

# CEREAL RUST BULLETIN

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Issued by:

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- Wheat leaf rust is present throughout the southern U.S.
- Wheat stripe rust is present throughout the southern U.S.
- Oat crown rust is severe in the southern oat growing areas.

Winter wheat growth and development is at normal crop development, but some areas in the southern U.S. are dry and need rain. In the spring wheat and oat area of the northern plains, warm temperatures have allowed for an early start for fieldwork and planting.

**Wheat stem rust.** As of April 19, no wheat stem rust has been reported in the U.S. No stem rust has been observed in plots of the susceptible cv. McNair 701 in Texas.

**Wheat leaf rust.** In mid-April, leaf rust was found in the Great Plains from Texas to Nebraska (Fig. 1). Leaf rust is still increasing in Texas except in dry areas. During the first week in April, leaf rust was found on the mid and upper canopy leaves of susceptible cultivars in central and southern Oklahoma. In early April, high levels of leaf rust were found in variety trails and fields in the panhandle of Oklahoma, which is unusual since low moisture conditions in this area usually are not conducive for rust to develop. Leaf rust overwintered in Colorado throughout the eastern half of the state. However, if dry conditions continue leaf rust will not be a problem in eastern Colorado. In mid-April, trace levels of leaf rust were found across south central to southwest Kansas.

In early April from central Louisiana through Alabama to Georgia, moderate levels of leaf rust infections were observed in research plots and fields. In susceptible cultivars 60% severities were common in south central Louisiana and southern Alabama nurseries. The leaf rust epidemic was very active in southern Louisiana. By mid-April, leaf rust was found in areas of Arkansas that had sufficient moisture. Leaf rust incidence and severity will increase in the next few weeks with periodic rainfall and dews throughout the southern U.S.

From rust collections made in late January in Louisiana the following leaf rust races were identified: KDBG (Lr24 virulence), MBRK (Lr18 virulence), MCRK (Lr18 and 26 virulence) and TBBJ (Lr2a virulence). In early February the following races were identified from collections made in south Texas: KDBG (Lr24 virulence, identified from Jagalene), MCDS (Lr17 virulence, identified from Jagger, TCBJ (Lr26 virulence), TDBJ (Lr24 virulence) and TNRJ (Lr41 virulence, identified from Thunderbolt). These leaf rust races were identified from rust collections made during the 2004 survey (<http://www.cdl.umn.edu>).



**Wheat stripe rust.** In early April, stripe rust was reported from central Texas, Louisiana, and Arkansas to southern Alabama (Fig. 2). In the first week of April, susceptible entries had severity levels of 100% in stripe rust monitoring and breeding nurseries throughout Louisiana and central Texas. Stripe rust infection types and severities on the entries in these nurseries were generally as expected based on their reactions to stripe rust as noted last year. In mid-April, wheat stripe rust severity levels of near 100% were observed on susceptible entries in nurseries in southwestern Arkansas. In mid-April, stripe rust was severe in over wintering hot spots in research plots in east-central Arkansas. If temperatures continue to be less than 55 degrees at night and moisture is available stripe rust will continue to develop in the southern states.

Stripe rust is spreading northwards in the Great Plains. In early April in southern Oklahoma, fields of 2174 and OK 102 had severe stripe rust and the fields were for sprayed rust. In mid-April in Kansas, trace levels of stripe rust were found in south central and southwestern regions.

In early April in California, 60% wheat stripe rust severities were reported on susceptible entries in nurseries in the Davis area of the Sacramento Valley. In the Pacific Northwest in early April, wheat stripe rust continued to increase in western Oregon and northwestern Washington. During the first week of April, wheat stripe rust was found on susceptible winter wheat entries in south central Washington nurseries. In mid-April, traces of stripe rust were found in winter wheat nurseries near Pullman in southeastern Washington. An early appearance of stripe rust in the Palouse region was expected according to the forecast based on the higher than normal temperatures in December and January. The wet weather in April has been favorable for stripe rust infection.

**Oat stem rust.** In mid-April, stem rust was increasing in southern Texas nurseries. Stem rust infections were less than last year in this area.

In mid-April, oat stem rust was light in oat demonstration plots in southwest Louisiana.

**Oat crown rust.** By mid-April, severe oat crown rust was found across central and southern Texas. A significant amount of crown rust was observed on ryegrass in central Texas. In the last 2 years there has been severe crown rust on many of the cultivars grown in Texas.

