

Wheat Disease Update – 31 May 2023
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During the last two weeks of May, high incidence and severity of leaf spotting diseases (mainly spot blotch and *Septoria tritici* blotch) were observed in multiple wheat fields in Oklahoma (**Figure 1**). These diseases were favored by the abundant rainfall during the month of May. Severe leaf spotting was found in Stillwater (Payne County), Morris (Okmulgee County), Lahoma (Garfield County), and Chickasha (Grady County). The wheat crop in these locations was at dough stage, therefore the impact of these diseases on yield should be limited. In addition to leaf spotting, *Stagonospora glume* blotch was found in high incidence and severity in wheat fields and breeding nurseries in Stillwater and Morris (**Figure 2**).



Figure 1. Leaf spotting diseases in a wheat field in Morris, OK (May 16, 2023).



Figure 2. *Stagonospora glume blotch* symptoms on wheat heads in Stillwater, OK (May 17, 2023).

In my previous disease update, I reported trace levels of stripe rust and leaf rust during the first two weeks of May. Stripe rust incidence did not increase and only a very few hotspots were found in Stillwater, Chickasha, and Balko (Beaver County). Leaf rust incidence was low to moderate in Stillwater and Lahoma during the last two weeks of May. The highest incidence and severity of leaf rust (**Figure 3**) were observed in Chickasha (OSU South Central Research Station) during the last week of May. Both rust diseases were too late during the growing season to affect yield.



Figure 3. Leaf rust symptoms observed in Chickasha, OK (May 22, 2023).

Stem rust was also found on some breeding lines from the Great Plains at the OSU South Central Research Station in Chickasha (**Figure 4**). Stem rust was rarely reported in Oklahoma. The stem rust pathogen race found in Chickasha is most likely an avirulent U.S. race like QFCSC, because it was affecting only some wheat lines in the breeding nursery. To confirm the race identify, infected wheat stem samples were sent to the USDA-ARS Cereal Disease Lab in Minnesota for race identification.



Figure 4. Wheat stem rust observed in Chickasha, OK (May 22, 2023).

The moisture during the month of May also favored the appearance of loose smut that was observed in multiple wheat fields (**Figure 5**). As wheat harvest is starting in Southern Oklahoma, seed from fields with loose smut infections should not be saved for coming seasons.



Figure 5. Loose smut symptoms on wheat heads.