

CEREAL RUST BULLETIN

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Issued by:

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- Wheat leaf rust is light in southern Kansas and northern Oklahoma.
- Wheat stripe rust is found throughout the state of Kansas.
- Aecial development is heavy on buckthorn bushes in Minnesota.
- Aecial stem rust collections were made from barberry in Minnesota and Wisconsin.

Please note: The next Cereal Rust Bulletin will be distributed the first week of June. If you have information on the rust situation in your area that might be of interest, please email (davidl@umn.edu) or call David Long (612-625-1284).

In the third week of May, harvest had commenced from southwestern Oklahoma to southern Georgia. Most of the wheat crop in the Central Plains is at normal maturity. In the spring grain-growing area, planting and emergence are ahead of normal.

Wheat stem rust. In mid-May, severe stem rust infections were found on green wheat tillers in plots in south Texas at Uvalde. Late developing tillers provide good niches for the stem rust to develop. This is the only location in the U.S. where wheat stem rust has been found so far this year.

Wheat leaf rust. In early May, leaf rust was light in plots and fields in southwestern Oklahoma, and with the crop close to maturity losses will be minimal. In plots in northern Oklahoma, severities of 20% were observed on the susceptible cultivar Jagger. Dry conditions have limited the increase of leaf rust. Rains in the past week may speed the increase of leaf rust, especially since Jagger comprises a significant amount of the wheat acreage in that area.

In the third week in May, leaf rust was starting to build in south central Kansas. Severity levels as high as 5-10% were observed on flag leaves in a few fields of Jagger.

In early May, leaf rust severities of 30% were reported in susceptible wheat plots in Louisiana and severities of 60-70% were reported in a few plots in south central Georgia. This year leaf rust was lighter and developed later than normal throughout the southern soft red winter wheat area. In mid-May, leaf rust was prevalent throughout Arkansas. Wheat leaf rust developed later than normal and did not cause much yield loss.



From leaf rust collections made during February and March in south Texas, the following races were identified – MBRJ, MDLJ, MBDS, MCDS, TLRJ and TNRJ. Races MBDS and MCDS are virulent to Jagger which has Lr17. TLRJ and TNRJ are virulent to cultivars with Lr9 (Lockett) and Lr41 (Thunderbolt).

Wheat stripe rust. In early May in southwestern Oklahoma, plots of the susceptible cultivars 2137, Above, AP502CL, Custer, Trego, and Intrada had lost their flag leaves because of a combination of stripe rust and moisture stress. Resistant cultivars Jagger, Cutter, Thunderbolt and several advanced lines from Oklahoma, still had green leaves. Cultivars with an intermediate resistance to stripe rust (Ok101, 2174, and 2145) also had green flag leaves. In northern Oklahoma, susceptible cultivars had lost their flag leaves due to the stripe rust and drought. Other cultivars which were resistant to stripe rust (e.g. Jagger) did much better in this area. The hot dry weather halted the progress of stripe rust, but Oklahoma had yield losses to stripe rust this year.

In mid-May, wheat stripe rust was prevalent throughout the entire state of Kansas at varying degrees of severity. The disease was most severe in the southern areas of the state. Resistant varieties such as Jagger, Big Dawg, and Betty are still resistant. In some areas of Kansas, the more susceptible cultivars such as 2137, AGSECO 7853, Kalvesta, OK101, Stanton, Venango, Oro Blanco, Lakin, Trego, TAM 107 and TAM 110 were hit very hard with stripe rust. Some estimates are for a 30-40% yield loss for the highly susceptible cultivars.

By the end of the first week in May, stripe rust severities of 100% were observed on susceptible cultivars in the south central Georgia wheat plots. In mid-May, the stripe rust epidemic had ended in the state of Arkansas.

This year, in much of the Pacific Northwest, there were favorable conditions for overwintering of wheat stripe rust and the cool, moist conditions in late April and early May were favorable for rust development. In early May, severities of 90% were observed on susceptible entries in the winter wheat nursery near Mt. Vernon in northeastern Washington. By mid-May, wheat stripe rust was severe in southeastern Washington winter wheat plots and fields. Many fields in eastern Washington were sprayed with fungicides. In irrigated spring wheat fields in southeastern Washington, rust severities of trace to 1% were observed. Since abundant rust inoculum is in the region with favorable weather for rust development, stripe rust will continue to spread and develop in eastern Washington and northern Idaho.

Oat stem rust. In mid-May, oat stem rust was severe on green plants in the south Texas nursery at Uvalde. Late developing tillers are the best niches for the stem rust to develop. From oat collections made in south Texas in late March and early April, races NA-27, -29 and -67 were identified. These races also were identified in this area last year.

By early May, stem rust severities of 100% were reported in the oat nursery at Baton Rouge, Louisiana.