In mid-April, 100% severities of crown rust were observed in oat plots in southeast Louisiana. These southern locations should provide inoculum for the oat growing areas further north.

**Buckthorn.** In mid-April, buds on buckthorn, the alternate host for oat crown rust, were beginning to break in the buckthorn nursery at St. Paul, Minnesota. This is slightly earlier than normal maturity for buckthorn development in these plots.

**Barley stem rust.** No barley stem rust has yet been found in 2005.

**Barley leaf rust.** There have been no new reports of barley leaf rust since April 5.

**Stripe rust on barley.** So far, barley stripe rust has been reported only in California and Oregon.

**Rye rusts.** There have been no new reports of rye leaf rust since April 5.



Fig. 1. Leaf rust severities in wheat fields - April 20, 2005

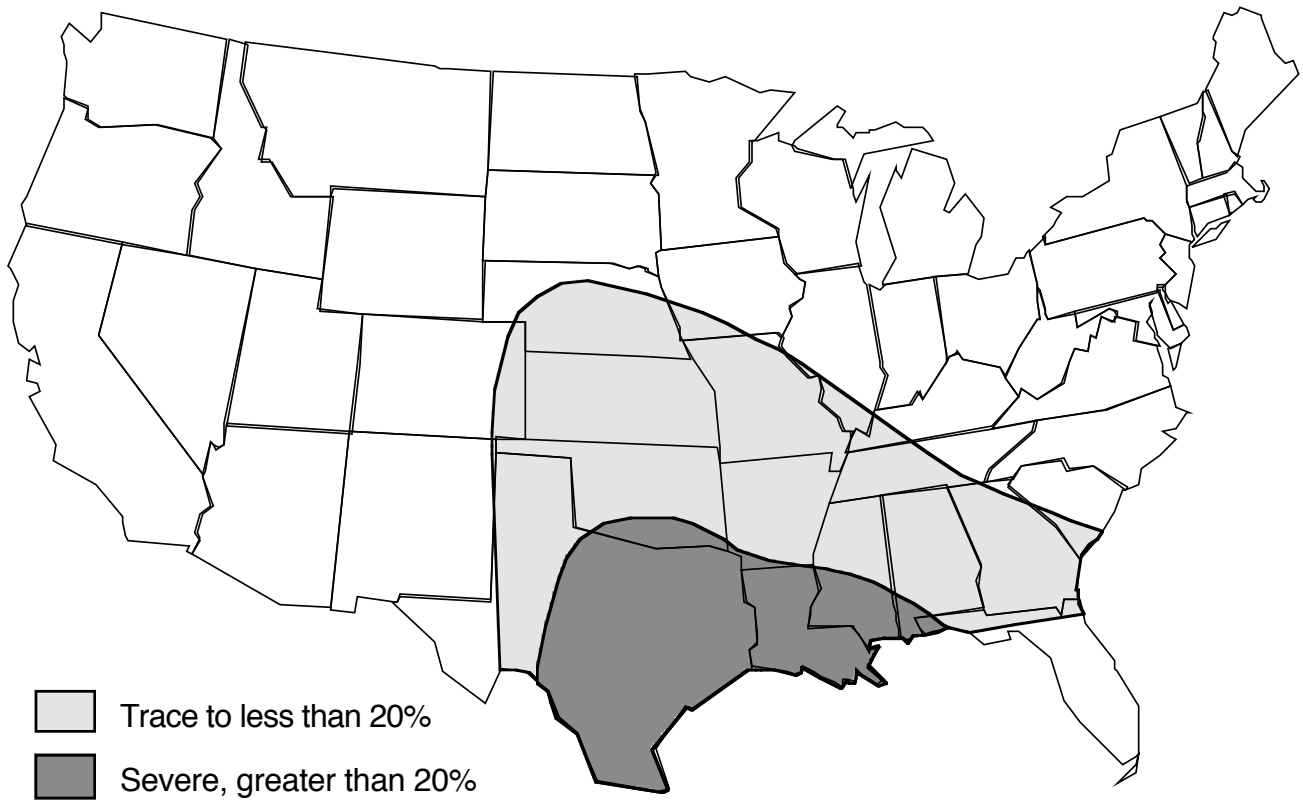


Fig. 2. Stripe rust severities in wheat fields - April 20, 2005

