

CEREAL RUST BULLETIN

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Issued by:

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- Wheat stem rust is at trace levels in southern U.S. wheat plots.
- Wheat leaf rust is widespread and increasing throughout the southern U.S.
- Wheat stripe rust is at low levels in the southern U. S. wheat
- Oat stem rust is increasing in plots in Texas and Louisiana.
- Oat crown rust is increasing in the southern U.S. oat growing fields

Winter wheat is at normal developmental stage in much of the U.S., but the freezing temperatures have caused damage in some areas. In the spring wheat and oat area of the northern plains, cool and wet conditions have delayed planting.

Wheat stem rust. On April 23, wheat stem rust was reported for the first time in the U.S. this year in varietal plots in south central at Crowley and in southwest Louisiana at Jeanerette. Stem rust was severe in some plots, but the distribution of infections was not uniform throughout the nursery. Hot dry weather is pushing the crop to maturity in these plots. Also, on April 23rd, traces of stem rust were found in two wheat plots in southern Texas at Castroville. Wheat stem rust has not yet been found in plots of susceptible cultivars in the Southeast.

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

Wheat leaf rust. By the third week of April, the susceptible varieties Jagalene and Jagger in nurseries at Castroville and College Station, Texas had 100% leaf rust severities on flag leaves. On the resistant varieties, Fannin and Fuller, zero to trace levels of infection were found. Low to moderate levels of rust have been reported in Texas fields (Fig. 1).

By late April, high severity levels of leaf rust had been reported on susceptible varieties in north central Oklahoma plots. Leaf rust was scattered and at high levels in locations where moisture was sufficient for rust infections.

In late April, high severity levels of leaf rust were found in the lower and middle canopy of susceptible wheat in plots in south central Kansas.

With continued good conditions for rust development, leaf rust incidence and severity will increase in the next few weeks in areas where freeze damage did not slow the rust development. Many of these southern areas will provide rust inoculum for areas further north.



In late April, plots of susceptible wheat cultivars in southern Alabama and southwestern Georgia had leaf rust severities up to 20% on lower leaves. Dry conditions in March and April have slowed rust development throughout much of the southeastern U.S. soft red winter wheat area. Leaf rust was either absent or at trace levels in commercial fields in Georgia and Alabama.

In the last week in April, 10% leaf rust severities were observed on lower leaves of wheat in southeastern and eastern North Carolina plots. There is a potential for economic losses to leaf rust in this area.

In late April, high levels of leaf rust were found on the lower leaves of susceptible lines in a nursery at Warsaw, Virginia. The rust was found on the closest leaves to the ground level, indicating that leaf rust may have overwintered at this location.

Wheat stripe rust. In late April, dry and warm conditions slowed stripe rust development in plots and fields throughout the southern U.S. For example, in southern Texas, southern Alabama and southwestern Georgia traces of wheat stripe rust were found in a few plots. In these locations most of the stripe rust infections had occurred earlier in mid to late winter when temperatures were cooler. In north central Texas fields, traces levels of active sporulating stripe rust infections were found, but at the same locations leaf rust was increasing rapidly in the fields and plots (Fig. 2). The return of warmer conditions will likely limit further development of stripe rust in the southern states.

By the third week in April, susceptible entries in winter wheat nurseries at Mount Vernon in northwestern Washington had 60% levels of stripe rust infection. In south central and southeastern Washington, early-planted winter wheat fields had 10% stripe rust severity. In this area the initial stripe development was about normal for this area.

Oat stem rust. During the last week in April, oat stem rust severity levels were high in plots in southwestern and southeastern Louisiana. Stem rust was found at trace to moderate levels in oat plots in northern Florida and southern Alabama.

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

Oat crown rust. In late April, central Texas fields had trace–20% severities while trace severities were reported in northern Texas. In late April, oat plots in southern Alabama and the Florida panhandle had 60% rust severities. Crown rust was found at moderate levels in several commercial oat fields in these areas. These southern locations may provide inoculum for the northern oat growing areas.

Buckthorn. Moderate pycnial infections were observed on emerging buckthorn in the nursery at St. Paul on April 30. Cooler than normal temperatures slowed down pycnial development. Buckthorn serves as the alternate host for oat crown rust.

