

# CEREAL RUST BULLETIN

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Issued by:

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- Wheat stem rust has been found on susceptible spring wheat in the northern plains.
- Wheat leaf rust is present in low to high severity levels on spring wheat cultivars in the northern plains.
- Wheat stripe rust development has stopped in the Pacific Northwest.
- Oat stem rust and oat crown rust is common in upper Midwest fields.

Spring planted small grain crops are ahead of normal maturity throughout much of the northern wheat growing area.

**Wheat stem rust.** In late June, a wheat stem rust infection site was observed in a plot of the susceptible winter wheat cultivar McNair 701 at the Rosemount experiment station, Minnesota and light levels were found on susceptible lines in spreader rows at Brookings, South Dakota. In early July, light levels were found in the susceptible spring wheat cultivar Baart plot at the south central experiment station and southwest experiment stations at Waseca and Lamberton, Minnesota, respectively. During the second week in July, light levels of stem rust were found in a Baart plot at the west central experiment station at Morris, Minnesota. Earlier in the year, there were few reports of wheat stem rust in the southern U.S. grain growing areas (CRB #7).

In mid-July, stem rust was found in winter wheat breeding plots near Pullman, Washington.

The wheat stem rust observation map is now available on the CDL website ([http://www.ars.usda.gov/SP2UserFiles/ad\\_hoc/36400500Cerealarustbulletins/2007wsr.pdf](http://www.ars.usda.gov/SP2UserFiles/ad_hoc/36400500Cerealarustbulletins/2007wsr.pdf)).

**Wheat leaf rust.** During the last week in June high levels of leaf rust were found in spring wheat plots at Lamberton, in southwest Minnesota. Leaf rust was found at high severity levels on cultivars Knudson and Ada that had been previously rated as resistant to moderately resistant. In mid-July, trace to 80% leaf rust severities were observed on flag leaves of spring wheat cultivars in fields and plots from south central Minnesota (Fig. 1) to south east South Dakota and east central North Dakota. Many wheat fields have been sprayed with fungicide to prevent losses due to rust and scab. Hot dry weather combined with severe leaf rust infections will kill the flag leaves of spring wheat.



In early July, light levels of leaf rust were found in winter wheat fields in eastern Wisconsin and in spring wheat plots at Sidney in northeastern Montana.

In the Pacific Northwest, wheat leaf rust has been found at low levels in northwestern Washington, and in irrigated fields in central Washington.

**Wheat stripe rust.** Due to the hot and dry weather conditions the first two weeks of July, the stripe rust season in most of the Pacific Northwest is over. Similar to 2006, stripe rust of wheat has been light in commercial fields and therefore, yield losses caused by stripe rust should be low. However, stripe rust has developed to 100% severity on susceptible entries in non-irrigated experimental plots of both winter and spring wheat under natural infection in Washington, and 60-80% severities in wheat nurseries in northeastern Oregon and northern Idaho.

In late May, heavy wheat stripe rust was found in Bozeman, Montana plots but was spotty throughout the rest of the state. Susceptible winter wheat varieties were more affected than spring wheats. Some growers in the golden triangle of north central Montana sprayed for stripe rust control in winter wheat. Hot dry conditions throughout July prevented stripe rust from becoming a problem.

**Oat stem rust.** In mid-July, trace to 20% severities of oat stem rust were found in fields and plots at the soft dough growth stage from east central South Dakota to east central Minnesota and to south central Wisconsin. Most current oat cultivars are not highly resistant to the current races of stem rust.

The oat stem rust observation map is now available on the CDL website ([http://www.ars.usda.gov/SP2UserFiles/ad\\_hoc/36400500Cerealrustbulletins/2007osr.pdf](http://www.ars.usda.gov/SP2UserFiles/ad_hoc/36400500Cerealrustbulletins/2007osr.pdf)).

**Oat crown rust.** In mid-July, trace to 60% severities of oat crown rust were found in fields and plots from east central South Dakota to east central Minnesota. Much of the primary inoculum originated from buckthorn, the alternate crown rust host, common throughout the Upper Midwest. There has been less crown rust this year than last year in eastern Minnesota and western Wisconsin because of the hot dry weather the last 3 weeks.

**Barley stem rust.** In mid-July, light levels of barley stem rust were found on the 2-row susceptible variety Hypana in plots in south central and west central Minnesota. Stem rust also was found in a plot of six-row barley in east central South Dakota.

**Barley leaf rust.** In mid July, light levels of barley leaf rust were found in plots in northeast South Dakota and southwest Minnesota. This year barley leaf rust was severe on winter barley in nurseries in northwest Washington, but was not observed in fields in Idaho, Oregon and Washington.

**Stripe rust on barley.** In late June, stripe rust on barley was found on experimental lines at the Fort Collins, Colorado experiment station. This was the first barley stripe rust seen at this location in the last 8 years. Barley stripe rust this year generally has been at very low levels of infection.



**Rye leaf rust.** In mid-July, 40% severities were observed on the susceptible variety Prolific in south central and west central Minnesota plots.

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

**Rusts on other grasses.** In late June various levels (from trace to 50%) of stem rust were found in perennial ryegrass seed production fields at Roseau, Minnesota. This is the second consecutive year that high levels of stem rust were found on perennial ryegrass in the early season.

