

CEREAL RUST BULLETIN

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Issued by:

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- Leaf rust is severe in a few fields of susceptible wheat cultivars in southeastern Kansas and north central Oklahoma.
- Leaf rust was found in winter wheat plots in east central Minnesota and in wheat fields in southeast North Dakota.
- Stripe rust is widespread on winter wheat and barley and is increasing on spring wheat and barley in the Pacific Northwest.

The small grain harvest is underway from central Georgia to south central Oklahoma. Winter wheat maturity is 1 to 2 weeks ahead of normal throughout the US. Small grain planting is virtually complete in the northern growing area, and development of spring-planted grains is two weeks ahead of average.

Wheat stem rust. During the third week in May, traces of wheat stem rust were found in a nursery in south central Kansas. Stem rust and stripe rust pustules were found on the same leaf, which correlates to a deposition of spores 7 to 10 days earlier from a rain storm that originated in the southern Mississippi Valley area.

Stem rust was observed on susceptible checks (particularly McNair 701) during harvest in central Texas wheat plots in late May.

Wheat leaf rust. During the third week of May, wheat leaf rust severities of 60% were observed on the flag leaves of susceptible cultivars growing in commercial fields in central Oklahoma. In north central Oklahoma varietal plots, cultivars such as Karl 92, TAM 107 and Chisholm had 60% severity readings, while rust severities in cultivars like Custer, Jagger and 2137 were less than 3%. Traces of leaf rust were observed on *Triticum cylindricum* (goatgrass)



in southwestern Oklahoma in mid-May. Losses to wheat leaf rust in Oklahoma will be much less than last year because of the reduced amounts of overwintering rust this year.

In late May, in south central Kansas fields, trace-1% leaf rust severities were common on the flag leaves of susceptible winter wheat cultivars such as Karl 92 and Jagger. In varietal plots, severities of 10% were common on susceptible cultivars and on the more resistant cultivars, rust severities were less than 1%. Leaf rust was severe (severities of up to 20%) in a few fields of susceptible wheat cultivars in southeastern Kansas in late May. Leaf rust development was slow during May, throughout northern Kansas. Leaf rust losses in Kansas are still expected to be in the 2-5% range.

By the third week in May, leaf rust severities of 30% were reported in rapidly maturing wheat fields of susceptible cultivars in northeastern Arkansas and the bootheel of Missouri. By June 1, traces of wheat leaf rust were found as far north as Lafayette in Indiana.

During the third week in May, 2% severities were reported on the flag-1 leaf in a winter wheat nursery in east central South Dakota. Traces of leaf rust were found in winter wheat plots in east central North Dakota and in spring wheat fields in southeastern North Dakota on May 29.

On May 29, severities of 5% were observed on the flag-1 leaves in the Roughrider winter wheat plot at the Rosemount Experiment Station in east central Minnesota. Traces of rust were observed on other winter wheat cultivars. This rust development originated from rust spores that were deposited with rain 12-16 days ago. This is the earliest that leaf rust has been observed in these plots, except when rust overwintered in the plots.

Leaf rust is present and increasing in the Willamette Valley of western Oregon.

Wheat stripe rust. During the third week in May, 10% severities were observed on 5% of the plants at the early berry stage in a field of wheat in south central Kansas. This rust developed from spores that were deposited in the early part of May from storms that originated in the Mississippi Valley area. The hot temperatures of the past two weeks will probably disrupt the development of stripe rust in this area.

In the Skagit Valley of western Washington, stripe rust is severe on winter wheat, but barley yellow dwarf virus infection is impeding further development. Stripe rust is present and beginning to increase on spring wheat in the area. In the Willamette Valley, stripe rust is present and increasing. East of the Cascade Mountains in Washington and Oregon and in the Palouse region of northern Idaho, stripe rust is increasing. Severities of 50% can be found on susceptible cultivars in Pullman, Washington, with much higher severities at Walla Walla, Washington; Hermiston, Oregon; and south of Pendleton, Oregon. Frequent rains in the Pacific Northwest the last two weeks of May have set the stage for further rust increase. An emergency label for Folicur has been obtained for use on wheat and barley in Washington, and Tilt may be used on wheat up to the heading stage. Damage to the soft white winter and spring wheats will be limited due to their adult plant resistance to stripe rust.



Oat stem rust. In late May, stem rust severities of 5-30% were reported on some elite oat lines at the Plains Experiment Station in southwestern Georgia. The stem rust appeared very late and did not affect the yield.

Oat crown rust. Throughout the southern U.S., crown rust has continued to increase on oats that are not yet mature.

Traces of rust were showing on oat growing in the St. Paul, MN buckthorn nursery on June 2. Moderate crown rust infection (pycnia and aecia) was observed on buckthorn at the Casselton Station, Cass County, North Dakota on May 29. The majority of the aecia were releasing aeciospores.

Barley stem rust. No barley stem rust has been reported in the U.S. as of June 1.

Barley leaf rust. During the third week in May, barley leaf rust was severe on the lower leaves of susceptible varieties in the Uniform Winter Barley Nursery in central Ohio. Hot dry weather prevented movement of rust to the upper leaves.

Stripe rust on barley. In the Pacific Northwest, the stripe rust on barley situation is much the same as the wheat stripe rust described in the wheat stripe rust section.

Rye leaf rust. During the third week in May, severities of 20% were observed on the flag leaves of rye growing in fields in north central Oklahoma and south central Kansas. Leaf rust severities of trace to 10% were reported in winter rye plots in east central Minnesota and southeastern North Dakota in late May.

Rye stem rust. No rye stem rust has been reported in the U.S. this year, as of June 1.

Stem rust on barberry. There have been no new reports of rust on barberry since CRB #3.

Latest rust news. As always, for the latest rust news, subscribe to the cereal rust survey mail list (see front page header) or visit the Cereal Disease Laboratory's web page (<http://www.crl.umn.edu>) regularly.



Fig. 1. Leaf rust severities in wheat fields on June 2, 1998

