

*Issued by:***Cereal Disease Laboratory**

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<http://www.ars.usda.gov/Main/docs.htm?docid=9970>

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- Wheat stem rust was found on a few plants in plots in west central Mississippi.
- Wheat leaf rust remains at unusually low levels particularly in the central and southern plains.
- Well-developed wheat stripe rust in tight foci were reported in south central Idaho.
- Wheat stripe rust was found in southwestern and south central Illinois and plots in eastern and southern 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 U.S. winter wheat crop was 60% headed by May 26, 12% behind the 5-year average. Overall, 31% of the U.S. winter wheat crop was reported in good to excellent condition. The winter wheat harvest continues in southern Texas (12% complete), Louisiana (6%), Alabama (4%) and Georgia (19%). The spring wheat barley crops were 79% and 78% sown, respectively and 42% and 46% emerged, respectively, by May 26. Ninety two percent of the oat crop was sown and 76% had emerged by May 26. Overall, 52% of the oat crop was rated in good to excellent condition.

Wheat stem rust. A few pustules of wheat stem rust were found on the stems and heads of three winter wheat plants in a plot in Hinds County in west central Mississippi in late May. Previously, stem rust was reported as severe on *T. monococcum* (Einkorn) at Feekes 10.5 growth stage in a plot at Davis, California on May 6. The rust on the Einkorn has been tentatively identified as rye stem rust.

Wheat leaf rust. Wheat leaf rust is at atypically low levels for this time of year, particularly in the southern and central Great Plains. Inoculum levels from Texas were low due to cooler spring temperatures, dry conditions and the application of fungicides.

Texas – There have been no new reports from the state since high levels of leaf rust were observed in plots in southern Texas in mid-April. Winter wheat harvest has progressed into areas in south central Texas.

Oklahoma – Wheat leaf rust remains at atypically low levels in the state (see [CRS](#)). Leaf rust was found in plots at Perkins (5-20S) and Stillwater in north central Oklahoma the fourth week of May. Drought and late season freezes have severely impacted wheat production in the panhandle.

Kansas – There have been few reports of wheat leaf rust in state (see [CRS](#)). Trace amounts of wheat leaf rust were found in susceptible plots of Winterhawk in Saline County in central Kansas in late May. The wheat was at kernel development stage.

Nebraska – Wheat leaf rust has not yet been reported in the state.



Mississippi – Low levels of wheat leaf rust had been found in 10 counties across the state by May 20.

Arkansas – Low levels of leaf rust were found in plots at Kibler in northwestern Arkansas on May 17. The first report of wheat leaf rust in the state was at low levels in plots at Rohwer in southeastern Arkansas on May 10.

Virginia – Wheat leaf rust was found in plots in Blacksburg in western Virginia in late May. Low levels of leaf rust were found in plots at Painter in eastern Virginia in mid-May. Relatively higher incidences were found on susceptible cultivars such as Massey as well as cultivars with *Lr9*. Lower leaf rust incidence was found on cultivars with *Lr24* and much lower incidence on cultivars with *Lr26*. No rusts were found on visits to the plots at Blackstone (southern Virginia) and Holland (northeastern Virginia) in mid-May.

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](#).

2012 wheat leaf rust race survey results are now available.

Wheat stripe rust.

Oklahoma – Generally, wheat stripe rust has been found at low incidence and severity in the state (see [CRS](#)). The fourth week of May, wheat stripe rust was found at low incidence and severity in plots at Lahoma and Stillwater in north central Oklahoma. The wheat was at fully berry to milk stage. Previously, reports of stripe rust increased in the state the second week of May, but there was no indication of a widespread or severe outbreak anywhere in the state (see [CRS](#)).

Kansas – No rust was found in a late May survey of five counties in north central Kansas in late May. Wheat in the area was flowering or just past flowering. Previously, low levels of stripe rust were found in commercial fields in southeastern Kansas, however, it is unlikely stripe rust will continue to develop to any degree due to increased temperatures.

Nebraska – Trace levels of wheat stripe rust were found in plots at Lincoln in southeastern Nebraska on May 30. Development of the stripe rust at Mead had stopped following high temperatures the week of May 13, however, the rust had recently increased to higher than trace levels by late May. Recent rains have created conditions conducive for rust infection and development in eastern Nebraska. No rust was found during a survey of three counties in southeastern Nebraska on May 21 and 22 (see [CRS](#)).

Mississippi – There have been no new reports of stripe rust in the state. Previously, it was reported that stripe rust was confirmed in 16 counties, however, it did not appear as severe as in 2012 (see [CRS](#)).

Alabama – There have been no new reports of stripe rust in the state. Previously, stripe rust was observed in plots near Tallassee in east central Alabama the second week of May (see [CRS](#)).

