

# CEREAL RUST BULLETIN

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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  
[Mark.Hughes@ars.usda.gov](mailto:Mark.Hughes@ars.usda.gov) or [markh@umn.edu](mailto:markh@umn.edu)

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- Low levels of wheat stem rust were found in Texas and Florida plots.
- Wheat leaf rust is widespread and is increasing rapidly throughout the southern U.S.
- Wheat stripe rust is at low levels in the southern U.S. wheat growing area
- Oat stem rust was found in plots in northern Florida and Texas.
- Oat crown rust is increasing in the southern oat growing areas.

Winter wheat is behind normal developmental stage in some areas of the U.S. In the spring wheat and oat area of the northern plains, cool and wet conditions have delayed planting.

**Wheat stem rust.** On April 24, low levels of wheat stem rust were found on the susceptible variety McNair 701 in plots at College Station, in central Texas. On April 28, traces of wheat stem rust were found in plots of McNair 701 and an unknown cultivar at Bardwell in central Texas. In late April, low levels of wheat stem rust were found in plots at Prosper in northern Texas. Traces of wheat stem rust were also found in a field near Abilene, Texas. On April 22, traces of wheat stem rust were found scattered throughout many susceptible cultivars and experimental lines at Castroville in south Texas. Stem rust was more prevalent this year than last year at Castroville.

On April 29, low levels of stem rust were found in plots at Quincy in the panhandle of Florida. On April 24 traces of stem rust were found at Baton Rouge, Louisiana. The wheat was almost mature so stem rust will not become an issue this year. So far this year wheat stem rust has been light on susceptible cultivars in plots throughout the southern U.S.

The first wheat stem rust identifications of 2008 were from Crowley, Louisiana and were identified as race QFCS. This race has been the most commonly identified race from U.S. collections in the past few years, and is avirulent to most of the winter and spring wheats in the U.S.

Wheat stem rust observations map can be found on the CDL website:  
([http://www.ars.usda.gov/SP2UserFiles/ad\\_hoc/36400500Cerealarustbulletins/2008wsr.pdf](http://www.ars.usda.gov/SP2UserFiles/ad_hoc/36400500Cerealarustbulletins/2008wsr.pdf)).

**Wheat leaf rust.** In late April, plots of susceptible wheat cultivars had leaf rust severities up to 80%, in the area from central Texas, northern Louisiana, central Mississippi to central Georgia.



In early May, fields of Jagger (*Lr17*) and Jagalene (*Lr24*) in northern Texas had severities up to 30% (Fig. 1), while the majority of the fields had traces of leaf rust.

In late April, leaf rust was observed on Jagalene and Jagger in commercial fields and variety evaluations in northern Oklahoma. By early May, leaf rust was increasing rapidly in plots near Stillwater and Lahoma, Oklahoma, with severity levels of 65% on flag leaves of Jagger and Jagalene. Continued cool and moist conditions should allow leaf rust to continue to rapidly increase in Oklahoma.

In early May, leaf rust was observed in additional counties from south central Kansas to north central Kansas. The highest rust severities were found on Jagger and Jagalene with traces levels on Overley (*Lr41*) and Fuller (*Lr17*, *Lr41*). The rust on Fuller was not completely unexpected because small hot spots of rust were found on Fuller the last two years.

In late April, severities of 40% were observed on flag leaves in fields of susceptible cultivars from southern Louisiana and southern Georgia. Many fields in the southern U.S. have been sprayed with fungicide to control rust development. Drier conditions than normal in late April will slow rust development throughout much of the southern U.S.

In early May, leaf rust was almost nonexistent in Arkansas. A few very small pustules were found on older leaves, but upper leaves were free of leaf rust. Apparently the commonly grown cultivars have adult-plant resistance.

