CEREAL RUST BULLETIN

Report No. 2
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Issued by:

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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 plots in extreme southern Texas.
- Wheat leaf rust is present at low-moderate levels in south-mid Texas.
- Traces of wheat stripe rust were found around the state of Louisiana.
- Oat stem rust was found in plots in south central Texas.

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.

Small grain development and spring fieldwork continues to be delayed in the Great Plains and areas east due to the unusually cool late winter and early spring weather. Ongoing drought conditions continue to be an issue in many areas of the central and southern plains.

Winter wheat development is limited to mostly southern regions with 5% of the crop headed by April 13. Oat producers had sown 9% of the crop nationally by April 13, 38 points behind the 5-year average. Barley planting was progressing in the Pacific Northwest, but cool weather and poor field conditions delayed planting in Minnesota, Montana and North Dakota. Sixteen percent of the national barley crop was planted by April 13.

Wheat stem rust.

Rio Grande Valley, Texas - Wheat stem rust was found in sentinel plots of Morocco, Panola, Siouxland and Line E at Weslaco in extreme southern Texas the second week of April. Severities ranged from <1% on Siouxland (stem rust pustules were found only on leaves) to 5% on Morocco with incidences from 10% on Siouxland to 90% on Morocco. Line E and Morocco were fully headed while Panola and Siouxland did not completely vernalize. In previous years barley, emmer and triticale were more commonly used in windbreaks for watermelons, now more sorghum or sorghum-sudan is used. This is the first report of wheat stem rust in the U.S. in 2014.

Wheat leaf rust.

South Texas – In a survey of north central Texas in late March and early April no rust was found in commercial fields and rust was not seen by consultants and extension agents in the areas. Typically, wheat leaf rust is found by this time in north central Texas. Low levels of leaf rust were reported as far north as 30 miles south of Dallas as well as areas to the south (see CRS and Maps for details). Some cultivars found with leaf rust were Greer (*Lr39/41, Lr34, Lr37*), WB Cedar (*Lr14a, Lr37*) and Coronado (*Lr1, Lr10, Lr14a*). Most of the wheat was fully headed.

Ten of the 11 lines in plots at Weslaco in extreme southern Texas had wheat leaf rust the second week of April, the only exception was Panola (*Lr11*). Severities ranged from 3-40% with incidences from 20-90%. Wheat leaf rust was moving into the flag leaves of susceptible wheat in irrigated plots at Castroville the second week of April. TAM 112 (*Lr39/41*) was rated at 15S while Jagalene (*Lr24*) had 60s on the flag leaves.

Previously (see CRB #1), leaf rust was reported at Wharton where it was progressing up into the mid-canopy. At Beeville, leaf rust was increasing on TAM 112 (*Lr39/41*) and spreader rows and at College Station leaf rust was developing on TAM 112 and spreader rows.

Oklahoma – Other than one leaf rust pustule observed in late March there have been no reports of cereal rusts in the state. Continued drought and dry conditions are not conducive for cereal rust development. Wheat in the state ranged from Feekes 6-9. Winter wheat in the western part of the state is particularly stressed by drought (see pictures from southwestern Oklahoma at: http://osuwheat.com/2014/04/11/pictures-from-southwest-oklahoma/).

Kansas – There have not yet been any reports of cereal rusts in the state in 2014. Much of the state is in drought, from moderate drought in the east to severe drought in the west. Wheat development, ranging from tillering in the northwest to jointing stages in the southeast and south central areas of the state, is two to three weeks behind average.

Louisiana – Very little leaf rust had been found in the state by early April. Previously, wheat leaf rust was reported at low incidence and severity in an early planted Baton Rouge nursery on March 18.

Georgia – There have been no new rust reports from Georgia. Previously, wheat leaf rust was reported in a very early-planted in a nursery at Plains in southwestern Georgia (see CRB #1).

Arkansas – No cereal rusts were found in plots throughout the state (Stuttgart, Marianna, Newport, Keiser, Fayetteville and Kibler) the second week of April. Wheat in the state ranged from Feekes 6 to Feekes 9. Previously, fresh wheat leaf rust pustules were reported on volunteer wheat at the experiment station at Marianna in the east central part of the state on March 20.

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.

South Texas – In a survey of north central Texas in late March and early April no rusts were found in commercial fields and was not seen by consultants and extension agents in the areas. Low levels of stripe rust were reported as far north as 30 miles south of Dallas as well as areas to the south (see CRS and Maps for details). Most of the wheat was fully headed.

Wheat stripe continued to develop in the irrigated Castroville nursery where the susceptible cultivar Patton reached 70s on April 9. Wheat leaf rust was competing with stripe rust on the upper leaves and with the warmer temperatures further stripe rust development was not expected. The stripe rust population in the plots did not appear to have *Yr17* virulence (see CRS).

Louisiana – Traces of stripe rust had been found around the state by early April. High stripe rust severities were found in a single family of wheat headrows in plots at Baton Rogue in early April. The stripe rust had apparently been present for some time, but had not spread beyond the one family. There was generally very little disease pressure in the nursery. Wheat maturity was about 10 days behind the 10-year average.

Previously, low levels of stripe rust were observed on GACT7, a susceptible cultivar, in plots at Alexandria in central Louisiana and at low incidence and severity in plots at Crowley in southwestern Louisiana.

Oregon – Wheat stripe rust was reported on the soft white winter wheat cultivars Goetze, Kaseberg, Sy Ovation and Tubbs 06 in the Willamette Valley in early April. It appears stripe rust overwintered in the valley.

Please send wheat and barley stripe rust collections as soon as possible after collection to:

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***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. Trace levels of oat stem rust were found on Harrison in plots at Castroville in south central Texas in early April.

Oat crown rust.

South Texas – There have been no new oat crown rust reports. Previously, oat crown rust was spreading uniformly throughout the nursery at Wharton and increasing on Nora at Beeville, but had not yet been found at College Station.

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 barley leaf rust reports. Previously, low levels of barley leaf rust were found on the lower leaves of the winter barley Alba in plots at Mount Vernon in northwestern Washington on March 25.

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