Oat crown rust. In early May, oat crown rust pressure was moderate at the Baton Rouge nursery and light in northern Louisiana.



Buckthorn. In mid-May, aecial development was heavy on buckthorn, the alternate host for oat crown rust, at the St. Paul, Minnesota nursery. Despite the slow leafing out of the buckthorn due to the prolonged cool temperatures in April, the aecial development is more severe than normal.

Barley stem rust. There have been no reports of barley stem rust this year.

Barley leaf rust. In mid-May, 60% severities were observed on barley in a nursery in the San Joaquin Valley of California.

Stripe rust on barley. In early May, stripe rust was increasing in the barley nursery in northwestern Washington near Mount Vernon. No stripe rust was found on barley in eastern Washington since most of the spring barley grown in this area is resistant to stripe rust.

Rye rusts. There have no new reports of rye leaf rust since CRB #4 (May 7).

Barberry rust. In mid-May, aecial collections were made from on barberry bushes (alternate host for stem rust) in south central Wisconsin and southeastern Minnesota. The aecial collections in southeastern Minnesota were made from a heavily rusted *Berberis koreana* hedge.



Fig. 1. Leaf rust severities in wheat fields - May 21, 2003

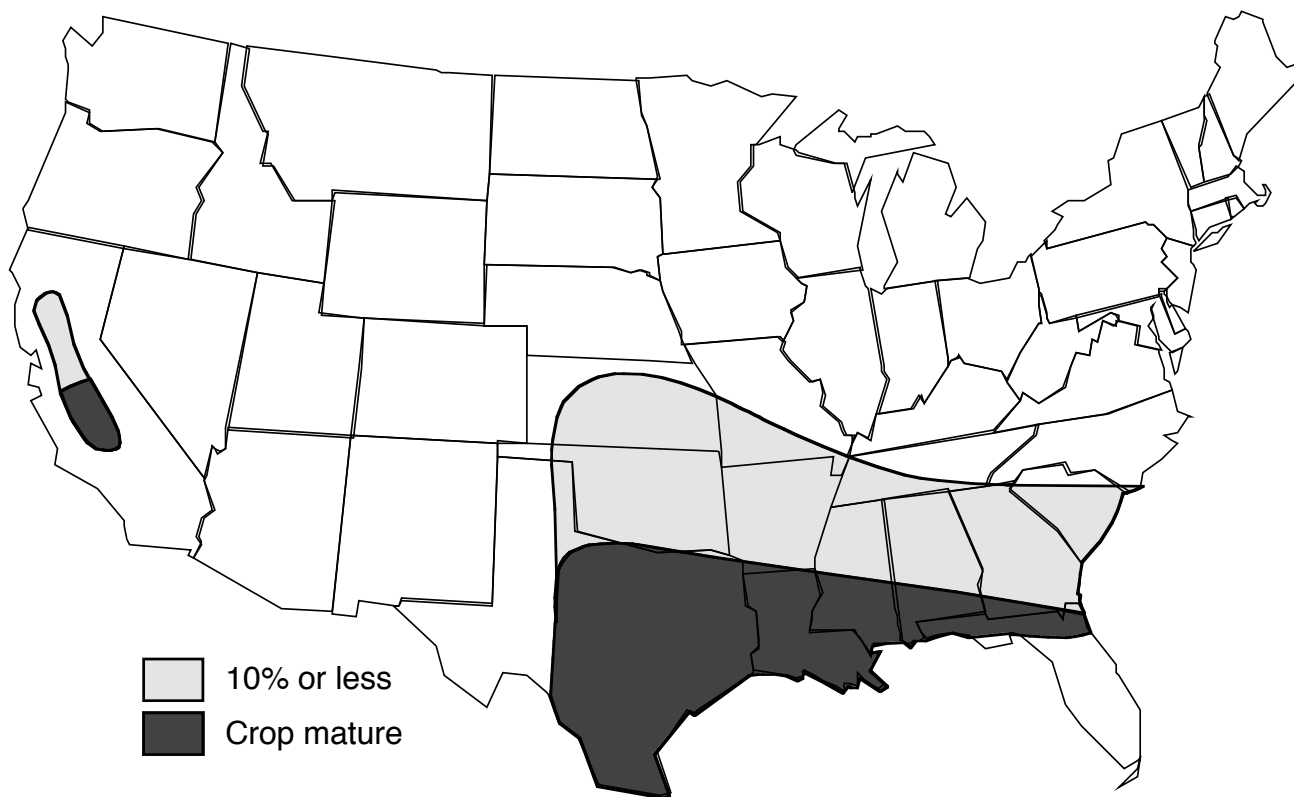


Fig. 2. Stripe rust severities in wheat fields - May 21, 2003

