

CEREAL RUST BULLETIN

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Issued by:

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- Stem rust foci were found in winter wheat in South Dakota and spring wheat in Minnesota.
- Wheat leaf rust in the upper Midwest is more severe this year than in the past 20 years.

The small grain harvest has commenced from central Pennsylvania to southern Nebraska. Winter wheat is generally in good condition and one week ahead of normal maturity throughout most of the U.S. In the northern small grain area, the spring-sown grains are erratic in crop development.

Wheat stem rust. In late June, foci of wheat stem rust 1 meter in diameter at 10% severity were found in plots of the susceptible spring wheat Baart in south central and west central Minnesota and in plots of winter wheat cultivars, e.g., 2174, in central and east central South Dakota. In winter wheat fields in southern Nebraska and in plots in north central Kansas, 10% severities were observed at the hard dough maturity stage. Wheat stem rust developed late in northern Kansas. Most of the cultivars are early maturing and therefore escaped the stem rust. The stem rust infected areas in the Central Plains are providing spores for susceptible wheats farther north. In much of the central and northern Great Plains the temperatures have been near normal and moisture has been ideal for the spore infection process to occur.

Wheat leaf rust. During the final week in June, leaf rust severities ranged from trace to 60% on flag leaves of susceptible winter wheat cultivars in central and eastern South Dakota plots and fields (Fig. 1). Winter wheat flag leaves are drying up quickly because of the leaf rust throughout South Dakota and southern Minnesota. The rust infections in South Dakota and Minnesota probably originated from inoculum sources in Oklahoma and northern Texas. During the final week in June, leaf rust severities of 10% were reported on the flag leaves and 60% severities on lower leaves of susceptible spring wheat cultivars, e.g., 2375, in plots in southwestern and west central Minnesota. In fields, severities ranged from trace to 10% on the lower leaves of spring wheats in western Minnesota and northeastern South Dakota. This year, leaf rust is more severe and concentrated in the Upper Midwest than it has been in the last 20 years. Abundant inoculum from the south has been deposited with the frequent rains, and weather conditions have



avored infection. The spring wheat cultivars currently grown are more susceptible than those in previous years.

By late June, wheat leaf rust was increasing on spring wheats in the Mount Vernon area of western Washington. In early July, traces of leaf rust were found in eastern Washington and northern Idaho fields.

Wheat stripe rust. There have been no new reports of stripe rust in the Midwest since the last bulletin (<http://www.cdl.umn.edu/CRB/99CRB/99crb6.html>).

By late June, wheat stripe rust was starting to increase on spring wheats in the Pacific Northwest, but rust losses will be minimal, since most of the cultivars have high temperature, adult plant resistance.

Oat stem rust. During late June, traces of oat stem rust were found in a commercial field in central Nebraska. This was the first report of oat stem rust since late April when it was reported in central Louisiana.

Oat crown rust. By late June, crown rust had developed very slowly at the Brookings, South Dakota nursery and trace to 20% severities were observed on lower leaves of susceptible cultivars at the early milk growth stage. In late June, 60% severities were observed in oat plots in south central Minnesota, while in fields 1-5% severities were found on the lower leaves. Traces of crown rust were seen in the nursery at Fargo, North Dakota.

Barley stem rust. In early July, traces of stem rust were found on the 2-row barley Hypana, in west central Minnesota.

Barley leaf rust. In late June, severities of 20% were reported on the lower leaves in spring barley plots in east central Nebraska and traces in plots in west central Minnesota.

Stripe rust on barley. In late June, barley stripe rust was increasing on susceptible cultivars in western Washington, while only traces were found in plots in eastern Washington. There is much less stripe rust than last year throughout the Pacific Northwest. The dry fall and cool dry May, which is the critical month for rust development, was not conducive for the disease.

Rye leaf rust. By the fourth week in June, 20% severities of leaf rust were found on lower leaves of spring rye in plots in southern and west central Minnesota.

Rye stem rust. There have been no new reports of rye stem rust since CRB #3 (<http://www.cdl.umn.edu/CRB/99CRB/99crb3.html>).





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Fig. 1. Leaf rust severities in wheat fields on July 6, 1999

