

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

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Or, send an email to: 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>)

- Wheat stem rust was found in plots in north central Oklahoma and central Missouri and on volunteer wheat in southeastern Missouri.
- Wheat leaf rust disease pressure was high in plots in eastern North Carolina.
- Stripe rust is spreading on susceptible winter wheat cultivars in south central and southeastern Idaho.
- Barley leaf rust was found in a field in northwestern New York and plots in northwestern Washington.

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 82% headed or beyond by June 9, 4% behind the 5-year average. Overall, 31% of the U.S. winter wheat crop was reported in good to excellent condition. Five percent of the U.S. winter wheat crop was harvested by June 9, 11% behind the 5-year average. Harvest was underway in areas of Texas, Oklahoma, Louisiana, Mississippi, Alabama, Georgia, Arkansas, North Carolina and California.

By June 9, 87% of the spring wheat crop was sown, 9% behind the 5-year average. Overall, 62% of the crop was reported in good to excellent condition. Ninety six percent of the oat crop was sown by June 9, 3% behind the 5-year average. Overall, 56% of the crop was reported in good to excellent condition. Eighty eight percent of the barley crop was sown by June 9, 8% behind the 5-year average. Overall, 63% of barley crop was reported in good to excellent condition.

Wheat stem rust. Wheat stem rust was found on a single stem of a Winterhawk plant in plots in Alfalfa County in north central Oklahoma on June 5. Trace amounts of wheat stem rust were found on two cultivars in plots in Pettis County in central Missouri and on volunteer wheat in a wheat field in Scott County in southeastern Missouri on June 7. Previously, wheat stem rust was found on three plants in west central Mississippi and on *T. monoccum* (Einkorn) at Davis, California (see [CRS](#)).

Wheat leaf rust.

Oklahoma – Trace amounts of wheat leaf rust were found in north central Oklahoma on June 5 (see [CRS](#)). Generally, wheat leaf was at atypically low levels in the state in 2013. Harvest has begun in southwestern Oklahoma.

Kansas – Trace amounts of wheat leaf rust were found in fields in south central Kansas and plots in north central and northeastern Kansas in early June. Susceptible cultivars such as Overley (Lr39/41), Jagger (Lr17), Jackpot (Lr39/41) and Fuller (Lr17, Lr39/41) had higher severities, but incidence was low. Trace amounts of leaf were observed on the cultivars Everest (Lr1, Lr14a), Armour (Lr39/41) and Cedar (see [CRS](#)). Wheat in central Kansas was in grain filling stages in early June. Trace amounts of wheat leaf rust were found in plots in Reno County in south central Kansas on



May 31. The wheat was at milk stages of development. No rust has been reported in Ellis, Rush, Ness, Lane and Russell Counties in central and west central Kansas where the wheat is in very poor condition due to drought.

Nebraska – A hot spot of wheat leaf rust was found in plots at Lincoln in southeastern Nebraska on June 7. The lower leaves had 40% rust severity and higher while the flag leaves had only trace amounts. Wheat in the plots was at flowering to milk stage. This is the first report of wheat leaf rust in the state in 2013.

Iowa – Trace amounts of wheat leaf rust were found in a field in Lee County in extreme southeastern Iowa.

Arkansas – There have been no new reports from the state since low levels of leaf rust were reported in plots at Kibler and Fayetteville in northwestern Arkansas on May 17. Harvest has begun in the state with 2% of the crop harvested by June 9.

Missouri – Wheat leaf rust was found in plots in Johnson, Pettis and Boone Counties in west central and central Missouri in early June. Severities ranged from trace to 20% and incidence from trace up to 40% (see [CRS](#)). Trace levels were also found in fields in Lincoln and Marion Counties in northeastern Missouri.

North Carolina – Leaf rust disease pressure appears to be higher than average in the Kinston and Plymouth plots in eastern North Carolina this year. The leaf rust arrived early in the plots and severely attacked the Saluda border rows. Other lines and cultivars in the plots were not as severely impacted as Saluda. Leaf rust was also found in plots at Clayton and Lake Wheeler in east central North Carolina. Many commercial fields were sprayed with fungicides to reduce leaf rust losses.

Virginia – Low levels of wheat leaf rust were reported in plots in Blacksburg in western Virginia and low to moderate levels were found at Painter and Warsaw in eastern Virginia in late May.

New York – The first report of wheat leaf rust in the state was made at Brockport in northwestern New York on June 5. The rust was found on a single leaf of an unknown cultivar in a commercial field. The wheat was a number of days past flowering and rainy, cool conditions continued in the area.

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 – Trace amounts of wheat stripe rust were found in north central Oklahoma on June 5. Generally, wheat stripe rust has been found at low incidence and severity in the state in 2013 (see [CRS](#)).

