CEREAL RUST BULLETIN

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Issued by:

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- Late developing leaf rust has become severe on wheat from southeastern Colorado to north central Kansas.
- Leaf rust is developing rapidly on winter wheat in South Dakota.
- Traces of wheat stripe rust were found in east central Colorado.

The winter wheat harvest is underway from North Carolina to southern Kansas. During the past week, rains have slowed the harvest in some of the area. The northern planted spring small grains are 1 to 2 weeks behind normal crop maturity.

Wheat stem rust. In mid-June, wheat stem rust was light on susceptible cultivars, e.g., Onaga, throughout central and north central Kansas plots. No stem rust has been found in any fields in either Kansas or Nebraska.

In mid-June, light stem rust was found in wheat plots in southwestern Virginia.

Wheat leaf rust. By the second week in June, 40% leaf rust severities were reported in plots of susceptible wheat cultivars from northeastern Missouri to northeastern Indiana. In fields of the susceptible cultivar Clark, in southern Illinois, 80% rust severities were common during the second week in June (Fig. 1). In plots and fields in places like east central Indiana, 20% severities were noted on only 10% of the wheat plants, because there was not enough dew or rainfall in late May to allow the infection process to occur and, therefore, rust did not spread from wheat plants infected earlier.

By mid-June in the central plains, 80% leaf rust severities were common on susceptible cultivars such as TAM 107, from southeastern Colorado to north central Kansas. Leaf rust developed late, but still managed to kill the flag leaves of susceptible cultivars during the soft dough stage throughout much of this area.

By mid-June, 20% severities were observed on the flag leaves of susceptible winter wheats and 30% on lower leaves of susceptible spring wheats in east central South Dakota. Leaf rust is developing faster in the this area than last year.

By the second week in June in western Washington plots, 50% severities were reported on winter wheats and traces on the springs. In eastern Washington and eastern Oregon, wheat leaf rust was light because of the cool dry May.

The preliminary leaf rust race identifications from collections made in southern Texas in mid-March have shown no major changes in the leaf rust race population from last year.

Leaf rust race identification at the Cereal Disease Lab has been delayed by a serious breakdown of a dew chamber and a major greenhouse renovation.

Wheat stripe rust. In early June, light amounts of stripe rust were observed in wheat plots in west central Indiana.

Last year during early June, stripe rust was found in wheat plots at Rosemount, Minnesota, but none has been found this year.

During the third week in June, traces of stripe rust were found in east central Colorado fields. Normally, stripe rust is found at higher elevations in Colorado, i.e, San Luis Valley (7,500 ft) or front range of the Rockies (~5,000 ft).

By the third week in June, wheat stripe rust was widespread in the Pacific Northwest. In plots of susceptible winter wheat cultivars, 80% severities were observed and on spring wheats, 60% severities were observed in western Washington. Wheat cultivars with adult-plant resistance continued to provide durable resistance in farmers' fields. Stripe rust foci of 60% severity were found in winter wheat plots in eastern Washington, but the foci were few in number. The stripe rust is also increasing in spring wheats. The dry fall and cool dry May lead to the low rust severities, but the latest rains may improve conditions for rust buildup.

Oat stem rust. There have been no new reports of oat stem rust being found in the U.S. since the last bulletin (http://www.cdl.umn.edu/CRB/99CRB/99crb5.html).

Oat crown rust. In mid-June, traces of oat crown rust were found in fields and plots in northern Kansas and northeastern Indiana at the full berry stage.

By mid-June, oats in the buckthorn nursery in St. Paul, Minnesota, had moderate crown rust infection on lower leaves, but little or no rust had appeared on the upper leaves. No crown rust was found on susceptible oats in plots at Rosemount, Minnesota.

Barley stem rust. No barley stem rust has been reported in the U.S. as of June 21.

Barley leaf rust. During the third week in June, barley leaf rust severities of 50% were reported on susceptible winter barleys in western Washington. Rust was just starting to increase on spring barleys. No barley leaf rust has been reported in western Washington.

Stripe rust on barley. By mid-June, in the Pacific Northwest stripe rust on barley was much less than last year. In western Washington, 30% severities were observed on susceptible barley cultivars, while in eastern Washington no stripe rust on barley has been reported. Again, the dry fall and cool dry May, which is the critical month for rust development, was not conducive for the disease.

Rye leaf rust. In mid-June, 10% leaf rust severiites were reported in rye fields in northeastern Indiana.

Rye stem rust. There have been no new reports of rye stem rust since CRB #3 (http://www.cdl.umn.edu/CRB/99CRB/99crb3.html).

Stem rust on Barberry. In mid-June, a few aecial infections were observed on common barberry bushes in south central Wisconsin.

Latest on CDL web page:
Buckthorn (alternate host for oat crown rust) pages added
(http://www.cdl.umn.edu/buckthorn/buckthorn.html)

Fig. 1. Leaf rust severities in wheat fields on June 21, 1999