



*Issued by:*

**Cereal Disease Laboratory**

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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/>)

- Wheat stem rust was found in nurseries in northeastern Kansas and south central Wisconsin.
- Wheat leaf rust was found in plots in South Dakota and Wisconsin.
- Low levels of wheat stripe rust were observed in a nursery in south central Wisconsin.
- Oat crown rust has been found in South Dakota, Minnesota and Wisconsin.

*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](#) links found throughout the bulletin. The cereal rust observation maps ([Maps](#)) can also be found on the [CDL website](#).*

Heavy rains fell across the Plains, Midwest and South over the last week. The rains hampered the winter wheat harvest in the central and southern Plains.

The U.S. winter wheat crop was 43% harvested by June 29, six percentage points behind the 5-year average. Thirty percent of the winter wheat crop was reported in good to excellent condition. Twenty six percent of the spring wheat was at heading or beyond by June 29, three points behind the 5-year average. Seventy percent of the spring wheat crop was reported in good to excellent condition.

Sixty nine percent of the oat crop was at or beyond the heading stage by June 29, four points behind the 5-year average. Sixty four percent of the oat crop was reported in good to excellent condition. The spring barley crop was 31% headed or beyond by June 29, six points ahead of the 5-year average. Barley development was well ahead of average in the Pacific Northwest. Sixty eight percent of the barley crop was reported in good to excellent condition.

**Wheat stem rust.** Wheat stem rust at 100% incidence and approaching 30% severity was found in plots near Manhattan in northeastern Kansas in late June. Based on the samples it appears the stem rust had been in the plots for some time. Wheat stem rust has not been reported in commercial fields in Kansas this season and is not expected to impact yields. The Kansas wheat crop was 84% mature by June 29 with 40% of the winter wheat harvested.

On June 26, stem rust was found on five plants in a single plot at Arlington in south central Wisconsin. Stem rust was not found in any other plots at the location. Stem rust was found in late-maturing plots at Kibler and Fayetteville in northwestern Arkansas in early June.

To date wheat stem rust has only been reported in nursery locations in the U.S. this season, i.e. in Texas, Louisiana, Arkansas, North Carolina, Nebraska, Kansas and Wisconsin (see [CRS](#)). Race QFCSC, the most commonly identified wheat stem rust race in recent years, was identified from collections made at Weslaco and Castroville in South Texas and Lincoln in southeastern Nebraska.

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



**Wheat leaf rust.** Leaf rust remains at very low levels in the central Great Plains due to the very dry conditions this year. In late June, leaf rust was appearing at low levels in South Dakota, Minnesota and Wisconsin. In the Southeast and mid-Atlantic areas wheat leaf rust was more widespread, but generally at low levels with the exception of higher severities noted on the cultivar Shirley at some locations.

*Nebraska* – No rusts were observed in a survey of southwestern Nebraska and the southern and northern Panhandle June 17-19. Most fields were stressed due to a lack of moisture. Wheat ranged from milk to hard dough (see [CRS](#)). Previously, wheat leaf rust was found at low incidence and severity in pots in southeastern Nebraska while very little rust was found in fields in south central areas of the state. A majority of the fields were drought stressed (see [CRB #5](#)).

*South Dakota* – Leaf rust, at low incidence and severity, was found in a winter wheat nursery at Brookings in eastern South Dakota in late June. This is the first report of wheat leaf rust in the state in 2014.

*Minnesota* – Leaf rust was found at very low levels in plots at St. Paul in southeastern Minnesota in late June. June was the wettest month on record for the Twin Cities area and other areas in Minnesota.

*Wisconsin* – On June 26, leaf rust was found in many winter wheat plots in a nursery in south central Wisconsin. Many plots had 100% incidence with 10% flag leaf severities. Wheat was approaching dough stage.

*Illinois* – There have been no new reports from the state since the last bulletin when wheat leaf rust was reported at high incidence and severity on some cultivars in plots in east central Illinois and was also reported in plots in south central Illinois (see [CRB #6](#)).

*Michigan* – There have been no new reports from the state since the last bulletin when wheat leaf rust was found at low severity in a nursery in south central Michigan.

*New York* – No cereal rusts were found on visits to fields and plots in eastern and central New York the fourth week of June. Winter wheat harvest in these areas will begin in two weeks or so.

