

CEREAL RUST BULLETIN

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- The spread of wheat leaf rust in the central Great Plains has been slow this year.
- Wheat stripe rust is unusually widespread throughout Kansas and eastward with first ever reports in northern Georgia and southwestern Virginia.

Most of the winter-sown small grain crop is in good condition throughout the United States. By the fourth week in May, harvest was underway from southern Georgia to southwestern Oklahoma. Most of the crop in the central plains is ahead of normal crop maturity. In the spring grain-growing area planting is near completion.

Wheat stem rust. In mid-May at the south central Kansas experiment station at Hutchinson, traces of wheat stem rust were found on the cultivar 2137.

From collections made in late March in south Texas, stem rust races Pgt-QCCJ, QCCS, QCRS and RCRS were identified. These races were also identified in the 1999 race survey. QCCJ is the race that attacks barley.

Wheat leaf rust. By the third week in May, 100% severities were observed on susceptible cultivars in south central Kansas plots. Some cultivars, e.g., Jagger, had 30% severities in fields, but leaf rust was light in fields of 2174. Rust was light in north central Kansas because there has been no rain or dew, which are needed for infection to occur.

By the third week in May in northeastern Arkansas, leaf rust was generally light in plots and fields but was severe on a few cultivars, e.g., Shiloh. The crop was near maturity south of I-40 in Arkansas. Leaf rust also was light in southwestern Kentucky plots during the third week in May.

In most of the southeastern U.S., weather was drier and cooler than normal through March and most of April and was a limiting factor in rust development. Since late April, frequent rains have occurred which were followed by rapid leaf rust increase on susceptible cultivars. But now the crop is maturing to the point where losses to leaf rust will be limited.



During the third week of May, in Rosemount, Minnesota trace leaf rust severities were found on the lower leaves in plots of susceptible hard red winter wheat.

In mid-May, leaf rust severities were low in California commercial wheat fields, but 50-100% severities were reported on a few lines and varieties in nurseries in central and southern San Joaquin Valley.

Wheat stripe rust. In mid-May, stripe rust was found throughout Kansas. This year, stripe rust was widespread throughout the southern plains. The mild winter and cool spring were conducive for stripe rust development. In south central Kansas plots, stripe rust was severe on a few of the hard red winter cultivars, especially those with the 1B-1R gene translocation.

During the third week in May in northeastern Arkansas, active stripe rust sporulation was observed in wheat plots and fields. The crop is maturing fast and with the arrival of hot temperatures not much more sporulation is expected. By the third week in May, 50% of the entries in northwestern Arkansas plots were either destroyed by stripe rust or severely damaged.

On May 9, a wheat stripe rust foci 1m in diameter, was found in northwest Georgia. This is one of the first record of stripe rust ever being found in north Georgia.

In mid-May, traces of stripe rust were found in plots in Blacksburg, Virginia. This is one of the first reports of wheat stripe rust east of the Appalachian mountains.

In mid-May, cool temperatures and several storm systems provided moisture that allowed stripe rust to continue to increase in the Central Valley of California. There were reports of wheat stripe rust at 100% severity in commercial fields of the widely grown variety RSI 5 throughout the Sacramento Valley and the northern part of the San Joaquin Valley. Cool spring weather also allowed wheat stripe rust to increase in commercial fields of several varieties in the central and southern portion of the San Joaquin Valley. Severities of 100% were observed on breeding lines and varieties in nurseries in this area.

Trace amounts of stripe rust were found in wheat breeding plots at Brookings, South Dakota in mid-May. The plots range from late boot to heading stage.

Oat stem rust. There have been no new reports of oat stem rust since the last bulletin. In late April, significant amounts of oat stem rust were found in southern U.S. fields and plots.

Oat crown rust. By the fourth week in May at St. Paul, Minnesota, a few uredinia were found on the oat spreader rows in the buckthorn nursery. The first pycnia appeared on the buckthorn in late April, but the main flush of new pycnia did not appear in the buckthorn nursery at St. Paul until early May. Cool weather has delayed development of aecia.

During the third week in May, aecia were observed on buckthorn on the Cornell University campus in New York.



Barley stem rust. No new occurrences of barley stem rust have been reported in the U.S. since the last bulletin, when all of the barleys in an elite nursery at Uvalde, Texas, were reported to be susceptible to stem rust.

Barley leaf rust. By the second week in May in Ontario, Canada, barley leaf rust was found on susceptible winter barley plots where the rust had overwintered.

Stripe rust on barley. By mid-May, barley stripe rust was increasing throughout the Central Valley of California with 100% severities on susceptible varieties and breeding lines at the soft-medium dough stage. In a large screening nursery (3000 entries) at Davis, California, 33% of the entries were rated at 100% severity and 50% were rated at 50% severity.

Barley crown rust. There have been no reports of crown rust on barley yet this year.

Rye leaf rust. There have been no new reports of rye leaf rust since the last bulletin.

Rye stem rust. There have been no new reports of rye stem rust since the last bulletin.

Barberry rust. During the second week in May, stem rust aecial infections were found on susceptible barberry bushes in south central Wisconsin.



Fig. 1. Leaf rust severities in wheat fields on May 23, 2000