Leaf rust has been present in lower canopies of susceptible varieties such as Saluda (*Lr11*) since late March at Plymouth in eastern North Carolina. During the last week rust moved up the canopy and covered 15% of the flag leaf area on varieties such as Saluda, McCormick (*Lr24*) and USG 3209 (*Lr11*, *Lr26*). Rust covers approximately 1% of the mid-canopy of Tribute (*Lr9*, *Lr24*) and Coker 9511 (*Lr9*). Leaf rust likely overwintered in the region and has advanced faster than normal.

In late April, leaf rust was observed on the lower wheat leaves in a field in Horse Heaven Hills in southeastern Washington.

**Wheat stripe rust.** In late April, hot and dry conditions slowed stripe rust development in plots and fields throughout the southern U.S. (Fig. 2). Hot spots of severe stripe rust were observed in late maturing susceptible cultivars in nurseries in southwestern Georgia and north central Louisiana. Most of the infections had occurred when conditions were cooler.

In late April, hot spots of stripe rust were found in breeder line planted at the Lahoma and Stillwater experiment stations in Oklahoma. They appeared to be limited to a relatively small area at each of these stations. These were the first reports of stripe rust in Oklahoma this year. As of early May no stripe rust has been reported in Kansas.

By early May, conditions were still favorable for stripe rust development north of I-40 in Arkansas. Most cultivars have some resistance, except for a few fields in northeast Arkansas that were planted with susceptible cultivars. Stripe rust is still active in plots at Fayetteville.



In early May, stripe rust levels were fairly high in many fields in western Tennessee. In early May, a field in southwest Kentucky had very low levels of stripe rust. If conditions continue to be favorable for stripe rust development in the soft red winter wheat many of these locations will provide rust inoculum for areas further north.

In late April, stripe rust was found in southeastern Washington. Some early-planted fields had severities up to 10% incidence and 5% severity. In general, stripe rust has been developing slowly in eastern Washington. In the Mount Vernon area in western Washington, stripe rust had developed up to 100% severity on highly susceptible entries by April 24.

**Oat stem rust.** On April 23, light oat stem rust was found in oat growing alongside the roadside in central Texas. In the same area oat stem rust was found on *Avena fatua* (wild oat).

On April 29, up to 10% severities of oat stem rust were found in a hot spot in the irrigated nursery at Marianna in the panhandle of Florida. If the plots are irrigated within the next few days the oat stem rust will spread and increase throughout the plots.

In late April, oat stem rust was severe (40% severities) and spreading rapidly in plots at Baton Rouge, Louisiana.

Oat stem rust observations map can be found on the CDL website:

([http://www.ars.usda.gov/SP2UserFiles/ad\\_hoc/36400500Cerealarustbulletins/2008osr.pdf](http://www.ars.usda.gov/SP2UserFiles/ad_hoc/36400500Cerealarustbulletins/2008osr.pdf))

**Oat crown rust.** In late April, central Texas fields had trace-20% severities while trace severities were reported in northern Texas. In plots in central Texas 60% severities were observed. Oat crown rust was lighter at College Station than at Castroville in south Texas, but was still severe on susceptible cultivars.

In late April, light to moderate levels of crown rust were found in oat plots from northwestern Florida to north central Louisiana. These southern locations may provide inoculum for the northern oat growing areas.

**Buckthorn.** In early May, no pycnial infections were observed on buckthorn, the alternate host for oat crown rust, in the buckthorn nursery at St. Paul, Minnesota. Cooler than normal temperatures have slowed bud development.

**Barley stem rust.** Barley stem rust has been reported yet in 2008.

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

**Stripe rust on barley.** There have been no new reports of barley stripe rust since the last bulletin when trace amounts to 80% severity were observed in the Barley CAP screening nursery at the University of California-Davis Agronomy Farm..

**Rye rusts.** In late April, severe levels of leaf rust were observed in rye plots at Mariana, Florida. In plots at Giddings, Texas in late April, 60% rye leaf rust severities were found.



