

*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)

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

- The first reports of wheat stem rust in 2012 were from nurseries in Mississippi and Arkansas.
- Wheat leaf rust noticeably increased the last two weeks in Kansas and is widespread in eastern North Carolina.
- Low levels of stripe rust were found in Colorado and south central and central Nebraska Panhandle.
- Moderate to high levels of oat crown rust were found in plots in eastern North Carolina.
- High levels of barley leaf rust were found in plots in Blacksburg in west central Virginia.

*For 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](#) link found throughout the bulletin.*

The winter wheat harvest has begun in parts of Texas, the Gulf States and the southern wheat area of California. Generally winter wheat development, as well as spring small grain planting, continues to be well ahead of normal, in areas east of the Rockies.

**Wheat stem rust.** Wheat stem rust was found in a variety trial nursery near Schlater in northwestern Mississippi in late April. Low to heavy levels of stem rust were found on Armor ARX 1107 while some plants of Pioneer 26R20, in a plot adjacent to a major hot spot, were also infected. This is the first report of wheat stem rust in the U.S. in 2012. Stem rust was also found on a breeding line in plots at Marianna in east central Arkansas in late May. Wheat in both Mississippi and Arkansas is approaching or at maturity.

**Wheat leaf rust.** Leaf rust is widespread from the southern Great Plains to the East Coast.

**Texas** – There have been no new reports from the state since low levels of leaf rust were reported in northeastern Texas fields the second week of April and leaf rust was widespread and increasing in central and north Texas the third week of April (see [CRS](#)).

**Oklahoma** – Most wheat in central, southern, southwestern and western Oklahoma had lost their leaves by May 4. In southwestern Oklahoma, where some plants still had leaves on April 28, leaf rust was the most prevalent disease, but some stripe rust could also be found. Previously, wheat leaf was reported as scarce in most fields around Stillwater in north central Oklahoma on April 21 (see [CRS](#)).

**Kansas** – Leaf rust severities in the state increased noticeably the past two weeks. Leaf rust was near 100% incidence and 10-15% severity on flag leaves in plots of known susceptible cultivars at Hutchinson in south central Kansas in early May (see [CRS](#)). The wheat was at watery ripe stage. Previously, low levels of leaf rust were reported in south central and central areas of the state by late April (see [CRS](#)). Winter wheat development in the state is still three weeks ahead of normal.

**Mississippi** – Leaf rust was still active in parts of the Delta in late April, however, telia were forming on wheat at most locations. Winter wheat was at or approaching maturity (50%) with 1% harvested by May 6.



**Arkansas** – Leaf rust was at low severities in northeastern Arkansas in late April. Wheat in both plots and fields in eastern Arkansas had lost most of their leaves by late April. Dry conditions and/or freeze damage likely accelerated maturity. Winter wheat was approaching maturity with 1% harvested by May 6. Previously, it was reported (early April) that leaf rust was widespread in the state and severe on several lines in southeastern Arkansas.

**Georgia** – No new reports of leaf rust since it was reported in commercial fields in southwestern and central Georgia the third week in April (see [CRS](#)).

**South Carolina** – Previously, wheat leaf rust was reported on USG 3209 in Barnwell County in southern South Carolina on April 6.

**North Carolina** – Wheat leaf rust was widespread in eastern North Carolina the first week of May. Susceptible lines in plots had 100% severity and resistant lines had intermediate to low infection levels. Wheat fields had moderate levels of infection on flag leaves. Maturity of wheat fields was variable as some fields in southeastern North Carolina were starting to dry down while fields in northeastern North Carolina were still in grain filling stage. Previously, low levels of leaf rust were reported in central North Carolina (see [CRS](#)).

**Virginia** – Susceptible lines were heavily infected with leaf rust in plots at Warsaw in eastern Virginia in late April. The infection was mostly on lower leaves and had not spread much, likely due to the very dry conditions in April. Very little leaf rust was found in plots at Blacksburg in western Virginia. Leaf rust was at low levels, but widespread at Blackstone (Piedmont area) and Holland (Tidewater area) in southeastern Virginia the second week of May. High levels of leaf rust infections were found at Painter on the Eastern Shore area of the state.

**Indiana** – Leaf rust was observed at low incidence and severity in several fields in Gibson County in southern Indiana the second week of April.

**Wheat leaf rust map.** Please visit: (<http://www.ars.usda.gov/Main/docs.htm?docid=9757>).

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

## **Wheat stripe rust.**

**Texas** – There have been no new reports from Texas since the last bulletin (see [CRB #3](#)) when stripe rust was active in central and north central Texas the third week of April, however, development in north central Texas appeared to be slowing while leaf rust was rapidly increasing (see [CRS](#)).

**Oklahoma** – Most wheat in central, southern, southwestern and western Oklahoma had lost their leaves by May 4. In southwestern Oklahoma, where some plants still had leaves on April 28, leaf rust was the most prevalent disease, but some stripe rust could also be found. Previously, stripe rust was reported across southwestern, central, south central and west central Oklahoma, but not heavy or severe at any location surveyed (see [CRB #2](#), [CRS](#)).

