

# CEREAL RUST BULLETIN

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CEREAL RUST LABORATORY  
U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL RESEARCH SERVICE  
UNIVERSITY OF MINNESOTA  
1551 Lindig St, ST. PAUL , MN 55108-6052

(612) 625-6299 FAX (612) 649-5054  
Internet: markh@puccini.crl.umn.edu

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- Stem rust has shown up unexpectedly in plots of wheat, oat and barley in the northern plains.
- Wheat leaf rust in the northern plains is more severe than in recent years.

The winter wheat harvest has begun from southwestern New York to northeastern South Dakota. In the northern Great Plains, persistent wet weather has reduced the potential yield of small grains in some locations, but more than half of the spring-sown grains are still rated in good to excellent condition. In spite of recent wet weather, spring-sown crops remain a few days behind normal crop development due to unusually cool weather earlier in the summer.

**Wheat stem rust.** In mid-July, traces of wheat stem rust were found in check plots of highly susceptible spring wheat cultivars such as Morocco and by the fourth week in July 40% severities were observed in other susceptible spring wheat lines in east central South Dakota plots. In mid-July, traces of stem rust were found in a plot of the susceptible spring wheat Max in east central North Dakota. The infections on Max were on the leaf sheaths and originated from spores that were rain deposited 7 and 14 days ago. The stem rust infections in the northern plains this year may have originated from rust spores that were released from rusted soft red winter wheat fields in southern Illinois or the Ohio Valley area. No other potential sources of wheat stem rust spores are known to have existed at the time those infections occurred. This year there have been few reports of stem rust in fields and nurseries and numbers of rusted collections received at the Cereal Rust Lab are 1/3 of normal.

In early July, stem rust was found in a nursery in south central Virginia. This is the first report of stem rust this year in the eastern soft red winter wheat area.

In mid-July, small foci of stem rust were found on winter wheat cultivars in the Palouse region of the Pacific Northwest. In late maturing cultivars like Eltan, stem rust may cause some yield losses. Stem rust infection was light on a few of the spring wheat cultivars in the Pacific Northwest.

**Wheat leaf rust.** As indicated in the previous Cereal Rust Bulletin, leaf rust was unusually severe on winter wheat in the northern Great Plains this year. Although most of the spring wheat cultivars in the northern plains are resistant to leaf rust, some cases of higher than usual

leaf rust severities have been reported. During mid-July, in west central Minnesota and southeastern North Dakota, trace to 40% leaf rust severities were observed on flag leaves of commercial spring wheat cultivars in the late berry stage. Only light losses are expected, and most of those losses will be in late planted fields. In plots of susceptible spring wheats in west central Minnesota, east central South Dakota, and east central north Dakota, 60% leaf rust severities were reported on flag leaves in mid-July. During the second week in July, 60% severities were observed in fields of winter wheat at the mid-dough stage in southeastern North Dakota. As in South Dakota, some yield losses from leaf rust are expected in winter wheat in North Dakota. In mid-July, wheat leaf rust was increasing in the Palouse region of Washington in fields and nurseries, but it is too late for any yield loss in winter wheats.

**Wheat stripe rust.** During mid-July, wheat stripe rust was increasing in fields in the Palouse region of Washington, but the adult plant resistance of commercial cultivars should keep losses to a minimum.

**Oat stem rust.** In mid-July, traces of oat stem rust were found in plots in east central South Dakota and west central Minnesota. These are the first reports of oat stem in the U.S. since late April, when oat stem rust was found in fields and plots in Louisiana and Alabama.

**Oat crown rust.** During mid-July, crown rust severities ranged from trace to 5% in oat fields and trace to 40% on flag leaves in plots in eastern South Dakota, east central North Dakota, west central Minnesota and southern Wisconsin. In east central Minnesota plots, 80% severities were observed on flag leaves of the most susceptible cultivars. No crown rust was found in oat plots in central South Dakota. In clumps of wild oats growing in small grain fields in east central North Dakota, crown rust severities ranged from 0 to 20% on individual plants. The cooler than normal weather in early June delayed rust development but warmer than normal temperatures the past two weeks favored crown rust increase. Rainy weather, however, has washed much of the inoculum off infected plants before spores could spread.

**Barley stem rust.** In mid-July, traces of barley stem rust were found on spring barleys in east central South Dakota plots. The last time barley stem rust was reported in the U.S., was May 19 in south Texas.

**Barley leaf rust.** In mid-July, trace - 40% barley leaf rust severities were observed in barley plots and none in fields in west central Minnesota and northeastern South Dakota.

**Stripe rust on barley.** By early July, stripe rust on barley was appearing on spring-sown barley in the intermountain area of northeastern California. Eighty to 100% severities were reported in northeastern California nurseries and in commercial fields, 100% severities were reported on flag leaves at the milk growth stage, which may lead to a 50% or more loss in yield. Many fields in this area were being sprayed with Folicur in order to control the rust. In mid-July, 70% severities were observed in spring barley test plots in west central Idaho and traces in the northern tip of Idaho and since the plants were in an advanced plant growth stage the rust should not significantly affect the yield.

**Crown rust on barley.** During the second week in July, 20% crown rust severities were observed in barley growing 15 meters from *Rhamnus* bushes in east central North Dakota. In mid-July, 20% crown rust severities were observed on flag leaves of susceptible lines in an east central South Dakota barley nursery.

**Rye rusts.** In late June, 20% rye leaf rust severities were reported in a winter wheat nursery and field in east central North Dakota. No rye stem rust has been reported in the U.S. this year.

**Stem rust on barberry.** There have been no new reports of stem rust on barberry since the last bulletin.

Special Note:

The Cereal Rust Lab web page has moved; please update your bookmarks. The new url is:  
<http://www.crl.umn.edu/>