Georgia – There have been no new reports of stripe rust in the state since it was reported stripe rust had been observed across much of the state (see [CRB #3](#)). Nineteen percent of the winter wheat crop was harvested by May 28.

Arkansas – Stripe rust was still active in plots at Kibler in northwestern Arkansas on May 17. Previously, it was reported that stripe rust was only serious in areas where it had overwintered and the cultivars lacked adult plant resistance or where no fungicide or late applications of fungicide were applied (see [CRB #3](#)).



Tennessee – There have been no new reports from the state since the last bulletin. Previously it was reported that by early May stripe rust was found in 9 counties in western Tennessee at varying levels of incidence and severity. Fungicides were applied.

Kentucky – No rusts were found in a May 24 survey of the most productive wheat area of the state in southern Kentucky. The wheat was in early milk stage. Previously, low levels of stripe rust were detected in a field in Christian County in southwestern Kentucky by early May.

Virginia – Trace amounts of stripe rust were found in a few headrows in plots at Warsaw in late May. A single stripe rust lesion was found on one leaf in a plot of the cultivar SS 520 at Blackstone in southern Virginia in mid-May. Wheat stripe rust (~1% prevalence) was found only in a few plots at Painter in eastern Virginia in mid-May. The cultivar Tribute had a few plants with severity ranging from 1-40%.

Illinois – Stripe rust at low incidence and severity was observed in Madison (southwestern Illinois) and Fayette (south central Illinois) counties the fourth week of May. There was no new development or spread of stripe rust previously reported in Champaign County in east central Illinois.

Delaware – There have been no new reports since the report of low levels of stripe rust in commercial winter wheat fields in eastern Kent County on May 14. At that time there had been no reports of rust in Newcastle or Sussex County.

California – There have been no new reports from California since the last bulletin when it was reported that stripe rust was established in plots in the Central Valley by early May even though the disease was late in developing in 2013 (see [CRB #4](#)).

Oregon – There have been no new reports from the state since the last bulletin. Previously it was reported that wheat stripe rust was easily found in plots at Hermiston in northeastern Oregon in early May and that stripe rust was developing rapidly in plots in the South Willamette Valley on April 24.

Idaho – The first report of stripe in Idaho this year was from the Hazelton area in south central Idaho. The well-developed rust was found on the soft white winter wheat Brundage on May 22 and had possibly overwintered. An update with additional information is expected in the next few days.

Washington – In a survey of the Palouse region of southeastern Washington on May 23 stripe rust was easy to find in plots near Pullman, but only one pustule was found in commercial fields in the area. The rust in the plots had moved from the lower leaves up into the middle and upper canopy with incidences ranging from 1 -10%. Winter wheat in the area ranged from jointing to heading. No rust was found in spring wheat fields. Spring wheat ranged from emerged to jointing stages. Most winter wheat fields in central and southeastern Washington have been treated with fungicides. This, in combination with dry conditions and high temperatures in early May, limited stripe rust infections and development. Rains the fourth week of May created conditions conducive for stripe rust development.

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



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 since it was reported in plots in southeastern Louisiana and in southern Texas (see [CRS](#)).

Oat crown rust. There have been no new reports of oat crown rust since the last bulletin when it was reported that crown rust was particularly virulent this year in Florida. Previously, crown rust was confirmed in a field in southeastern Mississippi, several oat fields from southwestern to east central Georgia, plots in southeastern Texas, the Florida panhandle and in southeastern Louisiana.

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

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

Barley leaf rust. Barley leaf rust at ~80 prevalence and up to 90% severity was found in plots at Painter in eastern Virginia in mid-May.

Barley leaf rust was common in the lower canopy of susceptible border rows in plots at Blacksburg in western Virginia on April 29. Barley leaf rust was also active in plots at Warsaw in eastern Virginia in early May; barley leaf rust was first noted in the plots on January 10.

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

Stripe rust on barley. Barley stripe rust was found on one leaf in a winter barley plot near Pullman in southeastern Washington on May 23. Previously stripe rust was reported in winter barley plots at Mt. Vernon in northwestern Washington in early May and on wild barley in Yolo County in late March.

Rye stem rust. Previously, stem rust was reported as severe on *T. monococcum* (Einkorn) at Feekes 10.5 growth stage in a plot at Davis, California on May 6. The rust on the Einkorn has been tentatively identified as rye stem rust.

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

Rust on other grasses. There have been no reports of rusts on grasses since crown rust was reported on Italian ryegrass in northwestern Mississippi in early May (see [CRB #4](#)).

Rust on barberry. Light amounts of early aecial infections were observed on common barberry (*Berberis vulgaris*) in southeastern Minnesota and south central Wisconsin.

