CEREAL RUST BULLETIN

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For the 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.

Harvest is underway from Texas to Georgia and from southern Oklahoma to Arkansas and in California. Barley harvest has begun in some areas in Virginia.

- Low levels of wheat stem rust were found in Barber County, Kansas.
- Traces of wheat leaf rust were found in plots in southeastern Minnesota.
- Wheat stripe rust was severe on the cultivar Joaquin in plots and fields in the Central Valley of California.
- Barley leaf rust was severe in some east coast fields and in plots in several areas in the Central Valley of California.

Wheat stem rust. Low levels of wheat stem rust (severity 1% or less, incidence 2%) were found on Winterhawk in Barber County in south central Kansas on May 25 (see CRS).

Previously**,** wheat stem rust was found in plots in north central Oklahoma and northeastern Arkansas (see CRB #4 for more details).

Stem rust observation maps can be found on the CDL website (http://www.ars.usda.gov/Main/docs.htm?docid=9757).

Wheat leaf rust.

Oklahoma – There have been no new reports of leaf rust in Oklahoma since the last bulletin when leaf rust was at low incidence north and west of Stillwater in north central Oklahoma (see CRB #4). Much of the panhandle and western Oklahoma were classified as exceptional drought areas as of May 24.

Kansas – Leaf rust is still at low levels in most areas in the state (see CRS). North central and northwestern Kansas have received more rain than southern Kansas and moderate increases in leaf rust are likely in the next two weeks.

Arkansas – Most wheat in the state is harvest ready. Trace amounts of leaf rust were found in late May in plots at Fayetteville in northwestern Arkansas.

Minnesota –Trace amounts of leaf rust were found in plots at Rosemount in southeastern Minnesota on May 26.

Virginia – Wheat leaf rust is very light or absent in commercial fields in eastern Virginia due to widespread fungicide use. Leaf rust was heavy in susceptible plots in eastern Virginia on May 20, indicating inoculum was present.

North Carolina – Wheat leaf rust is very light or absent in commercial fields in eastern North Carolina due to widespread fungicide use. Leaf rust was heavy in susceptible plots in eastern North Carolina on May 20, indicating inoculum was present.

Maryland, Delaware – Low levels of leaf rust were found on the eastern shore areas on May 20.

California – Leaf rust was found in plots, particularly on the hard white spring cultivar Blanca Grande and some advanced breeding lines, at the UC Davis Agronomy Farm in the Sacramento Valley on May 23 (see CRS).

Wheat leaf rust observation map can be found on the CDL website (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.

Arkansas – Stripe rust development has slowed across the state, but some spore production persisted in some areas in late May.

Kansas – Low levels of stripe have been found in many locations in the state. Dry conditions have limited rust development in the state, but moderate increases in rust will likely occur in the next two weeks (see CRS).

Nebraska – A small focus of stripe rust (trace to 35% severity) was found in a commercial field (Feekes 10.5.1) in Polk County in southeastern Nebraska on May 30.

Illinois – There have been no new reports of wheat stripe rust in the state since low levels of stripe rust were found in plots in east central Illinois on May 13.

Indiana – There have been no new reports of wheat stripe rust in the state since stripe rust was found at low incidence and severity in a southern Indiana field the second week of May.

Idaho – Fungicide applications had stripe rust under control in many commercial winter wheat fields (Feekes 5) in Latah County in northwestern Idaho in mid-May. Unsprayed fields in the county had 10% severity and 40% prevalence. Conditions have been favorable for stripe rust development.

Montana – Stripe rust was found at very low incidence on an unknown cultivar east of the Rockies in Choteau County in mid-May. Stripe rust was previously reported in plots and fields in northwestern Montana earlier in May.

Washington – Fungicide applications had stripe rust under control in many commercial winter wheat fields in southeastern Washington in mid-May. Conditions have been favorable for stripe rust development.

California – Recent cool, wet weather combined with late fall planting of fall-sown spring wheat and barley have extended the time of exposure of wheat and barley to stripe rust in the Central Valley (Sacramento and San Joaquin Valleys) and surrounding areas. Plots and commercial fields of the commonly grown hard red wheat Joaquin (reported at 139,000 acres in commercial production) have incurred severe levels of stripe rust throughout the area. Relatively few other commercial wheat cultivars have been affected (see CRS).

Wheat stripe rust observation map can be found on the CDL website (http://www.ars.usda.gov/Main/docs.htm?docid=9757).

Oat stem rust. Oat stem was found in Horizon 270 and Trophy plots at Baton Rouge in southeastern Louisiana on May 5. Oat stem rust was previously reported in southern Texas (see CRB #3).

Stem rust observation maps can be found on the CDL website (http://www.ars.usda.gov/Main/docs.htm?docid=9757).

Oat crown rust. Low levels of oat crown rust were found in plots at Kinston in east central North Carolina the third week of May. Previous reports were from northeastern Alabama in early May and central Texas in late April (see CRB #3, #4).

Barley stem rust. There have been no new reports of barley stem rust since it was found in windbreaks for watermelon fields in southern Texas in late April.

Barley leaf rust. Very heavy barley leaf rust infection was found in plots at Blacksburg in south central Virginia while moderate levels were found at Warsaw and Painter in eastern Virginia in early May. Barley leaf rust was heavy in a few fields on the eastern coast of Virginia and North Carolina the third week in May.

Barley leaf was severe in plots, particularly on the cultivar Commander, in several areas in the Central Valley of California in late May.

Barley stripe rust. Most commercial barley fields in the Central Valley of California have had low disease severity despite the cool, wet weather and late fall planting. However, the cultivars Max and Commander and some advanced breeding lines have shown severe levels of stripe rust in plots throughout the region (see CRS).

Rye stem or leaf rust. There have been no new reports of rye stem or leaf rust since heavy leaf rust infection was observed on an unknown winter rye cultivar in rotation with watermelon in fields in southern Texas.

Rust on barberry. Aecial infections, mostly at the pycnial stage of development, on common barberry (*Berberis vulgaris*) in Winona County in southeastern Minnesota and Dane County in south central Wisconsin were observed in late May. Based on past experiences, infections from these locations were mostly due to the rye stem rust pathogen, *Puccinia graminis* f. sp. *secalis*. Early stage of aecial infections on *B. chinensis, B. koreana* and Emerald Carousel (interspecific hybrid), likely by *P. striiformis* f. sp. *poae*, were observed in the vicinity of Twin Cities in late May.