



Issued by:

Cereal Disease Laboratory

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<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 was found in a field in northwestern Ohio and nurseries in south central Michigan.
- Wheat stripe rust was active in the Dakotas and southern Minnesota in late June.
- Wheat leaf rust was developing in western Nebraska, the Dakotas, Minnesota, Wisconsin, Indiana and Ohio.
- Oat stem rust found in a nursery in southeastern South Dakota.
- Oat crown rust developing in southeastern South Dakota and nurseries in southwestern Minnesota.

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.

Heavy rain fell from the northern Texas to Indiana with some areas receiving 2 to 4 inches or more the week ending July 11. Generally, little rain fell on either side of the heavy rain path. Showers in the Upper Midwest were generally favorable for crop development. Record heat occurred in the Northwest and that coupled with dry conditions stressed crops grown there.

By July 12, 65% of the U.S. winter wheat crop was harvested, 3% behind the 5-year average. Harvest was well ahead of average in the Pacific Northwest with Oregon 21% ahead of the five-year average. Ninety one percent of the spring wheat crop was at or beyond heading by July 12, 25% ahead of the five-year average. Seventy one percent of the spring wheat crop was reported in good to excellent condition.

Ninety six percent of the oat crop was at or beyond heading stage by July 12, 6% ahead of the 5-year average. Ten percent of the oat crop was harvested. Sixty eight percent of the oat crop was reported in good to excellent condition. Ninety five percent of the barley crop was headed by July 12, 26% ahead of the 5-year average. Seventy two percent of the barley crop was reported in good to excellent condition, 8% ahead of last year at this time.

Wheat stem rust. Wheat stem rust (~30% severity) was found in a small patch of young plants about 50' from the edge of a mature field near Archibald in northwestern Ohio the first week of July. This was the only wheat stem rust found on a field survey from Indianapolis to west central Ohio north to southeastern Michigan. Wheat stem rust at low incidence and severity was found in two nurseries in Ingham County in south central Michigan on July 8. Most wheat fields in southern Michigan had reached physiological maturity. Previously, wheat stem rust was reported in nurseries in southeastern Nebraska, northwestern Kansas, southern Texas and central Louisiana. 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. Leaf rust was developing in southwestern and southern Panhandle of Nebraska, central South Dakota, southeastern North Dakota, southern Minnesota and south central Wisconsin by late June to early July.

Nebraska – Leaf rust was actively developing in fields in southwestern Nebraska as well as southern areas of the Panhandle in late June. Leaf rust was found at moderate incidence and severity in the Box Butte County in the northern Panhandle. Wheat was turning color and 27% of the crop was harvested (mostly in southeastern and south central part of the state) by July 13. Previously, wheat leaf rust was found in nurseries in south central and southeastern Nebraska on cultivars and lines that had not lost their leaves to stripe rust.

Colorado – There have been no new reports from the state since wheat leaf rust was found on cultivars that had not lost their leaves to stripe rust. By July 12, 39% of the winter wheat crop was harvested.

South Dakota – Leaf rust was found at low severity in several winter and spring wheat fields in central South Dakota in late June.

North Dakota – Low levels of wheat leaf rust were found in southeastern North Dakota on June 30 while additional reports were received in recent days.

Minnesota – The cultivars Marshall (*Lr2a*, 10 and 34) and Glenn (*Lr2a*, 21 and 34) had leaf rust severities of 5S and 40S, respectively, at Waseca in south central Minnesota on July 10. No leaf rust was found on Faller (*Lr21*) and Prosper (*Lr21*). In plots at Lamberton, in southwestern Minnesota, Marshall was at 40S, WB 907, Faller, Glenn and Prosper were at 10S. Conditions are conducive for further leaf rust development. Previously, wheat leaf rust, at low levels, had been reported in nurseries at Lamberton and St. Paul.

Indiana – Wheat leaf rust was found in fields in central and east central Indiana on June 30. The wheat was at kernel hard growth stage.

Ohio – Wheat leaf rust was found in fields in west central and northwestern part of the state in late June and early July. Severities were high (~80%) in northwestern, Ohio. The wheat was from mealy ripe to kernel hard growth stage.

Michigan – Wheat leaf rust at trace incidence and trace to 10% severity was found in central and eastern Michigan on June 11 and was believed to be widespread across Michigan. Most fields in southern Michigan had reached physiological maturity by July 9. High wheat leaf rust severities (~80%) were found in fields in Lenawee County in southeastern part of the state on July 1. The wheat was at mealy ripe growth stage.

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. Winter wheat harvest had begun in areas of west central New York by July 12.

Wisconsin – High levels of leaf (and stripe) rust were found in winter wheat variety trial plots at Arlington in south central Wisconsin on June 26. Both leaf and stripe rust were present on the flag leaves of many cultivars and incidence reached 100% with 60% or higher severities. Many farmers likely sprayed their crops with fungicides and would not be expected to have such high levels of rust. Wheat leaf rust was most common in eastern Wisconsin this season.

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. Wheat stripe rust was still active in South Dakota, North Dakota and southern Minnesota in late June, however, with recent hot daytime and nighttime temperatures development has likely slowed.

Washington – There have been no new reports since the last bulletin. Hot, dry conditions have hastened crop maturity and minimized the development of stripe rust. Eleven percent of the winter wheat crop was harvested by July 12. Previously, generally low levels of stripe rust were reported in both winter and spring wheat in eastern Washington the second week of June and as is usual, stripe rust was severe on winter and spring wheat in nurseries in northwestern Washington in late May.

