

# CEREAL RUST BULLETIN

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Issued by:

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- Hot dry temperatures stopped stripe rust development in most of the U.S.
- Wheat leaf rust is very light this year throughout the U.S.
- Oat crown rust is light in the northern oat growing area.

The small grain harvest has commenced from southern Michigan to southern South Dakota. Winter wheat is generally in good condition. In the northern small grain area, the warm temperatures and dry conditions have pushed spring-sown grain development closer to the normal growth stage for this time of the year, but the crop still remains slightly behind.

**Wheat stem rust.** During the last week in June, stem rust was found in fields and plots in north central Kansas and southern Nebraska. Trace amounts of stem rust were observed in commercial fields, while 20% severities were observed on susceptible lines in plots. The rusted wheat in these fields and plots will provide inoculum for susceptible wheat further north. In late June, traces of stem rust were found on the susceptible spring wheat Baart in southern and west central Minnesota rust detection plots.

To date, races Pgt-QCCS, QCMB, QCMD and QCMJ have been identified from collections made in Texas in early May.

**Wheat leaf rust.** During late June, leaf rust was found in fields and plots in north central Kansas and southern Nebraska. Twenty percent leaf rust severities were observed on lower leaves in wheat fields (at soft dough stage) in east central and southern Nebraska. By late June, 10% severities were common on lower leaves of winter wheats and traces on susceptible spring cultivars in southern Minnesota and east central South Dakota plots. In late June, trace to 40% severities were observed on winter wheats growing in east central North Dakota plots. By early July, leaf rust was present on susceptible winter wheat cultivars across much of southern Wisconsin. Leaf rust in the Great Plains developed slower and to a lesser extent than normal this year. This is due to the small amount of leaf rust inoculum arriving from the southern grain growing areas, cool wet spring weather, and the current hot dry conditions that are not favorable for rust development. Also, many of the flag leaves that previously were free of rust have been infected with wheat stripe rust which normally is not present in the area.

By the last week in June, 5 to 20% severities were reported on winter wheat fields in northwestern New York at the late milk growth stage.



In late June, high levels of leaf rust were observed on susceptible winter wheat varieties in southwestern Ontario, Canada. In early July in winter wheat fields (anthesis stage) in southern Manitoba, 1% severities and 10% prevalences of leaf rust were observed. Light losses are expected because of the low rust levels and the advanced growth stage.

**Wheat stripe rust.** During the last week in June, stripe rust was the most common rust found on small grains throughout Nebraska and South Dakota. Stripe rust on susceptible winter wheat cultivars ranged from 20 to 80% on the flag leaves at late anthesis to soft dough. In late June, traces of stripe rust were observed on lower leaves of susceptible spring wheat in the disease observation nursery at Brookings, South Dakota. With the onset of the hot dry temperatures in late June and early July, stripe rust development essentially ceased throughout the Great Plains.

In late June, stripe rust was severe on the flag leaves of irrigated white wheat (e.g., Platte) in the Front Range of the Rocky Mountains in Colorado .

In early July, wheat stripe rust was present in eastern Washington but severity levels generally were low because most cultivars are resistant except for a few fields of susceptible cultivars such as 'WestBred 470'. Stripe rust will not cause much damage on winter wheats in the Pacific Northwest this year. Since most spring wheats have good resistance to stripe rust, losses will be minimal.

By late June, stripe rust was found in several locations across southwestern Ontario in plots of several varieties of winter wheat. Infections were generally localized, but spreading rapidly. Grain filling was in the early stages, so yields will likely be affected in some plots. In early July in winter wheat fields (anthesis stage) in southern Manitoba, 1% severities and 10% prevalences of stripe rust were observed. Light losses are expected because of the low rust levels and the advanced growth stage.

Preliminary results of stripe rust race identification show that the group of new races virulent on Yr9, Yr8 (and some other differentials) that were identified last year are prevalent again this year in California and Texas.

**Oat stem rust.** There have been no new reports of oat stem since CRB #6 (<http://www.cdl.umn.edu/crb/2001crb/01crb6.html>).

To date, oat stem rust races NA-27, -29 and -67 have been identified from collections made in Texas in early spring. Race 67 was identified from rust collections made in southern Alabama in late April.

**Oat crown rust.** In late June, 40% crown rust severities were observed in two oat fields in north central Kansas and south central Nebraska . During the first week in July, light crown rust was observed in oat fields in southern Wisconsin. This year crown rust is lighter than normal throughout the northern oat growing area. By early July, oat in the buckthorn nursery in St. Paul, Minnesota, had severe crown rust infection (60% severities) on the upper leaves in the spreader row. Traces of crown rust were found on oat in the other St. Paul nurseries.

**Barley stem rust.** In late June, trace to 5% severities were reported in nurseries in east central Nebraska and east central South Dakota. These were the first reports of barley stem rust in the U.S. since mid-May when it was found in plots in southern Texas.



**Barley leaf rust.** During the last week in June, light leaf rust was found on barley in east central Nebraska plots.

**Stripe rust on barley.** In early July, stripe rust was found in eastern Washington barley fields at low severity levels. Stripe rust severities of 75-90% were observed in some susceptible spring barleys in eastern and western Washington nurseries. The dry hot weather in the past two weeks has slowed rust development.

**Rye leaf rust.** In early July, trace to 10% severities were reported on winter rye in east central North Dakota plots.

**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 #6 (<http://www.cdl.umn.edu/crb/2001crb/01crb6.html>).

