

CEREAL RUST BULLETIN

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Issued by:

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- Stem rust was observed in susceptible spring wheat plots in the upper Midwest.
- Wheat leaf rust in the upper Midwest is increasing on susceptible spring wheats.
- Oat stem rust and oat crown rust is common in upper Midwest fields.
- Stem rust is common on many wild grasses in the upper Midwest.

The small grain harvest has commenced from southwestern New York to southern South Dakota. Winter wheat is generally in good condition and 1-2 weeks ahead of normal maturity throughout most of the U.S. In the northern small grain area, most of the spring-sown grains are ahead of normal crop development.

Wheat stem rust. By the third week in July, trace-20% stem rust severities were observed on the susceptible spring wheat cultivars Baart and Max in southern Minnesota, east central South Dakota and southeastern North Dakota plots. Also, during the third week in July, traces of stem rust were observed in hard red winter wheat fields in west central Wisconsin and northeastern South Dakota.

Much of the early stem rust development in the northern plains was due to spores which were deposited with rains in mid-June. The large area of stem rust infections can be attributed to inoculum produced on winter wheat cultivars, e.g. 2137, farther south in the Central Plains and to the temperatures and moisture, which have been ideal for stem rust infection in the northern plains this year. If current spring wheat cultivars were susceptible to stem rust, a serious epidemic with substantial yield losses would occur.

Wheat leaf rust. During the third week in July, trace-40% leaf severities were observed in spring wheat varietal plots in southeastern North Dakota and west central and southern Minnesota. In upper Midwest fields, trace to 10% severities were common. This year, leaf rust is more severe and concentrated in the upper Midwest than last year. More inoculum arrived from the southern plains which was deposited with the frequent rains and the hot temperatures favored infection. Most of the spring wheat cultivars currently grown are moderately susceptible to leaf rust.



In mid-July, wheat leaf rust was increasing on spring wheats in eastern Washington fields and susceptible wheats in nurseries had 10-20% severities..

Wheat stripe rust. There have been no new reports of wheat stripe rust in the U.S. since CRB#8.

Oat stem rust. During the third week in July, trace to 20% severities of oat stem rust were found in fields and plots at the late berry maturity growth stage throughout southern Minnesota. Oat stem rust is more scattered than last year on the same date throughout the northern oat-growing area. Inoculum arrived from locations further south in mid-June with the frequent rains. The hot temperatures have been good for rust development. Most current oat cultivars are not highly resistant to stem rust.

Oat crown rust. During the third week in July, trace to 60% oat crown rust severities were found in fields and plots at the late berry maturity growth stage throughout southern Minnesota. Conditions have been good for crown rust development throughout much of the oat growing area in Minnesota and Wisconsin.

Barley stem rust. The first reports of barley stem rust this year were trace to 10% severities in plots of susceptible two and six-rowed cultivars in plots in southern and west central Minnesota and traces in fields in northeastern South Dakota by the third week of July. On July 19, traces of stem rust were found on the six-rowed barley Robust, which has the T-gene, in a field in northwestern Minnesota.

In mid-July, trace to 5% stem rust severities were reported on wild barley (*Hordeum jubatum*) plants growing alongside the roadway in west central Minnesota and east central South Dakota. This year the rust did not develop on wild barley as extensively and early as in previous years because of the cooler than normal spring in the northern Great Plains. However, if current spring wheat cultivars were more susceptible to stem rust, the wild barley stem rust would be a good source of inoculum and substantial yield losses would likely occur.

Barley leaf rust. In early July, 40% severities were reported on lower leaves in susceptible spring barley plots in south and east central and southern Minnesota.

Stripe rust on barley. There have been no new reports of barley stripe rust since CRB #8.

Barley crown rust. In mid-July, traces of crown rust were found in plots in west central Minnesota.

Rye leaf rust. By mid-July, 60% severities of leaf rust were found on upper leaves of spring rye in plots in southern and west central Minnesota.

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

Stem rust on barberry. There have been no new reports of stem rust on barberry since CRB #7.

Other stem rust grass hosts. By mid-July, 20-60% stem rust severities were observed on quackgrass (*Elytrigia repens*), redtop (*Agrostis alba*), and timothy (*Phleum pratense*) in southeastern Minnesota.

