# CEREAL RUST BULLETIN

**Report No. 5**
May 27, 2009

*Issued by:*

**Cereal Disease Laboratory**
U.S. Department of Agriculture
Agricultural Research Service
1551 Lindig St, University of Minnesota
St. Paul, MN 55108-6052
(612) 625-6299 FAX (651) 649-5054

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- Wheat stem rust was found on susceptible cultivars in Texas, Oklahoma, Arkansas and Tennessee.
- Wheat leaf rust is widespread throughout the southern U.S.
- Oat stem rust is increasing in Texas.
- Oat crown rust is increasing in the Texas oat growing areas.

The winter wheat harvest has commenced in the most southern wheat areas from Texas to Georgia. Winter wheat maturity is ahead of normal in the central winter wheat growing area. In the spring wheat and oat area of the northern plains, cool and wet conditions have delayed planting and slowed crop development.

**Wheat stem rust**. ***Texas*** - To date wheat stem rust has been observed in several plots in central and southern Texas as well as one field in north central Texas (see wheat stem rust map on CDL website for details). Stem rust observation maps can be found on the CDL website (http://www.ars.usda.gov/Main/docs.htm?docid=9757).

***Oklahoma*** -In late May, low levels of stem rust were found in plots of two susceptible cultivars at Stillwater, Oklahoma.

***Louisiana*** – In mid May, wheat stem rust was increasing in plots and fields of susceptible cultivars in northeast Louisiana. Many of the soft red winter wheats in the plots had severities of 40 to 60%.

***Arkansas*** – Wheat stem rust was found in plots in Crawford and Pope Counties (northwestern Arkansas) in early May on Delta King 9577 and Panola, respectively. The only other wheat stem rust found was in a field in the southeastern part of the state.

***Tennessee*** – Moderate levels of wheat stem rust were found in a field near Jackson in west central Tennessee. This is the most stem rust seen in this area in the last 30 years.

These southern wheat stem rust locations will provide inoculum for susceptible wheat further north.

Race Pgt-QFCS, a common wheat stem rust race in recent years, has been the only race identified so far this year.

**Wheat Leaf Rust**. ***Texas*** **–** During early May, wheat leaf rust levels were severe in susceptible cultivars in central and northern Texas plots where conditions (moisture and temperature)

favored rust development. In fields only trace severities were reported. In much of the area drought-like conditions hampered the crop and rust development.

***Oklahoma*** – In mid-May, high levels of leaf rust were found on flag leaves of susceptible cultivars Jagger and Jagalene in the Stillwater plots. By late May throughout Oklahoma, the incidence and severity of rust increased dramatically. Leaf rust approached severity levels in the 65-90% range during the last week in May at locations where leaves were still green.

***Kansas*** – In mid-May, low levels of leaf rust were found on flag leaves in north central Kansas plots and fields. The rust infections originated from spores from wheat areas further to the south and then deposited with rainfall. With continued good conditions for rust development, leaf rust incidence and severity will increase in Kansas the next few weeks and this will provide rust inoculum for areas further north.

***Nebraska*** – As mid-May, no wheat leaf rust has been reported in Nebraska.

***Arkansas*** – In mid May, high levels of leaf rust were reported on susceptible lines and cultivars throughout Arkansas plots.

***Alabama*** – In mid-May, high levels (30-60%) of leaf rust were found in plots of susceptible wheat in central Alabama. Leaf rust from this area will provide inoculum for northern wheat areas.

***North Carolina –*** In mid-May, severe levels of leaf rust were found on susceptible lines and cultivars in plots and light levels in fields in eastern North Carolina.

***Virginia*** - In mid-May, severe levels of leaf rust were found on susceptible lines and cultivars in plots and light levels in fields in northeastern Virginia. Much of the acreage has been sprayed for wheat diseases.

***Maryland*** – In mid-May low levels of leaf rust were found in plots on the Delmarva Peninsula. Only a few pustules are developing on the flag leaves, but conditions are good for continued development. Much of the acreage has been sprayed for wheat diseases.

***New York*** – On May 22, light levels of leaf rust were reported in Monroe Co. – west of Rochester and along Lake Ontario.

***California –*** During the second week in May leaf rust was detected in plots in the nursery at Davis, CA and by the third week in May 60% severities were reported in susceptible lines.

Lr gene postulations of current soft red winter, hard red winter, and hard red spring wheat cultivars are available in a searchable database at:
http://160.94.131.160/fmi/iwp/cgi?-db=Lr%20gene%20postulations&-loadframes

**Wheat stripe rust**. ***Kansas***- As of mid-May, no stripe rust has been reported in Kansas.

***California*** - During early May, stripe rust severities of up to 60% were found in the susceptible cultivars Anza and Yecora Rojo. The resistance of the commonly grown wheat cultivars is holding up.

***Pacific Northwest*** – In mid-May, foci of stripe rust (10-80%) were found in winter wheat nurseries in the Washington/Idaho Palouse region. In rust nurseries in Umatilla County, Oregon stripe rust was developing on susceptible entries with 80% severities in foci. No stripe rust was found in any fields in the above area. In the Horse Heaven Hills area (Benton Co.) stripe rust development is under control after fungicide application.

**Oat Stem Rust**. In early May, light levels of oat stem rust were found in plots and fields in central and north central Texas. Stem rust also was found on wild oats growing alongside the road in central Texas.

