

Wheat Disease Update – 4 May 2021  
Bob Hunger, Extension Wheat Pathologist  
Department of Entomology & Plant Pathology  
Oklahoma State University - 127 Noble Research Center  
405-744-9958

Wheat tours last week to Walters (Cotton County) in south-central OK, Altus (Jackson County) in southwestern OK, and Apache and Chickasha (both in Caddo County) in central OK showed wheat in these areas to be either quickly approaching flowering, at flowering, or just past flowering. In all locations except Altus, stripe rust was by far the most prevalent foliar disease. At Altus, there simply has not been sufficient moisture for any foliar disease to develop. At the other locations, stripe rust was light at Walters, light to moderate at Apache, and moderate to severe at Chickasha. Stripe rust in trials around Stillwater also has increased significantly as shown in Figure 1. Although some leaf spotting and powdery mildew occasionally was observed on lower leaves, these diseases were at a low incidence and severity.

Figure 1. Severe stripe rust in a susceptible wheat line at Stillwater, OK on 5-1-2021.



Other diseases observed included barley yellow dwarf, which was present at all locations but did not seem to occur over large areas. Another disease observed at a low incidence was loose smut (Figure 2; left photo; credit Mike Schulte). If you recall, last year there was a higher than typical occurrence of loose smut across Oklahoma and although present again this year, loose smut seems to be more sporadic and at a lower incidence compared to 2020. Another disease that we did not see at these southern OK field days was wheat streak mosaic virus (Figure 2; right photo). However, we continue to receive a steady number of samples that are testing positive for *Wheat streak mosaic virus*, *High plains virus*, or both. These samples are coming from northern to northwestern OK and the panhandle, and it appears that mite transmitted virus diseases such as wheat streak mosaic and high plains virus will be a significant factor in certain fields in 2021.

Figure 2. A loose smutted head observed in southern Oklahoma the last week of April 2021 (left photo; photo credit: Mike Schulte) and wheat showing symptoms from a co-infection of *Wheat streak mosaic virus* plus *High plains virus* (right photo; photo credit Dr. Charlie Rush, Texas A&M University).



Finally, this week will be spent at wheat field days in northeastern OK (Afton) and in north-central OK (Kildare and Lamont). A complete schedule of those field days can be viewed at: <http://wheat.okstate.edu/virtual-plot-tour/2021OSUWheatFieldTours.pdf>