

Rust Update
June 26, 2009
Xianming Chen

The Pacific Northwest (PNW):

Wheat stripe rust has developed quite rapidly in the Palouse region (Whitman County of Washington and Latah County of Idaho) since it was first observed near Pullman in the first week of June. The winter wheat crop ranges from just after flowering to dough stages. Susceptible entries had 100% severity in our stripe rust monitoring and germplasm screening nurseries and some breeding nurseries around Pullman and near Colfax in Whitman County, Walla Walla (Walla Walla County) of Washington, Moscow of Idaho (Latah County), and Hermiston (Umatilla County) of Oregon. At the Pendleton Experimental Station (Umatilla) in Oregon, stripe rust reached 60% severity on susceptible entries. However, stripe rust has not developed to uniform severity on susceptible spreaders in most locations. Stripe rust has just showed up or developed up to 40% severity on susceptible entries in spring wheat nurseries. The relatively quick development of stripe rust is due to the good precipitation and cool weather conditions in June.

No stripe rust has been observed or reported in commercial wheat fields in eastern Washington (except for the Horse Heaven Hills area) and northern Idaho. Stripe rust will not cause significant damage on the winter wheat crop in this region as the crop is approaching maturity. However, spring wheat crop still has time for stripe rust to cause damage. Growers should start to check spring wheat fields for stripe rust, especially if susceptible cultivars are grown. When the rust develops to 5 to 10% severity, consider to spray the fields with fungicides.

In the western PNW, stripe rust season is pretty much over on winter crops. Stripe rust was very severe in nurseries in Corvallis, Oregon. Susceptible entries had 100% severity by the last week of May. In Mt. Vernon, Washington, stripe rust development has been little bit slower this spring due to unusually dry conditions in May and June. We finished winter wheat nursery notes by mid June and stripe rust reached 80% severity on susceptible entries. As this week, stripe rust has reached 100% severity but has not reached good uniformity yet on susceptible entries in spring wheat nurseries (flowering stage).

Today, Dr. Juliet Windes reported stripe rust of low incidence but active pustules occurring in commercial fields and breeding plots in southern Idaho and northern Utah.

Barley stripe rust just showed up on spring barley in our experimental fields near Pullman. The disease has been moderate in our nurseries in Mt. Vernon. In contrast, barley stripe rust was very severe in breeding nurseries in Corvallis. Some susceptible germplasms had 100% severity by the end of May.

Leaf rusts of wheat and barley have been relatively low in our nurseries in Mt. Vernon. We have found leaf rust on one leaf of a winter wheat breeding line in our nurseries near Walla Walla.

Stem rust infection has occurred on barberry and spring wheat fields in the Palouse region. In mid May, stem rust infection was barely observed on barberry leaves in Latah County, Idaho. The infection became severe by late May. Stem rust reached to 20% severity on spring wheat plants (heading stage) close to the barberry bushes on June 23. Plants with rust pustules were within 20 feet from the bushes. Last year, the same barberry bushes did not have much infection and no rust on wheat plants surrounding the bushes. As spring wheat and barley crops were planted later this year, stem rust will likely develop more than those in the last two years in the Palouse region, but should be sporadic. Spring wheat and barley growers in Latah, Whitman, Spokane, and Stevens counties should check their fields for stem rust.

Other Regions

Recently, stripe rust has been reported, in low levels, in Kansas, Virginia, and Colorado.