

# CEREAL RUST

## BULLETIN

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Issued by:

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- Wheat leaf rust is widespread and more severe than last year throughout the central U.S.
- Wheat stripe rust is light from South Dakota to Ohio.

Winter wheat harvest has begun from southern Indiana to southern Nebraska. Many of the northern-planted spring small grains are ahead of normal growth stage.

**Wheat stem rust.** In early June, traces of wheat stem rust were found in an experimental line in a nursery in northeastern Missouri. Stem rust infections were not observed in susceptible spring wheat plots or in winter wheat plots in southern Minnesota. Stem rust infections previously reported from Meade Nebraska may have been due to spore drift from inoculated plots at the same location. Rust infections on stems were not seen in Meade in mid June. Stem rust was not observed at any location in South Dakota.

**Wheat leaf rust.** In mid June, wheat leaf rust was severe in southeastern and south central Nebraska (Fig. 1). Rust severities on flag leaves were 60-80% in fields and experimental plots. Yield losses due to leaf rust are expected since most of the crop was at the early soft dough stage. The wheat crop is quickly drying down and the leaves turning due to the heavy leaf rust infection. Abundant rainfall in eastern and southern Nebraska provided good moisture conditions for leaf rust infections in 2004. In western Nebraska where it was much dryer, only trace levels of leaf rust infections were observed.

Leaf rust is increasing in winter wheat in southeastern South Dakota and southern Minnesota, with severities of 20-40% on lower leaves and 10-20% on flag leaves. The spring wheat crop had trace to 5% levels of leaf rust infections on lower leaves. Trace levels of leaf rust were observed on lower leaves of winter and spring wheat in south central South Dakota. In mid-June in an east central South Dakota rust nursery, high levels of leaf rust were observed on the susceptible spring wheat varieties Thatcher, Baart and Morocco. During the second week in June, traces of wheat leaf rust were found in fields in southeast and north central North Dakota. These fields were in the 4th leaf stage in the north and early boot stage of development in the south, which would allow time for significantly more leaf rust to develop. With the recent rains and moderate temperatures, conditions have been good for the increase and spread of leaf rust in the north central region. The current cool temperatures may slow development of leaf rust in the spring wheat region.



In early June, leaf rust had developed late in central Ohio and 20% severities on flag leaves were observed on susceptible varieties which may result in yield losses. During the second week in June, trace to 10% severities were found in plots in northwest Ohio, northern Indiana and south central Wisconsin. Only light losses were expected in this area.

In eastern Virginia, the wheat crop matured 10 days earlier than normal because of the hot temperatures in May, which essentially halted the leaf rust development. In early June, in western Virginia, the crop matured at a normal pace and leaf rust developed to a greater degree. Varieties with Lr26, e.g. USG 3209 and Sisson, had considerable leaf rust. In early June, moderate to light levels of leaf rust infection were observed in winter wheat plots in central Maryland.

In mid-June, trace levels of leaf rust were found in winter wheat plots south of Winnipeg, Manitoba, Canada.

**Wheat stripe rust.** In mid-June, trace levels of stripe rust were observed in winter wheat fields in south central South Dakota, and in fields of spring and winter wheat in eastern South Dakota (Fig. 2). In experimental winter wheat plots at Brookings, most lines had trace levels of stripe rust infection, however a few plots had very high levels of infection on flag and lower leaves. Trace levels of stripe rust were also observed in spring wheat plots in St. Paul Minnesota. Stripe rust was not observed in fields or plots in Nebraska, possibly due to the heavy leaf rust infections.

During the second week in June, trace levels of stripe rust were found in plots in central, northeast and northwest Ohio. The stripe rust will not impact the yield since the crop was in the soft dough stage of development.

In early June, stripe rust foci of 10% severity were located in winter wheat plots and fields in northern Indiana and south central Wisconsin. Most of the infections developed from spores deposited with rain in the previous 10-14 days.

**Oat stem rust.** There have been no new reports of oat stem rust since CRB #6.

**Oat crown rust.** In mid-June, trace levels of oat crown rust were observed in fields and plots in southern Minnesota, and southeastern South Dakota. In early June, 20% severities were observed in plots in northeast Missouri.

**Buckthorn.** Throughout the upper Midwest aecial infections have been severe on buckthorn in most locations. Moderate crown rust infection was observed on upper leaves of oat in spreader rows close to the St. Paul, Minnesota buckthorn nursery.

