Stripe Rust Update, April 13, 2024

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Stripe rust widely occurring in the Pacific Northwest

Over the last 10 days, we were planting spring cereal nurseries and checking winter wheat fields in various locations. So far, we have found stripe rust in our disease monitoring and germplasm screening fields in all locations we have checked.

On April 2, we were planting spring wheat and barley at Walla Walla (Walla Walla County), Washington, stripe rust became relatively easy to find in our winter wheat nurseries compared to February 22, but was mostly still on the low leaves. However, rust has been developing much faster over the last 10 days with hot spots of several feet in diameter and rust on top leaves, heavily producing spores (Figure 1).

Figure 1. Stripe rust spores produced on winter wheat plants in an experimental field in Walla Walla, Washington on April 12.

On April 4, one spot of stripe rust was found in the susceptible spreader rows in our field at the Lind Dryland Research Station in Adams County, Washington (Figure 2).
Figure 2. Stripe rust observed on winter wheat in an experimental field at Linda, Adams County Washington on April 4, 2024.

On April 9, I was checking our winter wheat fields around Pullman (Whitman County), Washington and easily found stripe rust in susceptible spreader rows in our experimental plots on both Palouse Conservation Field Station farm (Figure 3) and Spillman Farm (Figure 4). This is the earliest stripe rust observations for the Palouse region since 2011 when stripe rust was found in February and developed into one of the most severe epidemics that year.

Figure 3. Stripe rust on susceptible spreader rows in the experimental field on Palouse Conservation Field Station northeast of Pullman, Washington on April 9, 2024.
On April 10 and 11, we were planting spring crops and taking the first stripe rust note for the winter nurseries in Mount Vernon (Skagit County) in northwestern Washington. Stripe rust was up to 100% incidence and 70% severity on susceptible wheat varieties (Figure 5). Although stripe rust is severe every year in this location, the severity was higher than normal at this time of year. Barley stripe rust was found only on two accessions in the field.
On April 12, we were checking our stripe rust monitoring nurseries planted at the Oregon Station University Hermiston Agricultural Research and Extension Center (Umatilla County) northeastern Oregon. Stripe rust was easily found in our winter wheat plots (Figure 6), and the disease was also found on winter triticale plots. At Central Ferry (Garfield County), Washington, we found stripe rust in our experimental plots and breeders’ nurseries (Figure 7). On the way to Hermiston, Walla Walla, and Central Ferry, we checked several wheat fields in the Horse Heaven Hill (Benton County) and Walla Walla areas in Washington but did not find stripe rust.

Figure 6. Stripe rust observed in a stripe rust monitoring nursery in Hermiston (Umatilla County), Oregon on April 12, 2024.

Figure 7. Stripe rust observed in an experimental field in Central Ferry, Washington on April 12, 2024.
These observations support our previous forecast of severe stripe rust in 2024 and show a higher-than-normal pressure currently in the eastern Pacific Northwest. The current recommendations are the same as those made in the last stripe rust update issued on March 1. Fungicide application is recommended for the fields planted with moderate to susceptible winter wheat varieties with stripe rust ratings 5 to 9 in the early growth season at the time of herbicide application, and a second application may be needed 20 to 30 days after the first application, which can be determined by whether active stripe rust appears in the field after the first application. For spring wheat, if you have not planted, please choose resistant or moderately resistant varieties (stripe rust ratings 1 – 4). For fields planted with susceptible (stripe rust rating 8 and 9) or moderately susceptible (stripe rust ratings 6 and 7) varieties, please consider fungicide application at the time of herbicide application.

**Stripe rust in the country**

So far, stripe rust has been reported in Louisiana, Texas, Washington, Arizona, and Oregon. Based on the report by Dr. Shiyu Liu et al. on April 7, stripe rust was widely spread and continually developing in Texas. All these indicate that 2024 is likely an active year of stripe rust in the country. Growers should check their wheat fields for signs of stripe rust and apply fungicides when needed, following recommendations in your region.

We are welcome you to send stripe rust samples to us for race identification. Please use the following shipping address from sending samples:

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