

PLANT DISEASE AND INSECT ADVISORY



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WHEAT DISEASE UPDATE Bob Hunger, Extension Plant Pathologist

The following is a summary from some observations from around Stillwater and information I have heard from producers and colleagues in other states over the last week or so.



Wheat Soilborne Mosaic Virus (WSBMV) & Wheat Spindle Streak Mosaic Virus (WSSMV):

Symptoms of both of these virus diseases have been quite strong this year in my disease nursery at Stillwater as well as in surrounding plots. Hence, if you plant varieties susceptible to WSBMV or WSSMV, this should be a good year to identify fields in which only resistant varieties should be planted in the future. For the reaction of specific varieties to these viruses and other diseases, please go to:

<http://www.wit.okstate.edu/varietyinfo/jul2003wvcc.html>.

Leaf rust:

In Oklahoma, the incidence of leaf rust is very low. A few pustules of leaf rust have been seen on Jagger around Stillwater, but I have not heard of any reports of a high incidence of leaf rust from anywhere in the state. Dr. Brett Carver (OSU Wheat Breeder) took a tour from Stillwater to Goodwell to Sweetwater to Ft. Cobb to Kingfisher to Marshall, and reported seeing symptoms of only WSBMV/WSSMV. He did see some drought and other problems, but no foliar diseases. A report I received from the Cereal Disease Lab in Minnesota indicated that leaf rust races collected from Oklahoma and Texas in the early winter caused leaf rust on Jagger, Thunderbolt, Tam 110, and Jagalene.

In Texas, leaf rust appears to be more scattered than last year, but where it is occurring, the severity seems to be higher than last year. For example, 60% severity levels have been reported on susceptible cultivars in southern Texas (east of San Antonio).



In Kansas, I have one report of a low incidence of "old" pustules found in Sheridan County, which is in northwestern Kansas.



Stripe rust:

In Oklahoma – none so far.

In Texas – After a recent tour across south Texas, Rex Herrington (Research Associate at Texas A&M) reported on March 10 that he felt stripe rust would be light across this part of Texas. He observed that areas of stripe rust he had previously observed had mostly dried-up.

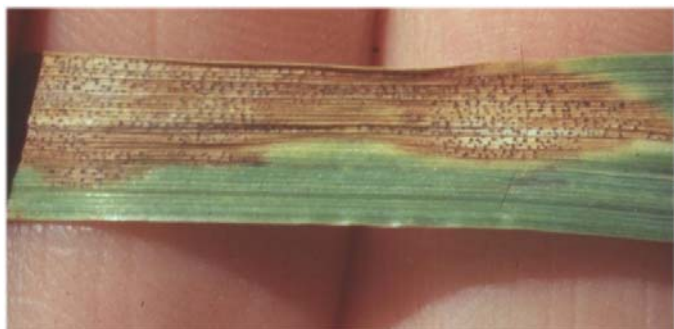
Powdery mildew:

Reports of severe powdery mildew continue to be heard from across Texas and Oklahoma. Rex Herrington reported that powdery mildew was widespread east of a line from Uvalde to Brady to Vernon, and is causing a significant loss of leaves on many varieties. I have seen similar levels of powdery mildew on susceptible varieties around Stillwater. How severe and if the powdery mildew continues will depend on the weather.



Tan spot/Septoria:

Roger Gribble has reported seeing tan spot/septoria symptoms in a number of fields across northern and northwestern Oklahoma, and I have seen the same in a few plots around Stillwater. Both diseases also have been reported in many wheat fields in Arkansas. The initial inoculum of both of these diseases comes from straw residue left in the field, so expect to see these diseases the most severe in fields where they occurred last year and that have a high amount of residue. Infection and spread of both of these diseases are highly dependent on rain and moisture on leaf surfaces as the wheat continues to grow; so, if dry conditions occur, then the spread of tan spot and septoria should slow down or stop.



Root rots:

This is somewhat early in the spring to see the effect of root rots, but Gary Strickland in southwestern Oklahoma has reported seeing large spots of wheat plants dying in some fields. This appears to most likely be a combination of browning root rot (caused by the fungus *Pythium*), common root rot (caused by the fungus *Bipolaris sorokiniana*), and possibly



nematodes. These spots are located in fields planted late last fall that never really became established because of the drought. Hence, plants in these fields were still at the 2 or 3 leaf stage, and in essence, are seedlings. Then, over the last 2-3 weeks it was quite wet and cool, so *Pythium* and nematodes in the soil would have been active and could have caused this type of damage.

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