Columbia Basin Agricultural Research Center

Oregon State University

48037 Tubbs Ranch Road

Adams, Oregon, 97810

March 14, 2024

RE: Stripe rust update

From: Chris Mundt, Ryan Graebner, Christina Hagerty

Dear Growers and Stakeholders,

Most of you have probably seen the stripe rust predictions released by Dr. Xianming Chen from the USDA/Washington State University. These predictions are based on a model that has been fairly accurate over the years in predicting stripe severity based on winter weather. This model is predicting severe stripe rust this year. A key determinant of how severe stripe rust will be is the time when rust first appears, as early epidemics allow for more generations of the pathogen to occur during the growing season. The Washington model predicts early appearance of rust and indeed rust has already been found in the state of Washington.

In Oregon, Christina Hagerty and Chris Mundt regularly check experimental plots in which they might expect stripe rust to first appear and often receive rust reports from growers and fieldmen. As of March 13, stripe rust still has not been reported anywhere east of the Cascades in Oregon. On March 13, Chris Mundt found stripe rust in just one experimental plot of a disease screening trial in Corvallis that was planted about a month earlier than normal recommended practice for the Willamette Valley, though the rust was not yet very heavy. In past years with severe epidemics, stripe rust was easy to find in the first few days of February in Corvallis.

We believe the lack of rust in Oregon thus far is likely due to drought in two of the last three years that has reduced stripe rust severity and thus the availability of inoculum to overwinter. There are many possible reasons why stripe has appeared already and has been easy to find in Washington but not Oregon, for example, chance weather events that favored fall infection in Washington, later crop maturity times, greater wheat acreage, etc.

We expect stripe rust severity in Oregon to be less than in years when epidemics began very early, for example, late January/early February. Nonetheless, stripe rust spores being produced in Washington will eventually be dispersed to Oregon, and there may be overwintering stripe rust that has not yet been detected in Oregon. How stripe rust develops will of course depend upon weather conditions for the rest of the season. In any case, fungicide should be added to spring herbicide applications for highly susceptible wheat varieties and fields should be scouted for rust.

The advice provided by Ryan Graebner on March 1, 2024 still holds:

“. . . please watch fields planted with susceptible winter wheat varieties closely, and when possible, plant resistant spring wheat varieties. Stripe rust resistance ratings for winter wheat varieties can be found in the OSU Disease Summaries and the WSU Variety Characteristics tables, while resistance ratings for spring wheat varieties can only be found in the WSU Variety Characteristics tables (links below).

https://cropandsoil.oregonstate.edu/wheat/variety-trials/2023-oregon-wheat-and-barley-yield-trial-data

https://smallgrains.wsu.edu/variety/2023-variety-data/

Keep in mind that many of the Coaxium wheat varieties are highly susceptible to stripe rust, as is the two-gene Clearfield variety UI Magic.

We will keep producers and other stakeholders informed as the season progresses. If stripe rust is found in any fields please inform one of us via the contact information provided below.

Sincerely,

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