

GENERAL:

Most of the area received another timely rain event that will help finish the wheat crop, keep the corn crop growing, and provide enough soil moisture to get cotton out of the ground. Corn is growing slowly despite the temperatures being favorable for rapid growth, but the low soil moisture profile is causing the corn to not grow as rapidly as it could. Cotton planting conditions continue to improve as we have received some timely rains the last three weeks, and the air temperature is averaging above 60F, and soil temperatures are at or above 65F in the top four inches. Our wheat crop is progressing nicely despite maturity being delayed due to the dry winter and early spring. Over the last ten days I have found more fields in the area with Hessian fly issues, which appear to be a function of planting date, hybrid resistance, and the warmer than normal winter. Leaf rust and stripe rust infections have started to pick up, and I have found both in southern portions of Hill County. There are also some fields around the north side of Hillsboro that are infected with wheat streak mosaic virus and infested with the wheat curl mite both of which are not common pests in the area.

WHEAT:

Both leaf rust (**Figure 1**) and stripe rust (**Figure 2**) are now active in Hill County, and currently active pustules have been found in wheat near Abbott, Bynum, Chatt, and West. At this point severity of both diseases are low, but the recent rain event could cause both diseases to spread within fields and between fields. Some field checked prior to the rain on Tuesday had leaves in the lower and middle canopy with a lot of flecking which can be an indication the plants are fighting off infection of either leaf rust or stripe rust. The recent rains and the amount of rain received in the last 21 days along with the forecasted weather indicates that both rust diseases could easily increase in incidence and severity across the region. Based on the recent rain events, forecasted weather and the current price of the July Kansas City Hard Red wheat an application of a fungicide to protect the plant from yield losses caused by either rust pathogen.

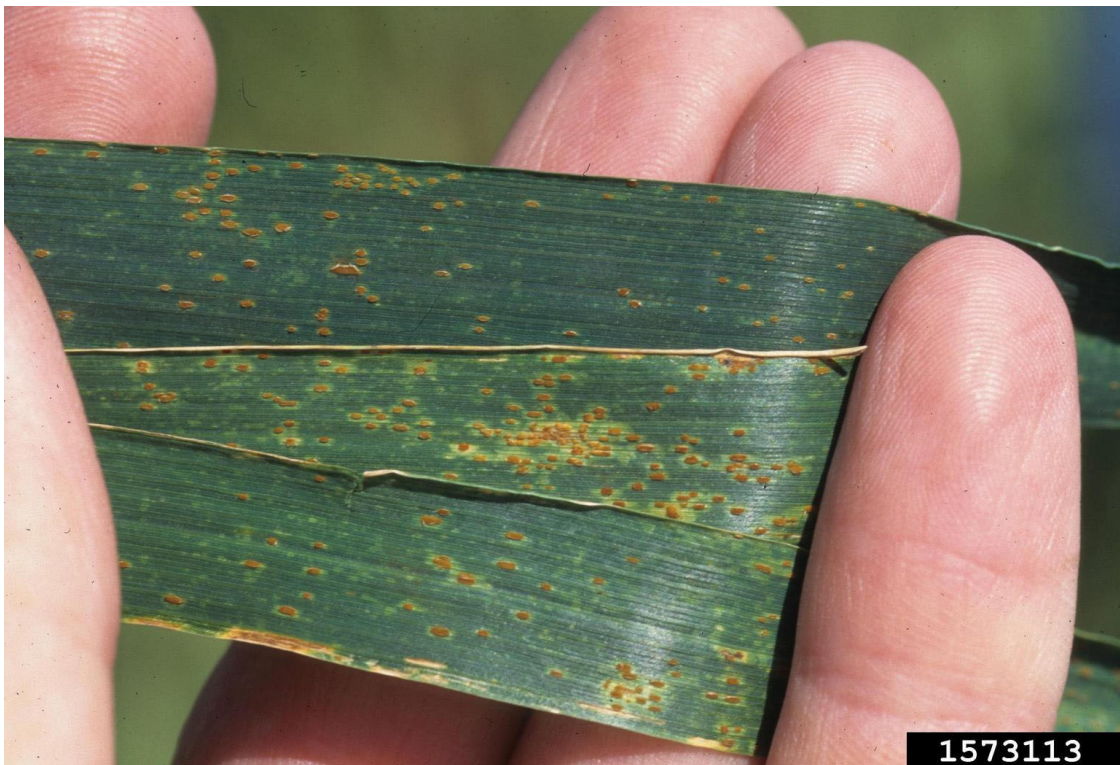


Figure 1. Leaf rust on wheat leaf. Photo credit: Gerald Holmes, Strawberry Center, Cal Poly San Luis Obispo, Bugwood.org



