

Stripe Rust Update, May 31, 2024

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Stripe rust in the Palouse region

Yesterday, I was checking wheat and barley fields in the Palouse region (Whitman County, Washington and Latah County, Idaho). Winter wheat ranged from boot (Feekes 10) and heading (Feekes 10.5), and winter barley reached the flowering stage (Feekes 10.52). Spring wheat and barley ranged from early tillering (Feekes 2) to early stem elongation (Feekes 6) stages. No stripe rust was found in any of checked commercial fields of winter and spring wheat and spring barley, but the rust pathogen heavily growing on winter wheat plants in germplasm screening and breeding nurseries, reaching to flag leaves (**Figure 1**). Although much less severe, barley stripe rust appeared on winter barley plants (**Figure 2**). Stripe rust was easily found on goat grasses out of and within commercial wheat fields even though no rust on wheat plants. In the past two weeks, stripe rust was easily found on goat grasses near wheat fields, along roads, and in parks, indicating high rust pressure. No rust in commercial winter wheat fields in the region indicate that the fields were planted with resistant varieties and/or have been applied with fungicides.



Figure 1. Stripe rust on winter wheat in an experimental field near Pullman, Washington, May 30, 2024.



Figure 2. Stripe rust on winter barley in an experimental field near Pullman, WA, May 30, 2024

Recommendations for stripe rust management

In the past two weeks, there were reports of stripe rust re-emerging in winter wheat fields that have been sprayed with fungicides in central Washington. As the temperatures have been low and the forecast weather will still cool for the next week, high-temperature adult-plant resistance will not fully express until a week from now, stripe rust pressure will likely increase. For winter wheat, if you planted moderately susceptible and susceptible winter wheat varieties (stripe rust ratings 5 – 9), it is advisable to check your fields about 20 – 30 days after fungicide application depending upon fungicides. If you see active stripe rust pustules and plants do not reach the flowering completed stage (Feekes 10.54), please consider the second application of fungicides. It is critical to choose fungicides as many chemicals cannot be used after Feekes 10.5 (flowering stage). Some chemicals can be used 30 days before harvest, such as Alto, Avaris 2XS, Caramba, Folicur, Muscle, Priaxor, Proline, Prosaro, Tebucon, Tebustar, Tebuzol, Tegrol, Toledo, Topguard, and Viathon.

For spring wheat, fungicide application is recommended for fields grown with moderately susceptible and susceptible varieties (stripe rust ratings 5 – 9), but the second application is generally not necessary.

For spring barley, it is recommended to check fields for stripe rust and apply fungicide before rust reaches 5% incidence.

Stripe rust in the country

Wheat stripe rust has been widespread. So far, the disease has been reported in Louisiana, Texas, Washington, Arizona, Oregon, Georgia, Mississippi, Alabama, North Carolina, Oklahoma, Kansas, California, Virginia, Nebraska, Indiana, Illinois, Kentucky, Tennessee, Arkansas, Maryland, Idaho, Michigan, New York, South Dakota, Utah, and Minnesota. Barley stripe rust has been reported in California and Washington.

Stripe rust samples

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

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