

Wheat Disease Update – 12 May 2022
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Root/crown/foot rots were observed in multiple wheat fields in April and May in Woods, Cherokee, Blaine, Cotton, and Payne counties. Dr. Amanda Silva reported severely damaged wheat plants in drought stressed fields mainly in Cherokee and Woods counties (**Figure 1**). Infected plants were stunted and white and had poor root systems. Although the plants were drought stressed throughout the growing season, much of the damage was not noticeable until after wheat heading. Dr. Silva observed pinkish discoloration on infected plants in Cherokee after peeling the leaf sheath in the lower stem internodes, which indicates that the infection was caused by Fusarium (**Figure 2**).



Figure 1. White, stunted, and drought-stressed plants showing symptoms of root/crown/foot rots (Cherokee county, Oklahoma; photo credit: Dr. Amanda Silva; May 12, 2022).



Figure 2. Pink discoloration indicates that root/crown/foot rot was caused by *Fusarium* (Cherokee county, Oklahoma; photo credit: Dr. Amanda Silva; May 12, 2022).

The rain in early May in some locations in Oklahoma provided suitable environmental conditions for the appearance of some fungal diseases including rusts. This week, stripe rust was observed in the Stillwater Agronomy Research Station on susceptible wheat varieties like ‘Pete’ and some OSU breeding lines (Figure 3). Leaf rust was found on the susceptible wheat variety ‘OK Bullet’ and on some OSU breeding lines (Figure 4). Rust diseases have not been found in other locations in Oklahoma. The current pressure is low and late compared to the previous year due to drought conditions through the growing season. However, rust disease incidence can increase in coming weeks if weather conditions are favorable.



Figure 3. Stripe rust on a susceptible OSU winter wheat breeding line in the Stillwater Agronomy Research Station, Oklahoma (the photo was taken on May 10, 2022).



Figure 4. Initial leaf rust pathogen infection on a winter wheat OSU breeding line in the Stillwater Agronomy Research Station, Oklahoma (the photo was taken on May 10, 2022).