CEREAL RUST BULLETIN

Report No.5
May 26, 2004

Issued by:

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- Wheat leaf rust is increasing in the central Great Plains.
- Wheat stripe rust has been found in central and eastern Kansas.
- Aecial development of crown rust is heavy on buckthorn bushes in Minnesota.
- Aecial collections of stem rust were made from heavily infected barberry in Minnesota.

The winter wheat harvest has commenced from central Texas to southern Georgia. Most of the wheat crop in the Central Plains is at normal maturity, or slightly ahead. Much of the spring wheat crop has been planted and the emerged crop is in good condition.

Wheat stem rust. There have been no new reports of wheat stem rust since CRB #4 (May 11).

Wheat leaf rust. In the third week in May, leaf rust was starting to increase in south central Kansas, where infections were found on the flag leaves. In late May, 20-60% leaf rust severities were found in fields in southern Kansas. The crop maturity stage in southern Kansas is 7-10 days earlier than normal. Fields in northern Oklahoma were at or nearing maturity.

In late May, 5-20% leaf rust severities were found in fields in west central Missouri.

Leaf rust in the southern Great Plains was more severe than last year, but dry conditions in some areas have slowed rust development. With more rainfall, leaf rust should increase and provide inoculum for the northern wheat growing area.

In mid-May, leaf rust was prevalent throughout Arkansas, but developed later than normal and will not cause much yield loss.

Hot, dry weather is hastening the maturity of small grains in the Carolinas and Virginia. Powdery mildew was widespread on wheat and in some fields appeared to be at damaging levels. Leaf rust on winter wheat was either non-existent or very light in commercial fields surveyed last week. In nursery plots in eastern North Carolina, leaf rust was severe only on fully susceptible cultivars.

In California, wheat leaf rust was late to develop and was only found on a few cultivars. The wheat crop matured early and therefore leaf rust did not affect the yield.

Wheat stripe rust. In mid-May, light stripe rust was found on flag leaves in a central Kansas field. In late May, light stripe rust (trace–10% severity) was found on flag leaves in south east and south central Kansas fields. Stripe rust is much lighter than last year in this area. The warm temperatures in the Central Plains are slowing further development of stripe rust.

In west central Missouri, 5-10% stripe rust severities were observed in fields of soft red winter wheat in late May.

In mid-May, the stripe rust development had ceased in the state of Arkansas.

In California, yield losses from stripe rust will be considerably less than last season and probably will amount to about 5% because of the wide-use of resistant varieties and the late development of heavy rust infections. One concern this year is that new strains of rust have developed that are virulent to the resistance that was effective last season and much of the current season. Whether these races survive in the stripe rust population and appear in higher frequency next season is impossible to predict.

Oat stem rust. No new oat stem rust has been reported since CRB #4 (May12).

Oat crown rust. Crown rust was very light in the Carolinas and Virginia in late May.

Buckthorn. By the fourth week in May, aecial development was heavy on buckthorn, the alternate host for oat crown rust, at the St. Paul, Minnesota nursery. Despite the slow leaf emergence 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, barley leaf rust was observed in a nursery in northeastern Virgina at Warsaw. Rust infections were found on the lowest leaves suggesting the rust overwintered in this nursery.

In California, barley leaf rust was late to develop and was only found on a few cultivars. The barley crop matured early and therefore leaf rust did not affect the yield.

Stripe rust on barley. Barley stripe rust occurred relatively late in the California nurseries this season, but increased to high severity by the end of the season on the UC Davis research farm. Severity ratings ranged from traces to 100% at the farm. Yield impact of barley stripe rust in California this season will be low because of the late development of the disease.

Rye rusts. There have no new reports of rye leaf rust since CRB #4 (May 12).

Barberry rust. In mid-May, aecial collections were made from heavily infected barberry bushes (alternate host for stem rust) in southeastern Minnesota**.**