

Rust Update May 24, 2013

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Stripe rust in the Palouse region of Washington and Idaho

Yesterday, I was checking wheat fields in the Palouse region of Washington and Idaho. Winter wheat ranged from jointing (Feeks 7) to heading (Feeks 10.1) and spring wheat ranged from just emerged (before Feeks 1) to jointing (Feeks 5). Stripe rust was relatively easy to find in experimental fields of winter wheat around Pullman, where susceptible wheat varieties are grown, but hard to find in commercial fields. In fact, I was only able to find one leaf with stripe rust pustules in one commercial field south of Colfax (Whitman Co., WA). In the experimental fields, stripe rust had moved from the bottom leaves to the middle and upper canopy, and incidences ranged from 1 to 10%, but had not form obvious foci yet. No rust was found in spring wheat fields.

Barley stripe rust was found on one leaf of headed winter barley in an experimental nursery on Spillman Farm near Pullman.

The application of fungicides together with herbicides in central Washington in April has reduced inoculum and spread to the east areas like the Palouse region. Most winter wheat fields in the Palouse region have been sprayed with herbicides and presumably together with fungicides. The dry weather in May until this week and high temperatures in the first half of the month have also contributed to the relatively low infection and slow development considering the relatively early rust occurrence commonly found in the central Washington and south-central Washington in Early April and the relatively early starting of stripe rust in the Palouse region in early May.

The precipitation in this week has created ideal conditions for stripe rust infection. The cool weather conditions this week and next 10 days will be favorable for stripe rust development. Fields of susceptible and moderately susceptible winter wheat cultivars which have not been sprayed with fungicides at the time of herbicide application or sprayed more than three weeks ago should be checked on a weekly basis for stripe rust. If active rust appears, fungicide application should be considered. For spring wheat, fungicide application should be used for fields grown with susceptible or moderately susceptible cultivars at the time of herbicide application. For cultivar susceptibility to stripe rust, please check the Seed Buyer's Guide, stripe rust data of the variety trials sent late last year, or the data files in our stripe rust website (<http://striperust.wsu.edu>).

Stripe rust in other states

Nationwide, wheat stripe rust have been reported at various levels in Arkansas, Texas, Louisiana, Mississippi, California, Oregon, Oklahoma, Georgia, Kansas, Tennessee, South Carolina, Kentucky, Nebraska, Alabama, Illinois, Delaware, Virginia, and Indiana. Barley stripe rust has been reported in California, Oregon, and Washington.

Stem rust infection on barberry

Yesterday, rust aecia, which are assumed as stem rust based on our past experience, were observed on leaves of flowering barberry bushes near Potlatch in the Latah County, Idaho. The infection level was the lowest observed at this site this time of the year in the recent years. The low infection could be attributed to the dry conditions in May, but infection could increase with the good moisture this week. Also, the mature aecia are releasing aeciospores which may infect barley and wheat crops in the nearby fields as the moisture is good nowadays. Whether stem rust will develop to a significant level in the Palouse region like last year will depend upon the moisture conditions in June and July. Fields of wheat and barley in the Palouse region should be checked for stem rust starting in early July and use fungicides if stem rust is found.