



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

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

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 race QFCSC was identified from Texas and Louisiana collections.
- Wheat stripe rust was severe in southern Nebraska and eastern Colorado and increasing in the Dakotas.
- Wheat leaf rust was found in Oregon, Virginia and Minnesota.
- Barley leaf rust was common in nurseries in northwestern Washington.
- Crown rust appearing on border rows in St Paul Buckthorn nursery.

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.

Following record rains in May (wettest month on record for Oklahoma and Texas, second wettest for Kansas and top ten wettest for Nebraska, Minnesota and the Dakotas) dry weather settled into the south central U.S. the week ending June 6. The drier conditions allowed the winter wheat harvest to ramp up in southern plains areas as fields dried out. Generally, the drought has disappeared from the Great Plains.

Ninety one percent of the U.S. winter wheat crop was headed by June 6, 7% ahead of the 5-year average. Forty three percent of the winter wheat crop was rated in good to excellent condition, 13% better than the same time last year. Four percent of the winter wheat crop was harvested by June 7, 8% behind the 5-year average. The spring wheat crop was 97% emerged, 17% ahead of the five-year average. Sixty nine percent of the spring wheat crop was reported in good to excellent condition.

Thirty eight percent of the oat crop was at or beyond heading stage, slightly behind the 5-year average. Sixty six percent of the oat crop was reported in good to excellent condition. Seventy six percent of the barley crop was reported in good to excellent condition, 12% ahead of last year at this time.

Wheat stem rust. There have been no new reports of wheat stem rust since bulletin #4. Previously, stem rust was reported in nurseries in Texas and Louisiana (see [CRB #4](#), [CRS](#)). Race QFCSC, the most frequently found race in recent years, was identified from nursery collections made in South Texas and in central Louisiana.

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

Wheat leaf rust. Wheat leaf rust has now been found in western Oregon (very unusual) and southern Minnesota. Recent cool temperatures in the Great Plains have limited leaf rust development while favoring stripe rust development. As the temperatures increase conditions will likely favor the increase and spread of leaf rust. Many areas have been treated with fungicides to control stripe rust and that will also inhibit leaf rust development.

Oklahoma – There have been no new rust reports from the state since the last bulletin. Generally, the winter wheat crop is at or approaching maturity. Previously, it was reported that wheat leaf rust development had increased rapidly



around Stillwater in north central Oklahoma and although stripe rust was prevalent in nurseries at Goodwell in the Panhandle, wheat leaf rust was increasing. By June 7, 13% of the winter wheat crop in the state was harvested.

Kansas – There have been no new rust reports from the state since the last bulletin. Previously, leaf rust had been reported in eastern, south central, central and north central Kansas by early May. In south central Kansas in the fourth week of May the wheat leaf rust incidence was generally between 10-20% and severity was less than 1% on flag leaves. Leaf rust was heavier in nurseries near Hutchinson (south central Kansas) with severities approaching 10-15% on flag leaves of the susceptible cultivar Overley (*Lr39/41*).

Nebraska – There have been no new rust reports from the state since the last bulletin. Previously, wheat leaf rust was reported on the cultivar Overley at Mead in eastern Nebraska on May 19. Conditions in the state had favored stripe rust development, i.e. cool, wet weather.

Colorado – While stripe rust was widespread in eastern Colorado by early June, traces of wheat leaf rust were appearing on cultivars that had not lost their leaves to stripe rust.

Tennessee – Wheat leaf rust at variable incidence and severity was found soft red winter wheat in plots at Madison in western Tennessee in mid and late May.

Virginia – Wheat leaf rust was moderately heavy on susceptible lines in plots at Warsaw in eastern Virginia in late May. Leaf rust was also found in nurseries at Blacksburg in western Virginia the second week of June.

New York – There have been no new reports from the state since trace levels of wheat leaf rust were reported in a single field in Orleans County in western New York the fourth week of May.

Minnesota – A single wheat leaf rust pustule was found in a winter wheat plot at Lamberton in southwestern Minnesota on May 28. Some lines and cultivars had heavy flecking likely caused by another wave of rust infection. Wheat leaf rust was observed on lower leaves of winter wheat in plots at St. Paul Minnesota on June 1. Incidence was very low with a trace level of severity. A few uredinia were fully erumpent, other uredinia had not yet broken through the leaf epidermis. On June 7 in the same plots leaf rust infections were at trace levels with low incidence.

Oregon – Wheat leaf rust was found in plots and fields in several areas in both the southern and northern Willamette Valley in western Oregon in late May. Wheat leaf rust has rarely been found in Oregon the last 10-15 years, perhaps because some susceptible cultivars are no longer grown. The wheat leaf rust has been found on the cultivars Bobtail and Cara. This year warm temperatures and moist weather has been conducive for wheat leaf rust development.

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](#)

2014 wheat leaf rust survey summary and results. Please visit: [Wheat leaf rust race survey results](#).

Wheat stripe rust. Stripe rust continues to be active from Colorado and Nebraska to North Dakota and has been found from the west coast to the east coast, north to the Canadian border in North Dakota. Recent cool, wet weather in the plains states has been conducive for stripe rust development.



Oregon – There have been no new reports of stripe rust in the state since the second bulletin when stripe rust was reported and a concern in the Willamette Valley of western Oregon (see [CRS](#)).

