CEREAL RUST BULLETIN

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- Wheat stem rust is reported on susceptible spring and winter wheat cultivars in the northern plains.
- Wheat leaf rust in the northern plains is increasing in severity in spring wheat cultivars.
- Wheat stripe rust development has stopped in the northern spring wheat.
- Oat stem rust and oat crown rust is common in upper Midwest fields.
- Stem rust is common on many wild grasses in southeastern Minnesota.

The small grain harvest has commenced from southwestern New York to northern South Dakota. Winter wheat is in good condition and at normal maturity throughout much of the U.S. In the northern small grain area, most of the spring-sown grains are in good condition and behind normal crop development.

Wheat stem rust. In mid-July, 20-60% severities were observed on the susceptible spring wheat cultivar Baart in central Minnesota and central South Dakota plots. All of the current spring wheat cultivars are resistant to the current race population. In susceptible winter wheat plots in an east central Minnesota nursery, trace to 60% severities were found at the soft dough growth stage. On July 15, traces of wheat stem rust were found on winter wheat in west central Wisconsin. Earlier in the year, there were few reports of wheat stem rust being found in the southern and central plains grain growing area and now in July stem rust is found on susceptible cultivars at a large number of locations throughout the northern plains. Stem rust collections from Kansas have been identified to be QFCS, a predominant race in the stem rust population in the Great Plains.

Wheat leaf rust. In mid-July, 10-40% leaf rust severities were observed on flag leaves of spring wheat cultivars in fields from northwestern South Dakota to northeastern Wisconsin. Many wheat fields have been sprayed with fungicide to prevent losses due to rust and scab. This year leaf rust is severe and concentrated in the upper Midwest. Rust inoculum arrived from the south in late May and early June with rain showers while temperature and moisture conditions have been good for infection and spread of leaf rust. The spring wheat cultivars currently grown have less effective resistance to leaf rust than those that were popular 10-15 years ago.

In early July, wheat leaf rust was widespread but not severe throughout western/central New York.

Wheat stripe rust. In mid-July, hot temperatures arrested development of stripe rust on spring wheat in the northern Great Plains.

In mid-July, 40% severities were observed in spring wheat plots at the early dough growth stage in northeastern California at Tulelake. Stripe rust foci also were detected in plots of wheat (90% severity, 30% incidence) in a nursery planted at MacDoel in north central California.

Oat stem rust. During mid-July, traces to 20% severities of oat stem rust were found in fields and plots at milk to soft dough growth stage throughout southern Minnesota and central South Dakota. Most current oat cultivars are not highly resistant to stem rust.

In early July, traces of oat stem rust were found in plots in northeastern Indiana.

Oat crown rust. During the third week in July, trace to 80% oat crown rust severities were found in fields and plots throughout west central Wisconsin to central South Dakota. Much of the primary inoculum originated from buckthorn, the alternate crown rust host, common throughout the Upper Midwest.

Barley stem rust. The first reports of barley stem rust this year were trace severities in plots of susceptible two-rowed cultivars in a plot and field in southern Minnesota. Stem rust was found on wild barley (*Hordeum jubatum*) in southern Minnesota. Last year stem rust was light on wild barley, but in previous years was easily found in the northern Great Plains.

Barley leaf rust. In early July, traces of barley leaf rust were reported on lower leaves in susceptible spring barley plots in southern Minnesota.

Stripe rust on barley. In mid-July, 80% severities were reported in susceptible barley plots planted in October and February, while 40% severities were reported in nurseries planted in April in northeastern California at Tulelake.

Rye leaf rust. By mid-July, 40% leaf rust severities were found on the upper leaves of spring rye in plots in southern and west central Minnesota.

Rye stem rust. There have been no reports of rye stem rust this year.

Stem rust on barberry. There have been no new reports of stem rust on barberry since CRB #7.

Stem rust on other grass hosts. By the third week in July, 5-40% stem rust severities were observed on quackgrass (*Elytrigia repens*) and redtop (*Agrostis alba*) in southeastern Minnesota.