Stem rust observation maps can be found on the CDL website (http://www.ars.usda.gov/Main/docs.htm?docid=9757).

**Oat Crown Rust**. In early May, moderate levels of oat crown rust were found in plots in central Texas where conditions (moisture and temperature) favored rust development. Light levels were found in the fields. These southern locations will provide crown rust inoculum for oat growing areas further north.

**Buckthorn**. On May 8, light levels of aecial infections were observed on buckthorn in the nursery at St. Paul. Cooler and drier than normal conditions the past 2 weeks have slowed aecial development. Buckthorn serves as the alternate host for oat crown rust.

**Barley leaf rust**. In mid-May, severe levels of barley leaf rust were found on susceptible cultivars in a Warsaw, VA nursery.

**Stripe rust on barley.** In mid-May, severe levels (60%) of stripe rust were found on the susceptible cultivar Max in the Fresno Co. nursery, California

**Rye rusts.** In early May, severe levels of rye leaf rust were observed in central Texas plots at Giddings.

**Stem rust on barberry**. In mid-May, light pycnial infection was found on susceptible barberry bushes (alternate host for stem rust) growing in south central Wisconsin.

Fig. 1. Leaf rust severities in wheat fields - May 28, 2009

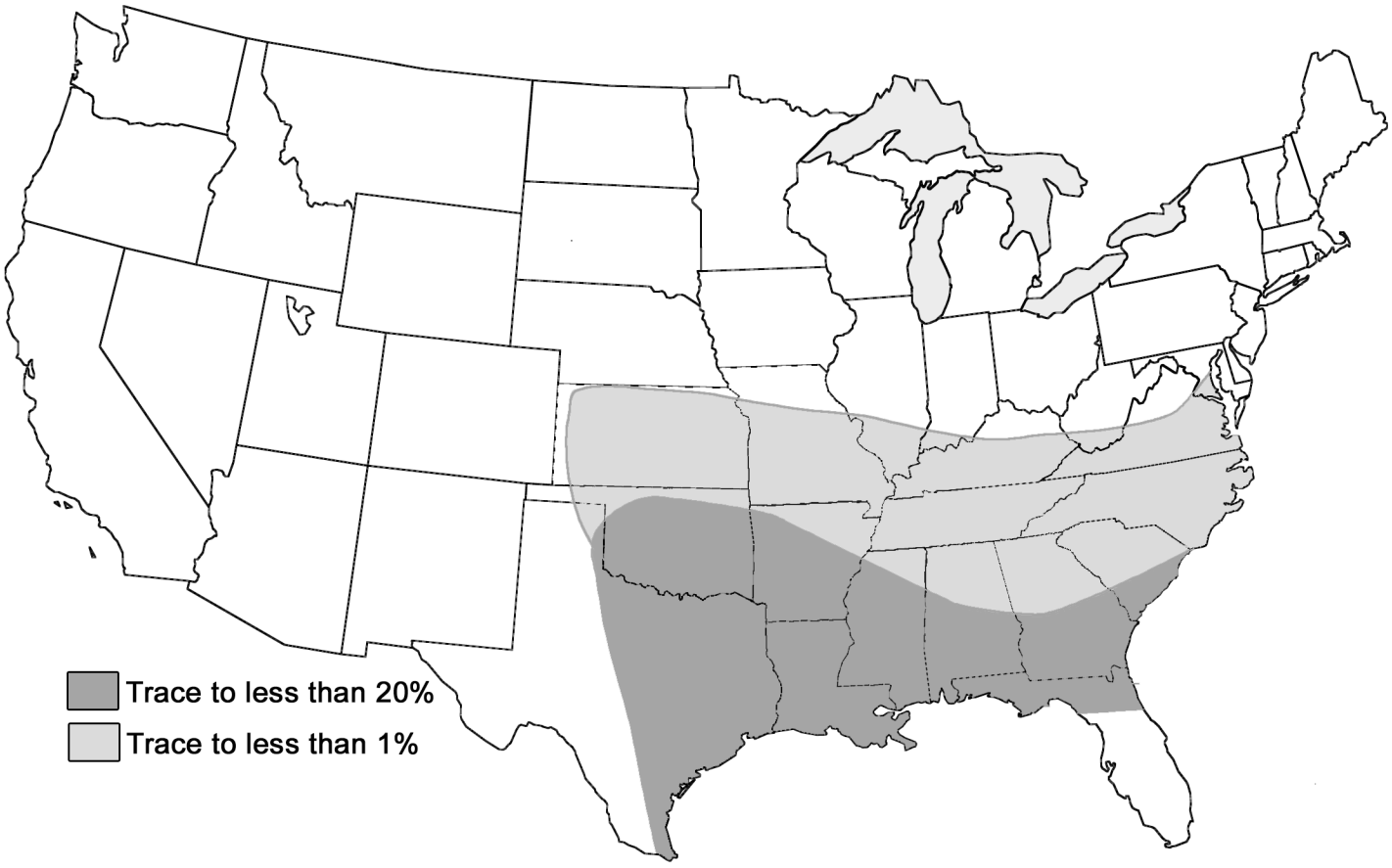


Fig. 2. Stripe rust severities in wheat plots and fields - May 28, 2009