Figure 2. Stripe rust on wheat leaf

I have found wheat streak mosaic in a handful of fields on the northside of Hillsboro. This virus is not common in the area, and is spread through seedborne infections, the wheat curl mite, and probably other insects like various aphid species. Symptoms of wheat streak mosaic can be seen on the leaf, with a pattern of parallel broken yellow streaks (**Figure 3**). As symptoms progress the leaves of infected plants develop a mottled yellow appearance. If plants are infected early on between emergence and the start of tillering plants can become stunted and discolored. This virus can survive between wheat crops on volunteer wheat, and grassy weeds in the field and in bar ditches. Once plants are infected with wheat streak mosaic, there are no management options to minimize the effects it can have on yield except to minimize the spread of the vector to new regions of the field or new fields in the area. Viable management options for wheat streak mosaic include planting resistant varieties, control volunteer wheat and grassy weeds at least 2 weeks prior to planting, and to plant as late as possible to reduce the risk of infestation with vectors like the wheat curl mite.



Figure 3. Wheat streak mosaic virus symptoms on a wheat leaf.

The wheat curl mite has been found in fields around Hillsboro where wheat streak mosaic is being found. This mite is a small cigar shaped with a white body and will require magnification to see on the leaf surface (**Figure 4**). Unlike spider mites that are we familiar with in corn and cotton, this mite feeds on the upper leaf surface. Their feed causes the leaf margins to curl in toward the mid-rib of the leaf. This leaf curling gives infested wheat plants an onion leaf appearance. Field infestations of this mite is favored by dry warm weather, and early planted wheat crops. Because this pest lacks wings and moves slowly dispersal within the field and the environment is by wind currents, and their damage can be seen moving across the field in the same direction as the predominant wind direction. Unfortunately, foliar miticides in the past have not been effective, as the mite is protected from any contact pesticide application once the leaf blade curls. Viable management options for the wheat curl mite include, controlling volunteer wheat and weeds at least 2 weeks prior to planting, plating late as possible, and selecting a variety that has resistance to the wheat curl mite. Varieties with resistance to the wheat curl mite do exist, but most of these varieties are not adapted to be grown in our environment.

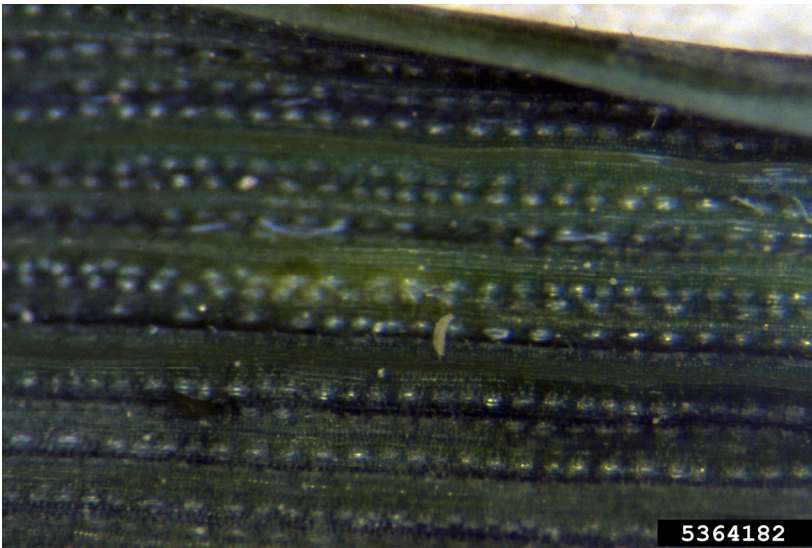


Figure 4. wheat curl mite inside a curled wheat leaf. Photo credit: Frank Peairs, Colorado State University, Bugwood.org

COTTON:

Cotton is starting to emerge around the county, and there are a few things we need to watch as the crop is starting to develop hopefully excellent stands. The first thing we need to keep an eye on is stand establishment and stand uniformity. On cotton planted on 30-inch row spacings, I personally do not mind fields have as low as 25,000 plants per acre (1.4 seeds per foot) if the stand is uniform and does not have any big skips. Secondly, we need to keep an eye out for thrips, as plants can be damaged by thrips in both excessively wet and dry conditions. I wish I had a crystal ball and could predict whether thrips will be a major issue for our cotton crop this year, but the warm dry weather can favor quick cotton growth, and the fact that our small grain crop still has a few weeks before starting to dry down can reduce the risk of thrips damage. On the downside our abnormally dry weather pattern can also favor thrips issues, as wild host near field edges are not lush, and they will be looking for green tender tissue to feed on right as our cotton crop is starting to get established.

There is still room for more cotton acres in the scouting program for the 2022 growing season. If you would like to sign up some fields for the scouting program, please contact me by calling the office or emailing me.

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