

CEREAL RUST BULLETIN

Report No. 5

June 5, 2001

Issued by:

Cereal Disease Laboratory
U.S. Department of Agriculture
Agricultural Research Service
University of Minnesota
1551 Lindig St, St. Paul, MN 55108-6052

(612) 625-6299 FAX (651) 649-5054
markh@cdl.umn.edu

For the latest cereal rust news from the field, subscribe to the cereal-rust-survey mail list. To subscribe, send an email message with the word *subscribe* in the message body (not subject line) to:

cereal-rust-survey-request@coafes.umn.edu

Reports from this mail list as well as all Cereal Rust Bulletins are maintained on the CDL website (<http://www.cdl.umn.edu>).

- Wheat stem rust is light and scattered throughout the central Great Plains.
- Wheat leaf rust is lighter than normal in the southern U.S. this year.
- Wheat stripe rust is found from northern Oklahoma to east central South Dakota; losses have occurred in some Oklahoma and Kansas fields.

The small grain harvest is underway from southern South Carolina to central Oklahoma. Winter wheat maturity is one week behind normal throughout the central plains because of the cooler and wetter than normal weather. Small grain planting is continuing throughout the northern growing area and development of spring-planted grains is behind average maturity.

Wheat stem rust. During late May, traces of stem rust were found in wheat fields in west central Missouri and east central Kansas. Stem rust severities ranged from trace to 40% in plots from northwestern Arkansas to northwestern Oklahoma. In wheat plots in north central Oklahoma at the Lahoma experiment station, 20% severities were observed on 10% of the plants in plots of Chisholm, Lockett and Thunderbolt. Wheat stem rust development is scattered and light this year throughout the central plains area of the U.S.

Wheat leaf rust. During the last week in May, leaf rust was light in plots and only traces were found in fields from west central Kansas to west central Missouri (Fig. 1). In plots of Jagger in north central Oklahoma, 20% severities were found while in fields of Jagger in south central Kansas, 5% severities were observed on 1% of the plants. In south central Kansas wheat plots, 20% severities were found on Jagger at the late berry stage compared to 80% severities reported last year on Jagger in the same nursery at the same stage. The cooler than normal temperatures and excessive moisture during the last part of May actually slowed leaf rust development. As stated in the previous bulletin, this is an abnormally poor year for leaf rust development in the southern plains, which means there will be a reduced amount of leaf rust inoculum for the northern wheat growing area.



In late May, 20% severities were observed on *Aegilops cylindrica* (goatgrass) growing in the roadside in north central Oklahoma.

In late May, 20-40% severities were observed on plots of Thatcher wheat at Plymouth, North Carolina. Leaf rust incidence and severity on winter wheats in North Carolina was very light in 2001 compared to previous years. Some rust was observed on Coker 9663 and Foster in plots.

During the first week in June, traces of leaf rust were found in winter wheat plots in east central South Dakota.

During the fourth week of May, 60% wheat leaf rust severities were common in plots of susceptible varieties and in commercial fields throughout the Central Valley of California.

Wheat stripe rust. In late May, severe stripe rust was found in southern Kansas and northern Oklahoma (Fig. 2). The high temperatures in mid-May slowed the rust development but the cool humid weather in late May allowed the rust to reproduce further. Stripe rust defoliated some cultivars such as 2137 in northern Oklahoma and southern Kansas. By late May, in northern Kansas, severe stripe rust was reported on the same varieties as in the south. Jagger, Heyne, Betty, Scout 66 and several minor wheat varieties remain very resistant. Karl 92, 2174, Dominator, and some others are intermediate. Hondo and 2137 are the most stripe rust susceptible varieties. In south central Kansas plots, severities ranged from traces to 80%. In 2001, a large acreage of stripe rust infected wheat developed in late winter and early spring in south and central Texas. This provided inoculum for areas further north such as Kansas. Also, as was true in 2000, the cool spring and nighttime temperatures, which were in the 40s and 50s, plus humid weather were conducive for stripe rust development throughout the Great Plains. Losses to stripe rust in Kansas are expected to be as high as 20% in susceptible fields in some cases and statewide losses are expected in the 5-10% range. The infected areas in the central plains are providing stripe rust inoculum for states further north.

In late May, trace to 60% stripe rust severities were observed on *Aegilops cylindrica* (goatgrass) growing in the roadside in north central Oklahoma and south central Kansas.

In early June, traces of stripe rust were found in wheat plots in east central Nebraska. By early June, traces of stripe rust were found in winter wheat plots in east central South Dakota. Incidences ranged from trace to 5% on lower leaves with trace amount of rust. Growth stages of winter wheat varied between early boot to heading.

By late May, wheat stripe rust was increasing on susceptible winter wheat cultivars in the Pacific Northwest. Rust development is slower than normal because of the dry conditions in mid-May but during the last week weather conditions were more conducive for stripe rust increase in most of the Pacific Northwest.