Washington – As is typical, stripe rust was severe on winter and spring wheat in nurseries at Mt Vernon in northwestern Washington in late May. Susceptible checks and spreader rows had 85-100% severities. Previously, it was reported that stripe rust was widespread, but at low levels in commercial fields in eastern Washington (see [CRS](#)). The use of resistant cultivars and the application of fungicides limited development.

Montana – Stripe rust was widespread across the state by June 4. The cultivar Yellowstone was holding up well in the golden triangle area of the state. Previously, stripe rust was reported in northwestern and north central Montana in early April (see [CRS](#)).

Idaho – There have been no new reports from the state since it was reported in both western and eastern Idaho where it was increasing (see [CRS](#)).

Tennessee – There have been no stripe rust updates from the state since stripe rust at very low levels was reported in a field in Haywood County in western Tennessee the second week of April. It did not appear the stripe rust was developing to any extent.

Virginia – Stripe rust was found in a plot of Tribute at Warsaw in eastern Virginia on May 4. Stripe rust was severe in a corner of a plot at Blacksburg in western Virginia in early June.

Oklahoma – Stripe rust was widespread in the state by early May and developed to severe levels on some cultivars. Leaf rust was appearing on many cultivars with resistance to stripe rust that still had green leaves. Generally, the winter wheat crop is at or approaching maturity. Thirteen percent of the winter wheat crop was harvested by June 7.

Kansas – There have been no updates from the state since the last bulletin. Previously, stripe rust was reported in central and western Kansas reaching severe levels in some fields. Recent conditions had been conducive for further stripe rust development in the state.

Nebraska – Stripe rust was severe in southeastern, south central and southwestern Nebraska in late May. Severely impacted fields may realize a 40-50% yield loss to stripe rust. Many fields were either not sprayed or sprayed too late with fungicide. Cool, wet conditions had been very conducive for stripe rust development.

Colorado – Stripe rust is now widespread in eastern Colorado with severities up to 100% in many areas. This is the worst stripe rust year since its initial appearance in 2001. Leaf rust is appearing at trace levels on cultivars that have not lost their leaves to stripe rust. Cool, wet weather this spring has created conditions very favorable for stripe rust development.

Wyoming – Light levels of stripe rust were found in both irrigated and dryland nurseries near Lingle in southeastern Wyoming in early June.

South Dakota – Stripe rust was found in several wheat fields in south central South Dakota the last week of May. Stripe was found at low to moderate severity in winter wheat fields in several counties near the Nebraska border on June 4. A field in Gregory County had spots of severe stripe rust. Winter wheat was between heading and flowering. Recent cool, wet conditions were conducive for stripe rust development.



North Dakota – Stripe rust was found in a spring wheat field in southeastern North Dakota and confirmed in areas from central part of the state to the northern border by June 1. The infections were found on the oldest leaves. Spring wheat ranged from tillering to jointing and winter wheat was at boot. Conditions were conducive for further development.

Minnesota – Stripe rust was found in trace amounts at low incidence in winter wheat plots in St. Paul on June 7.

Illinois – There have been no new reports from the state since the last bulletin. Previously, stripe was reported in east central and southern Illinois (see [CRS](#)).

Indiana – There have been no new reports from the state since stripe rust was reported in southwestern Indiana the third week of May (see [CRS](#)).

Wisconsin – Wheat stripe rust was found in a winter wheat plot at Sharon in southeastern Wisconsin in early June. The pustules were only found on a single cultivar. This was the first report of stripe rust in Wisconsin.

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 the first bulletin (see [CRB #1](#)) when oat stem rust was reported in nurseries in southern Louisiana and southern Texas. Race TGN was identified from a Marvelous oat collection made in a nursery at Weslaco in extreme southern Texas.

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

Oat crown rust. There have been no new reports of oat crown rust since the second bulletin. Previously, oat crown rust was reported in South Texas and southern Louisiana (see [CRS](#)).

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

Barley stem rust. There have been no new reports since the first bulletin when a few stem rust pustules were reported on hooded barley, used in watermelon windbreaks, in the Lower Rio Grande Valley of Texas (see [CRS](#)).

Barley leaf rust. Barley leaf rust was common on winter barley lines and cultivars in nurseries at Mt Vernon in northwestern Washington in late May. The barley was at flowering growth stage. Previously, barley leaf rust was reported



in nurseries in south central and western Virginia and at Davis, in a field in in the southern area of the San Juan Valley of California and in watermelon windbreaks in the Lower Rio Grande Valley of Texas (see [CRS](#)).

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

Barley stripe rust – Barley stripe rust at high severity was found on the susceptible check, Steptoe, in nurseries at Mt Vernon in northwestern Washington in late May. Barley stripe rust was not found on other lines or cultivars in the nurseries. Previously, stripe rust was found on barley in a nursery near Walla Walla in eastern Washington on May 21.

Rust on barberry. There have been no new reports of rust infections on common barberry (*Berberis vulgaris*) since the last bulletin. Common barberry is the alternate host for stem rust. Previously, light amounts of aecial infections were reported on common barberry in south central Wisconsin and southeastern Minnesota.

Rust on buckthorn. Aecia were observed on common buckthorn at Lamberton in southwestern Minnesota in late May. The infections were much less severe than in 2014. There was an estimated 50% loss to oat crown rust in Minnesota in 2014. Crown rust had spread to the oat spreader rows by June 2 in the Matt Moore Buckthorn Nursery at St. Paul in southeastern Minnesota. Previously, aecia were reported on common buckthorn in New York and Michigan.