Montana – There have been no new reports from the state since stripe rust was reported as widespread across the state in early June (see [CRS](#)). At that time the cultivar Yellowstone was holding up well in the golden triangle area of the state.

Idaho – Stripe was developing in susceptible spring wheat cultivars in late June. The hard red spring wheat cultivar Kelse was particularly hard hit while stripe rust was also developing on hard white and soft white spring cultivars. Spring wheat growth stages ranged from late boot to early grain fill. Stripe rust was heavy on some winter wheat lines. Winter wheat harvest began in some areas. Recent heavy rains in the southern part of the state caused lodging in some mature wheat fields.

Nebraska – Stripe rust incidence and severity were at trace to low levels in fields in Box Butte County in the northern Panhandle in late June. Wheat was turning color and 27% of the crop was harvested (mostly in southeastern and south central part of the state) by July 13. Previously, stripe rust was reported in southern Nebraska where some severely impacted fields may realize a 40-50% loss to stripe rust (see [CRS](#)). Stripe rust was reported in the southwestern Panhandle the second week of June.

Colorado – There have been no new reports from the state since the last bulletin. Previously, stripe rust was reported as widespread in eastern Colorado with severities up to 100% in many areas. This is the worst stripe rust year in the state since 2001. Cool, wet weather this spring created conditions very favorable for stripe rust development.

Wyoming – There have been no new reports from the state since light levels of stripe rust were reported in both irrigated and dryland nurseries in southeastern Wyoming in early June.

South Dakota – Stripe rust was severe in some winter wheat fields not treated with fungicides in central South Dakota and was just beginning to develop in untreated spring wheat fields in late June. In winter wheat plots in Sully and Brookings Counties varying levels of susceptibility were observed in the Crop Performance Test nursery. By June 15, stripe rust was prevalent in winter wheat trials across the state. In recent days, hot daytime and nighttime temperatures likely slowed stripe rust development in the state.

North Dakota – Stripe rust had moved to the flag leaves of both spring and winter wheat in fields in North Dakota by late June. The highest levels of incidence were in the eastern half of the state. High severities were noted in fields not treated with fungicides. June and early July were cooler than normal, however, the last few days have had hot daytime and nighttime temperatures which will likely limit further stripe rust



development. In early June stripe rust was reported southeastern North Dakota to the Canadian border. Most hard red spring wheat cultivars grown in the state are susceptible to wheat stripe rust.

Minnesota – Stripe rust was generally at moderate levels, but severe on some spring wheat cultivars in plots at Lamberton in southwestern Minnesota in early July. The wheat was at early dough. At Waseca stripe rust was found at levels up to 60S (WB 907). Recent hot daytime and nighttime temperatures in the state will likely limit further stripe rust development. Previously, stripe rust was reported in plots in southeastern Minnesota on June 7.

Wisconsin – High levels of stripe (and leaf) rust were found in winter wheat variety trial plots at Arlington in south central Wisconsin on June 26. Both stripe and leaf rust were present on the flag leaves of many cultivars and incidences reached 100% with 60% or higher severities. Many farmers likely sprayed their crops with fungicides and would not be expected to have such high levels of rust. Stripe rust was predominant disease in central Wisconsin this season.

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. Oat stem rust was moderately severe on some oat lines in nurseries at Beresford in southeastern South Dakota in early July. Previously, oat stem rust was reported in nurseries in southern Louisiana, southern Texas and southeastern Nebraska (see [CRS](#)). To date, race TGN has been 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. Oat crown rust, at 5% incidence and 30% severity, was found in a field in Logan County in northwestern Ohio on June 30. No other crown rust was found on the survey from Indianapolis to west central Ohio north to southeastern Michigan. By early July, oat crown rust had increased rapidly on some cultivars in plots at Lamberton in southwestern Minnesota. The oats were at late milk to early dough. Oat crown rust was at very low levels in these plots at Lamberton on June 18. Oat crown was severe in the Matt Moore Buckthorn nursery at St. Paul in southeastern Minnesota by the second week of July. Crown rust was at low levels and scattered among cultivars in plots at Rosemount in southeastern Minnesota in early July. Oat crown rust was widespread and developing in southeastern South Dakota by early July. Previously, oat crown rust was reported in southeastern Nebraska, southern Mississippi, South Texas, southern Louisiana and northern Florida.

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 of barley stem rust since the last bulletin when it was reported in barley plots at Lincoln in southeastern Nebraska the third week of June. The barley stem rust was not believed to be widespread. This was the first barley stem rust report since it was reported in watermelon windbreaks, in the Lower Rio Grande Valley of Texas the second week of March (see [CRS](#)).

Barley leaf rust. Barley leaf rust at 100% incidence and 50% severity was reported in a nursery at Mt. Vernon in northwestern Washington in late June. The barley was at milky ripe growth stage. Barley leaf rust was earlier reported in late May in this nursery. Previously, barley leaf rust was reported in fields in southern Texas, a field in southern area of the San Juan Valley of California and nurseries in south central and western Virginia and northwestern Washington (see [CRS](#)).

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

Barley stripe rust – There have been no new reports of barley stripe rust. Previously, barley stripe rust was reported in a nursery in eastern and northwestern Washington (see [CRS](#)).