**Kansas** – Stripe rust development slowed in south central and central Kansas the first week in May. In north central and northwestern Kansas, where it has been slightly cooler, stripe rust was still active, however, higher temperatures were expected over last weekend. Cooler weather is anticipated this week in northern Kansas, perhaps allowing stripe rust to remain active in the area. Previously, stripe had increased in south central and central Kansas and was most severe on cultivars previously thought to be resistant, suggesting a race change in the Great Plains (see [CRB #3](#), [CRS](#)).



**Nebraska** – Stripe rust was generally at low incidence and severity throughout fields in south central and southwestern Nebraska on May 3. A few hot spots with high severities were found in some fields. Most fields were at full heading or flowering while a few fields were in boot stage. Trace to low levels of stripe rust were found in fields in the southern Nebraska Panhandle on May 4-5. Traces were found in the central Panhandle while the northern Panhandle was free of stripe rust. It is likely stripe rust will appear in the northern Panhandle in the next 2-3 weeks. Previously, stripe rust was reported (mid-April) in fields in southeastern and south central Nebraska (see [CRS](#)).

**Colorado** – Stripe was found at low levels in Phillips County in eastern Colorado in early May.

**Mississippi** – Stripe rust was still active throughout parts of the Delta in late April. However, at most locations telia had formed. Winter wheat was at or approaching maturity (50%) with 1% harvested by May 6. Previously, stripe rust was reported as active and rapidly developing in some areas of state the second week of April.

**Arkansas** – Wheat in eastern Arkansas had lost most or all of their leaves by early May. Drought and/or freeze damage likely accelerated maturity. Winter wheat was approaching maturity with 1% harvested by May 6. Earlier, it was noted that previously resistant cultivars were infected suggesting one or more new races may be present (see [CRB #3](#), [CRS](#)).

**North Carolina** – Low levels of stripe rust were found in a plot of Shirley in Lenoir County in southeastern North Carolina the first week of May. Previously, stripe was reported in the Coastal Plain, south central and east central North Carolina (see [CRB #3](#), [CRS](#)).

**Virginia** – Isolated foci of stripe rust were found in plots at Mt Holly and at Warsaw in eastern Virginia in late April and early May, respectively. In the second week of May isolated stripe rust infection foci were found in plots at Blackstone and Painter in southeastern Virginia and Eastern Shore, respectively.

**Illinois** – There have been no new reports since stripe rust was observed across several counties in southern Illinois on April 19.

**Indiana** – There have been no new reports since stripe rust was observed at low incidence and severity in a field in southern Indiana the second week of April.

**California** – There have been no new reports since stripe rust was reported as widespread in the state in [CRB #3](#).

**Pacific Northwest** – There have been no new reports since [CRB #3](#) when it was noted that there were lower levels of rust development than in 2011, except for northwestern Washington (see [CRB #3](#) and [CRS](#)).

**Idaho** – No new reports from the state. Previously, it was reported (early April) that no overwintering stripe rust was found in plots at Aberdeen in southeastern Idaho.

### **Stripe rust samples**

Please send wheat and barley stripe rust collections 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.

**Wheat stripe rust map.** Please visit: (<http://www.ars.usda.gov/Main/docs.htm?docid=9757>).

**Oat stem rust.** There have been no new reports of oat stem rust at locations other than reported earlier (extreme southern Texas and College Station Texas, see [CRB #1](#)).

**Oat crown rust.** Crown rust on oats was present at moderate to high levels in plots in eastern North Carolina the first week of May. Low levels of crown rust were found in plots in Alabama in late April. Previously, crown rust was reported in plots in central North Carolina (early April), in southeastern Louisiana (early March) and South Texas (late March).

Early infections on buckthorn in the Matt Moore Buckthorn Plots at St. Paul, Minnesota are now producing aeciospores. Recent heavy buckthorn infections will be releasing even more aeciospores next week. Infection and development is very early this year. Crown rust infections will likely appear very soon on the spreader rows in the nursery.

**Barley stem rust.** Not yet reported in the U.S. this year.

**Barley leaf rust.** High levels of barley leaf rust were found in plots in Blacksburg in west central Virginia in late April. Barley leaf rust increased significantly and was at low to moderate levels in plots at Warsaw in eastern Virginia the first week of May. Barley leaf rust was at low severity, but very widespread in plots at Blackstone and Holland in southeastern Virginia the second week of May. At Painter on the Eastern Shore, heavy barley leaf rust infections were found in plots. Previously, barley leaf rust was reported in east central Georgia, Delaware, Virginia and extreme southern Texas (see [CRBs #1, #2 and #3](#) and [CRS](#)).

**Barley stripe rust.** Barley stripe rust was reported in plots at U.C. Davis in California in April.

**Rye stem rust.** Not yet reported this year in the U.S.

**Rye leaf rust.** Not yet reported this year in the U.S.