Fig. 1. Leaf rust severities in wheat fields - May 6, 2008

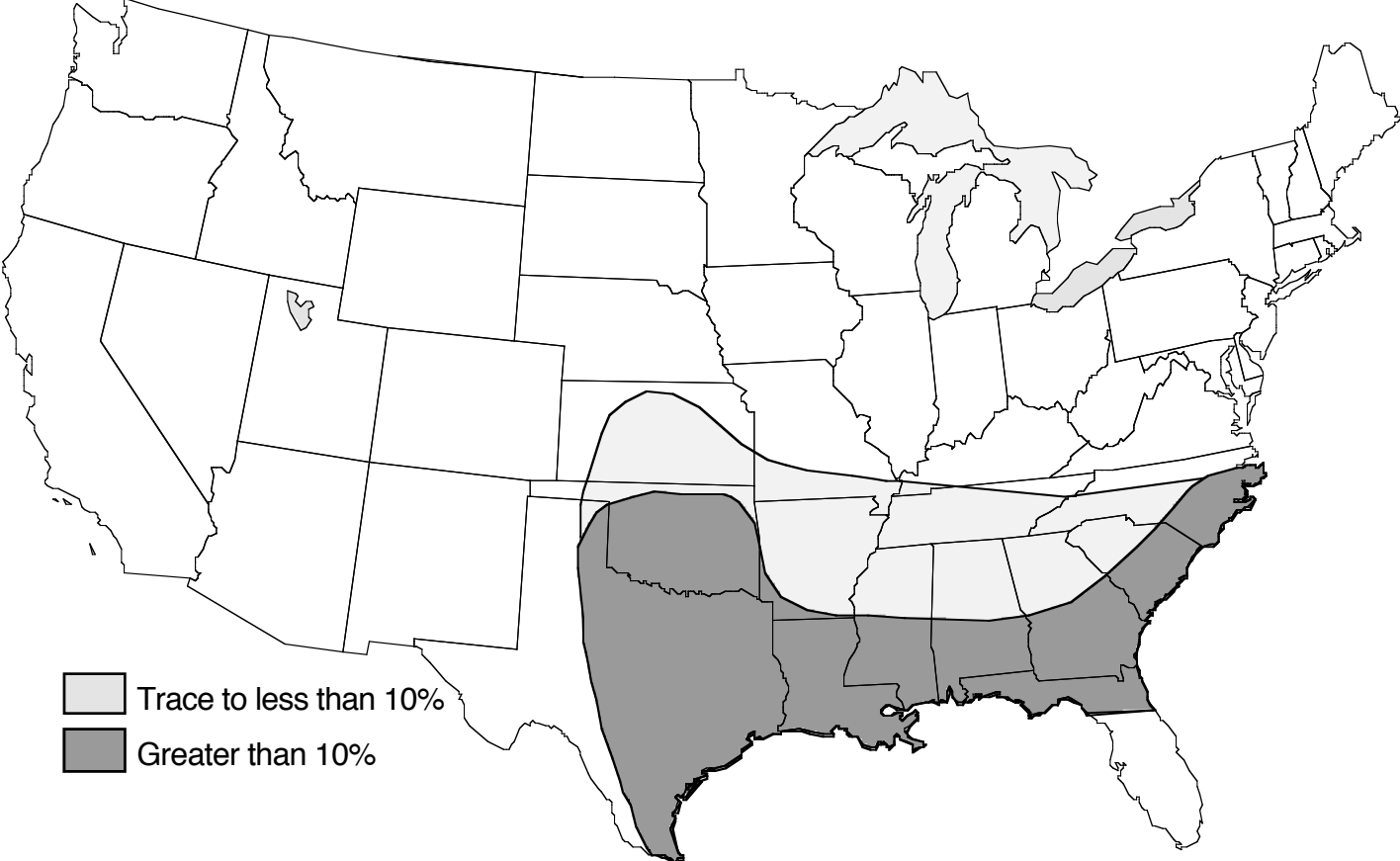


Fig. 1. Stripe rust severities in wheat plots and fields - May 6, 2008

