## Rust Update, June 13, 2023

Xianming Chen

## **Rusts in the Pacific Northwest**

Last week, we completed collecting the stripe rust data in our germplasm screening nurseries of winter crops and took the first time of stripe rust data of the spring crop nurseries at Mount Vernon in northwestern Washington (Skagit County). As always for this location under natural infection, wheat stripe rust was severe, up to 100% severity on susceptible winter wheat varieties and up to 60% severity on susceptible spring wheat varieties. Barley stripe rust was as usual, up to 80% severity on winter barley and 40% severity on spring barley. Both wheat leaf rust (**Figure 1**) and barley leaf rust were more severe in this year than in the last five years.



**Figure 1.** Leaf rust on wheat in germplasm screening nurseries at Mount Vernon, WA, June 7, 2023

In Lind, WA (Adams County), no rust was found in our experimental fields up to May 31.

In Walla Walla, WA (Walla Walla County), no stripe rust was found on May 31, and only one stripe of rust less than 1 inch long was found in susceptible spreader rows of winter wheat (soft dough stage) on June 12.

In Central Ferry, WA (Garfield County), only one stripe of rust in a half inch long was found in susceptible spreader rows of winter wheat on May 31. Although more plants of the susceptible winter wheat check were found to have stripe rust on June 12, the rust could not develop to the adequate level for screening varieties as plants reached soft dough. Stripe rust just appeared in the spring nurseries, and the plants were in the heading stage.

In our stripe rust monitoring nurseries at Hermiston, Oregon under irrigation, stripe rust was up to 60% severity on susceptible varieties of winter wheat (soft dough), but no rust was observed in the spring nurseries (heading to flowering) on June 12.

In our experimental fields near Pullman, WA (Whitman County), which were all inoculated, stripe rust has developed up to 80% severity in some of the susceptible check rows of winter wheat by June 8. The showers over the last weekend and relatively milt temperatures forecast for this week and next weak should allow stripe rust to develop to an adequate level for reliable data for both winter and spring crops of wheat and barley.





No stripe rust has been found in commercial fields. The rust season is over for winter wheat. For spring wheat, with the recent showers and relatively mild temperatures, stripe rust may show up in fields grown with susceptible varieties, especially in the Palouse region of Washington and Idaho, it will be better to check susceptible wheat fields in the coming two weeks, if rust incidence reaches 5% before flowering, a fungicide may be used. Otherwise, there is no need to apply fungicides as the rust pressure is very low.

## Stripe rust in the country

In addition to Texas, Washington, Oklahoma, Louisiana, Kansas, Virginia, and Oregon, which were reported to have stripe rust in the previous report on May 17, wheat stripe rust has been reported in South Carolina, California, Kentucky, and New York. Barley stripe rust has been reported in Washington and Arizona. In general, stripe rust has been low these reported states.