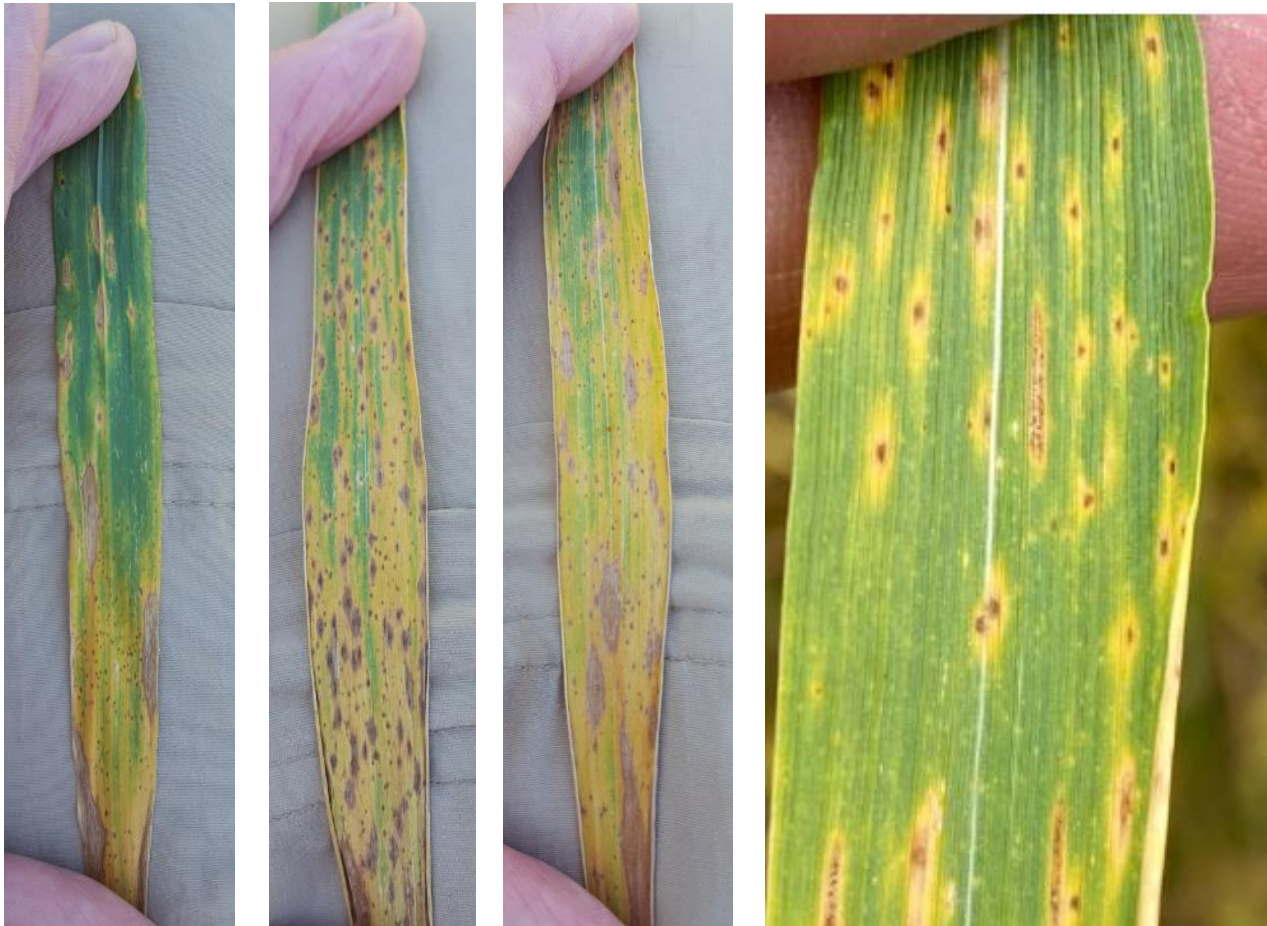
**Wheat Disease Update – 22 May 2020**

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The disease situation in Oklahoma has not changed significantly since my last update on May 15th. The weather in Oklahoma has remained atypically cool and mostly dry; however, off-and-on rain is forecast over much of the state starting tonight and into next week. This will provide excellent conditions for continued grain filling, and typically would also provide conditions favorable for foliar diseases to increase. However, over about the southern half of the state, much of the canopy has turned or is turning and no longer will be threatened from foliar diseases. For example, Dr. Brett Carver (OSU Wheat Geneticist & Breeder) was in Tipton (southwestern OK) earlier this week and indicated most of the wheat he saw was within about 7-10 days of being ready to harvest. Here around Stillwater, most of the canopy is turning, and the grain is mostly around late milk to early soft dough. On wheat such as this, foliar diseases are no longer a concern, and wheat at this stage even with green foliage is way past the time to spray. Josh Bushong (Area Extension Agronomy Specialist) indicated diseases overall are lacking in northwestern Oklahoma and the Oklahoma panhandle primarily because of dry conditions.

On Tuesday, 19-May, I took a trip to Kildare (north of Ponca City) over to Cherokee (northern OK) and to Lahoma (just west of Enid). On the same day, Dr. Amanda de Oliveira Silva (Asst Professor & Small Grains Extension Agronomist) started in Alva (about 15 miles west of Cherokee) and then worked her way east to Cherokee and Lamont (north-central OK about 15 miles west of I-35 at the Tonkawa exit, highway 11). Wheat in a field near Alva and in the variety trials near Cherokee, Lamont, and Kildare were in the late milk to soft dough stage. In a field near Alva, Dr. de Silva saw very little rust (leaf or stripe) or other foliar diseases (too dry). At the variety trial near Cherokee, rust (both leaf and stripe) as well as powdery mildew were present but sparse. In the variety trial near Lamont, Dr. DeSilva did observe moderately severe leaf rust but the leaves, although still having some green area, are turning/dying quickly. The most common symptoms seen at all these variety trials was the leaf browning/spotting (Figure 1) that I've talked about in the last couple of updates. This browning/yellowing/leaf spotting is curious, because there appears to be diseases involved as well as environmental/weather factors such freeze and perhaps drought and wind. For example, in the photo on the right in figure one, you can see dead areas consistent with Septoria leaf blotch as indicated by the irregular, small blotchy areas in which pycnidia (small black spots) of the Septoria fungus can be observed. Many of the other spots appear to be consistent with tan spot symptoms, but the tan spot fungus has been only occasionally isolated from such leaves. I am continuing to isolate from leaves such as those in Figure 1 to try to ascertain the cause, but remain puzzled at the cause.

Figure 1. Various “types” and “degrees” of leaf browning/yellowing/spotting observed on wheat across northern Oklahoma during the week of May 18th. (right photo credit; Dr. Brett Carver; OKSU).



So in summary, the time for active foliar diseases in Oklahoma is coming to an end as the crop is maturing and moving toward senescence. It is possible that foliar diseases such as leaf rust could still appear in northwestern OK and the OK panhandle, but dry conditions have prevented that to this point in time, and the wheat crop in Oklahoma is moving steadily toward harvest.

#### **Disease and Insect Diagnostic Laboratory**

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