

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)

For the latest cereal rust news from the field, subscribe to the cereal-rust-survey listserv list. To subscribe, please visit:  
<http://www.ars.usda.gov/Main/docs.htm?docid=9970>

Or, send an email to: [Mark.Hughes@ars.usda.gov](mailto:Mark.Hughes@ars.usda.gov)

Reports from this list as well as all Cereal Rust Bulletins are maintained on the CDL website (<http://www.ars.usda.gov/mwa/cdl>)

For the original, detailed reports from our cooperators and CDL staff, please visit the [Cereal Rust Situation \(CRS\)](#) reports page on the [CDL website](#) or click the [CRS](#) links found throughout the bulletin.

- Wheat stem rust is present at low levels in plots in central and southern Texas and watermelon windbreaks in the Rio Grande Valley.
- Wheat leaf rust is light and scattered in the southern Plains and Southeast.

**Wheat stem rust.** In addition to stem rust reported earlier in McNair 701 plots in southeastern and south central Texas (CRB #2), wheat stem rust was found on McNair 701 in McGregor nursery plots in central Texas on April 23. Stem rust was also found on emmer, barley and triticale used as windbreaks in watermelon fields in the Rio Grande Valley in southern Texas on April 20-21. The infection was sparse on emmer and barley with severities from trace to 20% while the triticale was highly susceptible with severities up to 80S (see [CRS](#)).

Trace amounts of wheat stem rust were found in plots of an unknown variety at Crowley in southern Louisiana on April 22.

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

**Wheat leaf rust.**

**Texas** – Leaf rust was found at very low to moderate levels in plots of susceptible wheat in southern Texas in mid-April. The persistent and widespread drought conditions will limit the spread and development of leaf rust in the state.

**Oklahoma** – There have been few reports of leaf rust in the state (see [CRS](#)). The only significant leaf rust (25-65% severity on flag leaves) found was in strips of Jagalene (*Lr24*) in plots near Stillwater in north central Oklahoma. Recent rains made conditions more favorable for development.

**Kansas** – Low levels of leaf rust have been found in central and south central parts of the state (see [CRS](#)). Dry conditions in the state this spring have not been conducive for rust development.

**Arkansas** – There have been no new reports of leaf rust in the state since the report of leaf rust in a 120 acre field of Jackpot in central Arkansas in mid-March.

**Mississippi** – Low levels of leaf rust were found in a field of Pioneer 26R22 (*Lr11*) at Fearn Spring in Winston County in east central Mississippi on April 15.



**Georgia** – Traces of leaf rust were observed in a field in Lee County in southwestern Georgia in late April. Otherwise, no rust was found in commercial fields in several counties surveyed in the southwestern part of the state.

**South Carolina** – The first report of leaf rust in the state in 2011 was in susceptible plots of USG 3209 (*Lr26*, +) and Panola (*Lr11*) in Barnwell County in the southern coastal plain on April 22.

**Virginia** – There have been no new reports of wheat leaf rust in the state since the report of leaf rust in plots in Warsaw on April 14.

**California** - Leaf rust was severe on the cultivars Dirkwin and Mika in plots at Colusa in the Sacramento Valley in late April.

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

**Special Note:** New races of wheat leaf rust with virulence to *Lr21* were detected for first time in North America in 2010. The leaf rust resistance gene *Lr21* was originally derived from the wild wheat relative *Triticum tauschii*. Virulence to this gene had not been detected in isolates of *Puccinia triticina* in North America in previous years. In 2010 in research plots in North Dakota and Minnesota the wheat cultivars Faller, Glenn, and RB07 with *Lr21* had higher levels of leaf rust than in previous years. Wheat leaf rust races TFBGQ and TFBJQ – both virulent to seedling wheat plants with *Lr21*, were identified in the leaf rust collections from Minnesota and North Dakota. [For the complete report, please visit the CDL website.](#)

**Wheat cultivar *Lr* gene postulation database.** Please visit: [Leaf rust resistance gene postulation in current U.S. wheat cultivars.](#)

#### **Wheat stripe rust.**

**Texas** – No new reports of stripe rust since it rust was found in south central Texas plots on March 8.

**Louisiana** – Stripe rust developed around the state, but was not a significant problem for growers.

**Mississippi** – No new reports of stripe rust since it was detected in commercial fields of Croplan 8868 and Dixie 427 in northwestern Mississippi in late March.

**Arkansas** – Stripe rust remains the most prevalent wheat disease in the state, but it remains at low levels. Recent rains and cool evenings are favorable for stripe rust development.

**California** – Stripe was severe on several cultivars in plots at Grimes and Clarksburg (early dough and anthesis to early dough, respectively) in the Sacramento Valley in late April (see [CRS](#)).

**Washington** – Stripe rust severities up to 60% (normal for the area) were found in the Mount Vernon winter nursery in northwestern Washington in late April (see [CRS](#)). Stripe rust (low levels) has been found in more fields in eastern Washington since the last bulletin (CRB #2).

Wheat stripe rust observation map can be found on the CDL website (<http://www.ars.usda.gov/Main/docs.htm?docid=9757>).



### **Stripe rust samples**

Please send wheat and barley stripe rust collections (5 or more rusted green leaves) as soon as possible after collection to:

Dr. Xianming Chen  
USDA-ARS  
361 Johnson Hall  
P.O. Box 646430  
Washington State University  
Pullman, WA 99164-6430  
email: [xianming@wsu.edu](mailto:xianming@wsu.edu)

**Note:** Stripe rust collections are vulnerable to heat and do not survive long at warm temperatures; therefore, if shipment of collections for race identification is delayed their viability will be greatly reduced. An overnight courier service is preferred for sending stripe rust collections.

**Oat stem rust.** Heavy stem rust infection was found in a field plot of *Avena strigosa* (black oat) at Weslaco in extreme southern Rio Grande Valley of Texas on April 20-21. Numerous pustules were found on upper stems and flag leaves in several plots at College Station in southeastern Texas on April 23.

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

**Oat Crown Rust.** Oat crown rust was found at low levels in a few plots and scattered on *Avena fatua* in ditches in Central Texas in late April. It appears Texas will not be a significant source of crown rust inoculum for the Central and Northern Plains this year.

**Barley stem rust.** Stem rust was found scattered on barley used in windbreaks for watermelon fields in the Rio Grande Valley in southern Texas on April 20-21.

**Barley leaf rust.** Dense telia on dried barley leaves in the Rio Grande Valley of south Texas on April 20-21 suggests barley leaf was severe at the location. Barley leaf rust was severe in a plot at Clarksburg in the Sacramento Valley, California on April 27.

**Barley stripe rust.** Barley stripe rust was severe in several plots at Clarksburg in the Sacramento Valley, California on April 27.

**Rye stem or leaf rust.** Heavy leaf rust infection was observed on an unknown winter rye cultivar planted in a mixture with vetch (in rotation with watermelon fields) in the Rio Grande Valley in southern Texas.