**Barley stem rust.** There have been no reports of barley stem rust this year.

**Barley leaf rust.** In mid-June, barley leaf rust was found on susceptible spring barleys in east central South Dakota and east central Minnesota.



**Stripe rust on barley.** There have been no new reports of stripe rust on barley since CRB #5 (May 26).

**Barley crown rust.** In mid-June, low levels of barley crown rust infections were found in barley plots growing near the buckthorn in the St. Paul, Minnesota nursery.

**Rye leaf rust.** In early June, traces of leaf rust were reported in a rye field in southeastern Indiana.

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

**Stem rust on barberry.** In mid-June, aecial infections were light on susceptible common barberry bushes (alternate host for stem rust) in southeastern Minnesota.



Fig. 1. Leaf rust severities in wheat fields - June 22, 2004

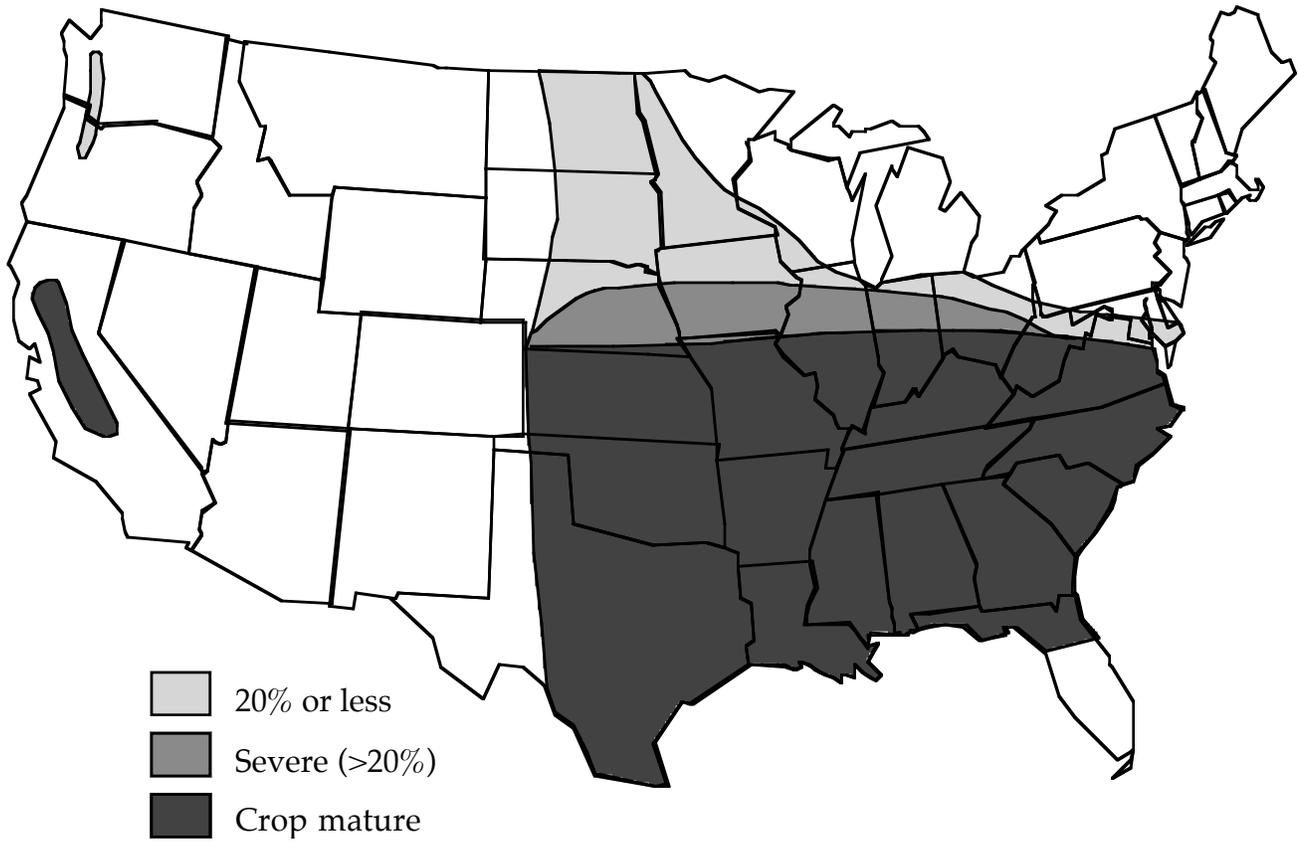


Fig. 2. Stripe rust severities in wheat fields - June 22, 2004

