

Wheat Disease Update – 11 February 2020
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This is an early season update to summarize a view items that have come up during this week. To start however, I need to repeat that this past fall and winter have been amazingly lacking in diseases. The Diagnostic Lab only received a few wheat samples during the fall, none of which were found to be associated with a pathogen/disease. Causes included low pH, nutrition, and/or environment. This lack of disease still seems to be the predominate scenario. Around Stillwater, I was not able to find any rust or powdery mildew in any of the trials I examined this week. Additionally, it appears as though foliar disease is absent in south Texas as well as indicated by Dr. Amir Ibrahim (Regents Professor, Small Grains Breeder/Geneticist, Texas A&M University, College Station, TX) who indicated to me that,

“It has been really quiet here. We have not seen stripe or leaf rust so far. I doubt the former will be an issue this year since it has not established yet and it is already getting warmer. However, I expect to see heavier leaf rust in mid-April if it continues to be this warm.”

Hence, it appears that early season stripe rust and leaf rust should not be a major concern in Oklahoma. In contrast, leaf spot diseases (especially tan spot) should be watched for if you have wheat planted into wheat residue. Josh Anderson (Senior Research Associate, Noble Research Institute, Ardmore, OK) found tan spot in no-till wheat plots planted into wheat residue near Burneyville in far south-central OK (Figure 1). Tan spot can be damaging to seedling wheat especially when it occurs in emerging spring wheat in northern states. However, tan spot also can be damaging to winter wheat if infection is severe in the spring as plants are coming out of winter dormancy. Often an early season fungicide application is used to control not only tan spot but also early season stripe rust and powdery mildew. Such an early season application (late February/March) will not provide protection from leaf rust later in the season (April/early May). If you do have wheat planted into wheat residue, I highly recommend scouting for the presence of not only tan spot, but other early season foliar diseases such as Septoria and Stagonospora leaf spots, powdery mildew, and early season stripe rust. If any of these diseases are seen as severe in late February or March, applying an early application of a fungicide may be beneficial. Keep in mind however, that the timing for an early season fungicide application does not coincide with the optimum timing for top-dressing with fertilizer. If it is likely that two applications will be used, I recommend making the first application with a lower cost generic and reserve the second application for a higher priced premium fungicide.

For a photo guide to wheat diseases, go to:

<http://dasnr22.dasnr.okstate.edu/docushare/dsweb/Get/Document-11682/E-1024%20Wheat%20Disease%20Identification.pdf>

For more information on fungicide applications, see:

CR-7668 (Foliar Fungicides and Wheat Production in Oklahoma) available at:

<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-4987/CR-7668web2019.pdf>,

and,

PSS-2138 (Split versus Single applications of Fungicide to Control Foliar Wheat Diseases)

available at <https://extension.okstate.edu/fact-sheets/split-versus-single-applications-of-fungicides-to-control-foliar-wheat-diseases.html>

Figure 1. Leaf spotting of wheat due to tan spot on wheat growing in a no-till field near Broken Arrow, OK. Notice the small, tan spot present in many of the lesions as indicated by the arrows. [Photo credit: Dr. Anderson, Noble Research Institute, Ardmore, OK]



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