Oat stem rust. On May 25, limited oat stem rust was found on wild oats (*Avena fatua*) in Sonoma Co. California. In general, oat stem rust development is equal to last year throughout the southern U.S.

Oat crown rust. In late May, 10% crown rust severities were observed in an oat field in north central Oklahoma. In mid-May, 50% rust severities were observed in plots in Davis, California and a collection of crown rust was made from *Avena fatua* in Sonoma County, California.



Buckthorn. In late May, crown rust aecial infections were still developing at the St. Paul, Minnesota buckthorn nursery. The plentiful moisture and warm temperatures have been ideal for aecial infection.

Barley stem rust. In mid-May, the first barley stem rust of the year was reported in a south Texas nursery at Uvalde. Moderate severities were reported on a few entries in the nursery.

Barley leaf rust. There have been no new reports of barley leaf rust.

Stripe rust on barley. By late May, barley stripe rust was increasing on susceptible barley cultivars in the Pacific Northwest. Rust development is slower than normal because of the dry conditions in mid-May, but during the last week weather conditions have been better for stripe rust increase in most of the Pacific Northwest.

Barley crown rust. There have been no reports of crown rust on barley yet this year.

Rye leaf rust. In late May, light leaf rust was observed on rye in a field in south central Kansas.

Rye stem rust. There have been no reports of rye stem rust this year.

Stem rust on barberry. In late May, stem rust aecial infections were found on susceptible barberry bushes in southeastern Minnesota.

Latest rust news. As always, for the latest cereal rust news, subscribe to the cereal rust survey mail list (see front page header) or visit the Cereal Disease Laboratory's web page (www.cdl.umn.edu) regularly. We greatly appreciate all the observations cooperators send to us for redistribution to our mail list members.



Fig. 1. Leaf rust severities in wheat fields - June 5, 2001

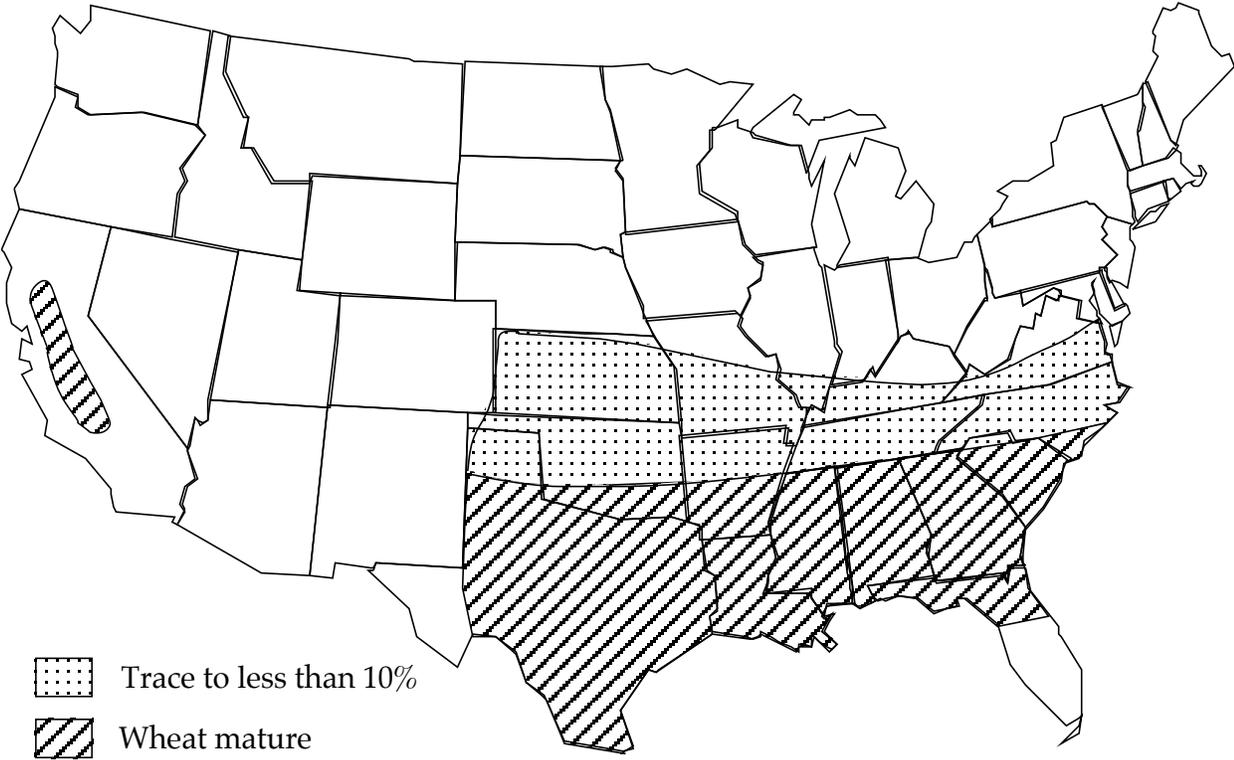


Fig. 2. Stripe rust severities in wheat fields - June 5, 2001