**Wheat leaf rust races identified to date from 2014 collections.**

Virulence code	Virulences	State	No. of isolates
MBDSB	1,3,17,B,10,14a,	TX	1
MBDSD	1,3,17,B,10,14a,39	TX	16
MBPSD	1,3,3ka,17,30,B,10,14a,39	TX	2
MBTNB	1,3,3ka,11,17,30,B,14a,	LA	1
MCDSB	1,3,26,17,B,10,14a,	TX	3
MCSD	1,3,26,17,B,10,14a,39	TX	8
MCTNB	1,3,26,3ka,11,17,30,B,14a,	LA	1
MFNSB	1,3,24,26,3ka,17,B,10,14a,	TX	2
MFPSB	1,3,24,26,3ka,17,30,B,10,14a,	TX	1
MLDSD	1,3,9,17,B,10,14a,39	TX	5
MLPSD	1,3,9,3ka,17,30,B,10,14a,39	TX	7
MMDSD	1,3,9,26,17,B,10,14a,39	TX	1
MMPSD	1,3,9,26,3ka,17,30,B,10,14a,39	TX	7
PBDQJ	1,2c,3,17,B,10,28,39	TX	2
PBDSJ	1,2c,3,17,B,10,14a,28,39	TX	1
PLDDJ	1,2c,3,9,17,14a,28,39	TX	1
TBBGJ	1,2a,2c,3,10,28,39	TX	6



TBBGS	1,2a,2c,3,10,21,28,39	TX	1
TCLJG	1,2a,2c,3,26,3ka,10,14a,28	TX	1
TLBGJ	1,2a,2c,3,9,10,28,39	TX	1
TNBGJ	1,2a,2c,3,9,24,10,28,39	TX	12
TNBJJ	1,2a,2c,3,9,24,10,14a,28,39	TX	3
TPBGJ	1,2a,2c,3,9,24,26,10,28,39	TX	2
Total			85

**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.

*Colorado* – There have been no new reports from the state since the last bulletin when stripe rust, at low levels, was reported in two commercial fields in eastern Colorado.

*Oregon* – There have been no new reports from the state since the last bulletin. Previously, low levels of stripe rust were reported in commercial winter wheat fields and plots in northeastern Oregon and stripe rust disease pressure was low in the western part of the state (see [CRS](#)).

*Washington* – There have been no new reports from the state since the last bulletin. Previously, very low levels of stripe rust were reported in commercial fields (see [CRB #5](#)). Generally, stripe rust disease pressure was low in eastern Washington in late May. Stripe rust had reached 80% severity on susceptible winter wheat checks in plots at Mount Vernon in northwestern Washington by late April.

*Idaho* – Stripe rust has been found in areas of eastern and southern Idaho, but only the soft white winter wheat cultivars Brundage and WB 470. Winter wheat was in grain filling stages in late June. Stripe rust was not found on the most susceptible spring wheat lines in the nursery at Idaho Falls nor in the spring wheat nurseries at Rupert and Aberdeen in southeastern Idaho in late June.

*Montana* – There have been no new reports from the state since the last bulletin. Wheat stripe rust was previously reported on the cultivar Yellowstone in the Hardin area south central Montana in late May (see [CRB #5](#)).

*Wisconsin* – Several small stripe rust foci were found in plots at Arlington in south central Wisconsin on June 27. Incidence and severity were at very low levels. This contrasts to the past two seasons when stripe rust was found at high incidence and severity in plots at this point in the 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](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 since the [bulletin #5](#). Previously, oat stem rust was reported in Louisiana and central and southeastern Texas.

**Oat crown rust.** Crown rust was severe on oat in a nursery at Brookings in eastern South Dakota on June 30. Common buckthorn, the alternate host for oat crown rust, in the vicinity has been shedding aeciospores and likely caused the severe infections. Oat crown rust at low incidence (<1%) and severity (<1%) was found on oat in Meeker and Stearns County in central Minnesota the fourth week of June. In commercial fields in west central Wisconsin oat crown rust was found at high incidence and trace severity on July 2. Previously, trace levels of oat crown rust were reported on spring oat in a plot in south central New York on June 17. Oat crown was earlier reported in Texas, Florida, Louisiana and Georgia (see [CRS](#)).

**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.** There have been no new reports of barley leaf rust since [CRB #4](#). Previously, barley leaf rust was reported in plots in eastern and western Virginia and northwestern Washington (see [CRS](#)).

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