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

Barley leaf rust. In late April, barley leaf rust was observed throughout head rows in Lenoir County, North Carolina nursery.

By the third week in April, susceptible entries in winter barley nurseries at Mount Vernon in northwestern Washington had 40% levels of stripe rust infection.

Stripe rust on barley. By the third week in April, susceptible entries in winter barley nurseries at Mount Vernon in northwestern Washington had 60% levels of stripe rust infection.



Fig. 1. Leaf rust severities in wheat fields - May 1, 2007

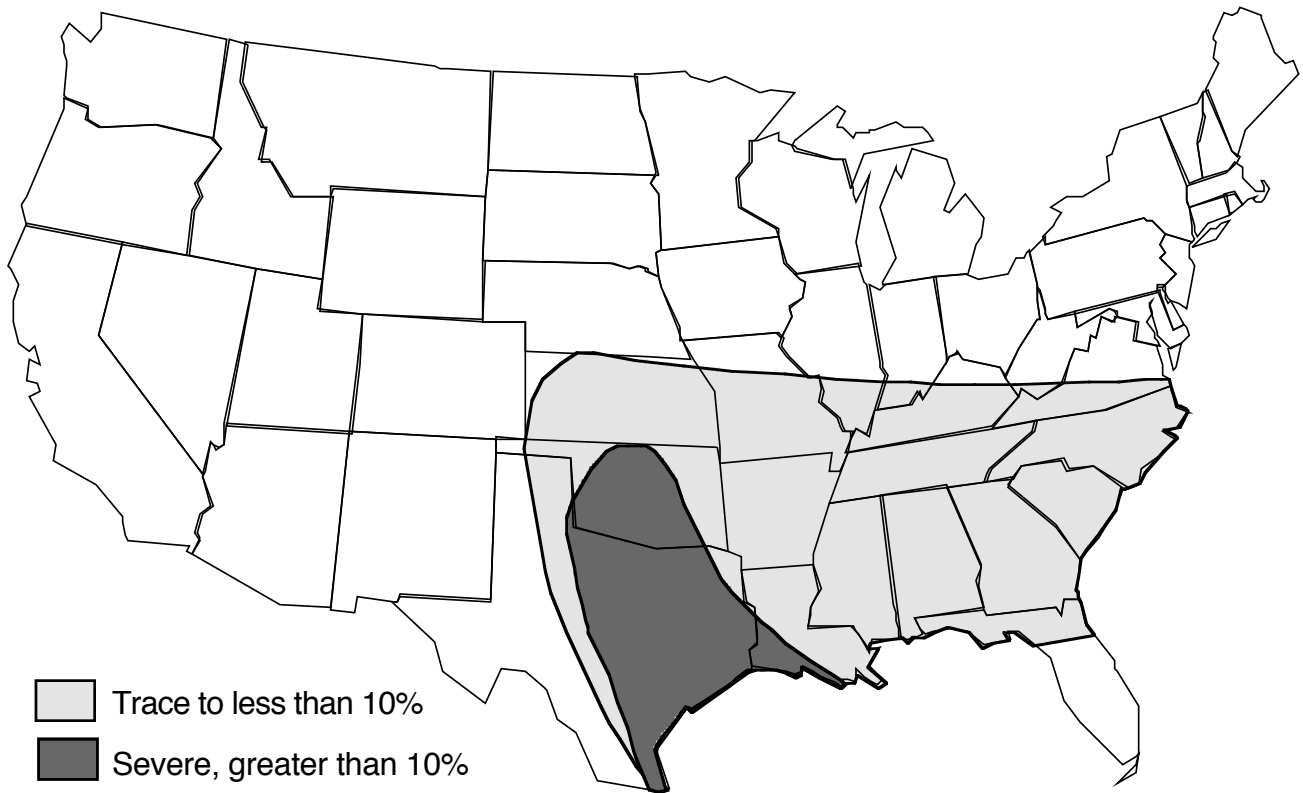


Fig. 2. Stripe rust severities in wheat plots and fields - May 1, 2007