Kansas – Trace amounts of wheat stripe rust were found in fields in south central Kansas and trace to low levels were found in plots in north central and northeastern Kansas in early June. The stripe rust was found the cultivars Everest, Winterhawk, TAM 111 and Armour. Stripe rust has generally not developed much in the state this year, likely due to the higher temperatures.

Nebraska – There have been no new reports of stripe rust from the state since the last bulletin. Previously, trace levels of wheat stripe rust were reported in plots in southeastern Nebraska in late May and stripe rust development at



Mead had slowed, but later increased to higher than trace levels. Rains in late May created conditions conducive for rust infection and development in eastern Nebraska.

Missouri – Stripe rust at trace to 60% severity and 25% prevalence was found in plots in Johnson County in west central Missouri in early June while trace levels of stripe rust were found in plots in Boone County in central Missouri. Trace levels of stripe rust were found in fields in Scott and Lincoln Counties, in southeastern and east central Missouri, respectively, in early June. Twenty to forty percent severity and 10% incidence were observed in Marion County in northeastern Missouri.

North Carolina – Stripe rust was severe this year in plots in Clayton in central North Carolina while traces were found on a few plants at Kinston in eastern North Carolina. Low levels of stripe rust were found in plots at Plymouth in eastern North Carolina in late May (see CRS).

Virginia – There have been no new reports from the state since the last bulletin when trace amounts of stripe rust were found in a few plots at Warsaw and Painter in eastern Virginia in late May and a single stripe rust lesion was found in a plot in southern Virginia in mid-May.

Illinois – There have been no new reports from the state since the last bulletin when stripe rust at low incidence and severity was reported in southwestern and south central Illinois the fourth week of May and there was no new development or spread of stripe rust previously reported 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 – Wheat stripe rust has now been reported on the susceptible soft white winter wheat cultivars Brundage and WB 470 and others in south central and some southeastern counties of Idaho as well as in plots of Brundage at Moscow in northwestern Idaho. The stripe in the southern areas was found in small hot spots, however, it appears large amounts of inoculum are present and the stripe rust is spreading. Conditions in the next week appear to be very conducive for stripe rust development and stripe rust will likely be developing on spring wheat.

Washington – There have been no new reports from the state since the last bulletin. Previously, stripe rust was readily found in plots near Pullman, on May 23, but only one pustule was found in commercial fields in the area. No rust was found in spring wheat fields. Most winter wheat fields in central and southeastern Washington were treated with fungicides and 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.

Wisconsin – Wheat stripe rust was found at 25-50% incidence and 20-50% severity in some plots at Janesville in south central Wisconsin on June 11. The previous week stripe rust could only be found at trace levels. Wheat had flowered or was in full flower.



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 [CRB #4](#). 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 was widespread in winter barley plots at Mount Vernon in northwestern Washington in early June. Severities ranged from 0-50% (see [CRS](#)). Low levels of barley leaf rust were found in a winter barley field at Appleton in northwestern New York in late May. The barley heads were just emerging. Previously, barley leaf rust was reported in plots in eastern and western Virginia (see [CRS](#)).

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

Stripe rust on barley. There have been no new reports of barley stripe rust since the last bulletin when barley stripe rust was reported in a winter barley plot in southeastern Washington. 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. There have been no new reports of rye stem rust. Previously, stem rust was reported as severe on *T. monoccum* (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. Low levels of leaf and stripe rust were found on *Aegilops cylindrica* in a nursery in Lincoln County in central Kansas in early June. Low levels of stem and stripe rust were found on *Lolium* sp. (possibly *L. multiflorum*) in Scott County in southeastern Missouri in early June. Previously, crown rust was reported on Italian ryegrass in northwestern Mississippi (see [CRB #4](#), [CRS](#)).



Rust on barberry. There have been no new reports of rust on barberry since the last bulletin when light amounts of early aecial infections were observed on common barberry (*Berberis vulgaris*) in southeastern Minnesota and south central Wisconsin.

Rust on buckthorn. Aeciospores are being released from aecia on common buckthorn (*Rhamnus cathartica*), the alternate host for oat crown rust, in the Matt Moore Buckthorn Nursery at St. Paul in southeastern Minnesota. Typically, oat straw with telia are placed on the bushes in the nursery to promote infection, however, the telia straw was not available this year and the infection on the bushes is all from natural infection. Crown rust infections have not yet shown up on oat in the nursery. Due to the cool spring development in the nursery was delayed about two weeks later than average, but typical infection is anticipated. Crown rust aecia were also found on common buckthorn in southeastern Minnesota and northwestern Wisconsin in early June and in central New York in late May.

