

# CEREAL RUST BULLETIN

Report No. 8  
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Issued by:

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- Wheat stem rust is in the northern Great Plains.
- Wheat leaf rust in the upper Midwest is severe on winter wheat and increasing on susceptible spring wheat.
- Wheat stripe rust is increasing throughout the northern spring wheat growing area.
- Oat crown rust is increasing in the northern oat growing area.

The small grain harvest has commenced from northern Ohio to southern South Dakota. Winter wheat is generally in good condition and ahead of normal maturity throughout most of the U.S. Spring grown small grain development has slowed because of cool weather and is slightly behind normal throughout much of the area.

**Wheat stem rust.** In late June, severe stem rust was observed in plots of the susceptible cultivar Red Chief at Lincoln Nebraska. These infections developed from spores that were deposited with rain showers from areas farther to the south. In late June, traces of stem rust were found in a field of triticales in southeastern Minnesota, which is the same area where barberry bushes are growing. Race QFCS, a predominant race found in the Great Plains the past few years, was identified from collections made on an experimental wheat line in a nursery in northeastern Kansas. In the first week of July, trace levels of stem rust infections were found on the susceptible spring wheat Baart in southern Minnesota.

**Wheat leaf rust.** In early July, in east central Minnesota plots, susceptible winter wheat cultivars such as Jagger had 80% rust severities, but the resistant cultivars had only trace levels of infections on the flag leaves. The rust infections probably originated from inoculum sources in Oklahoma and Kansas.

In early July, susceptible spring wheat cultivars in southern Minnesota plots had 20% rust severities, with most infections on the lower leaves. Traces of leaf rust were observed in many of the spring wheat fields in southern Minnesota (Fig. 1). In the first week of July leaf rust severities were up to 80% on susceptible spring wheat cultivars such as Ingot in southern and west central Minnesota. The spring wheat Oxen, which is commonly grown in southern Minnesota, had leaf rust severities of 30-60% and the cultivar Alsen had leaf rust severities of 5-10% in southern and west central Minnesota.

This year leaf rust is widespread in the upper Midwest in spring wheat. Rust inoculum arrived from the south in late May through early June with rain showers. 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 10-15 years ago. Many of the wheat fields in the spring wheat region have been treated with fungicide which will prevent losses due to leaf and stripe rust.

In late June, a foci of 20% leaf rust severity was found in soft white winter wheat plots in northeastern Oregon at Pendleton. Leaf rust development has been slow in the Pacific Northwest this year.

**Wheat stripe rust.** In early July, stripe rust was severe with severity levels up to 60% in west central Minnesota susceptible spring wheat fields and plots (Fig. 2). The cultivars Trooper and Walworth were the most susceptible with stripe rust infections up to 50%. Most of the commonly grown spring wheats had good resistance to stripe rust. The very cool temperatures with sufficient moisture levels have been conducive for stripe rust development in the north central region.

In late June, wheat stripe rust was developing very rapidly in fields of susceptible winter and spring wheat cultivars in eastern Washington. Since many of the cultivars have high temperature, adult plant resistance rust losses will be lessened. Some fields had incidence levels of 60% stripe rust with severity levels up to 20%. Growers have applied fungicides on susceptible wheat fields. In plots of susceptible lines, 80% severities were reported in a winter wheat nursery near Pullman, Washington. Weather conditions have been conducive for rust increase in eastern Washington.

**Oat stem rust.** In early July, traces of oat stem rust were found in a nursery at Lafayette in northwestern Indiana.

**Oat crown rust.** In the last week in June, lower leaves of oat in east central Minnesota plots and fields had trace to 20% severities of crown rust. Crown rust on oats in the buckthorn nursery at St. Paul, Minnesota was severe with severity levels up to 60%.

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

**Barley leaf rust.** There have been no additional reports of barley leaf rust since CRB #7.

**Stripe rust on barley.** There have been no additional reports of barley stripe rust since CRB #5.

**Barley crown rust.** In late June, susceptible barley cultivars in the buckthorn nursery at St. Paul, Minnesota had trace to 10% crown rust severities

**Rye leaf rust.** By late June 60% severities of leaf rust were found on upper leaves of winter rye and trace severities in spring rye in east central Minnesota plots.

**Rye stem rust.** There have been no new 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.



Fig. 1. Leaf rust severities in wheat fields - July 8, 2004

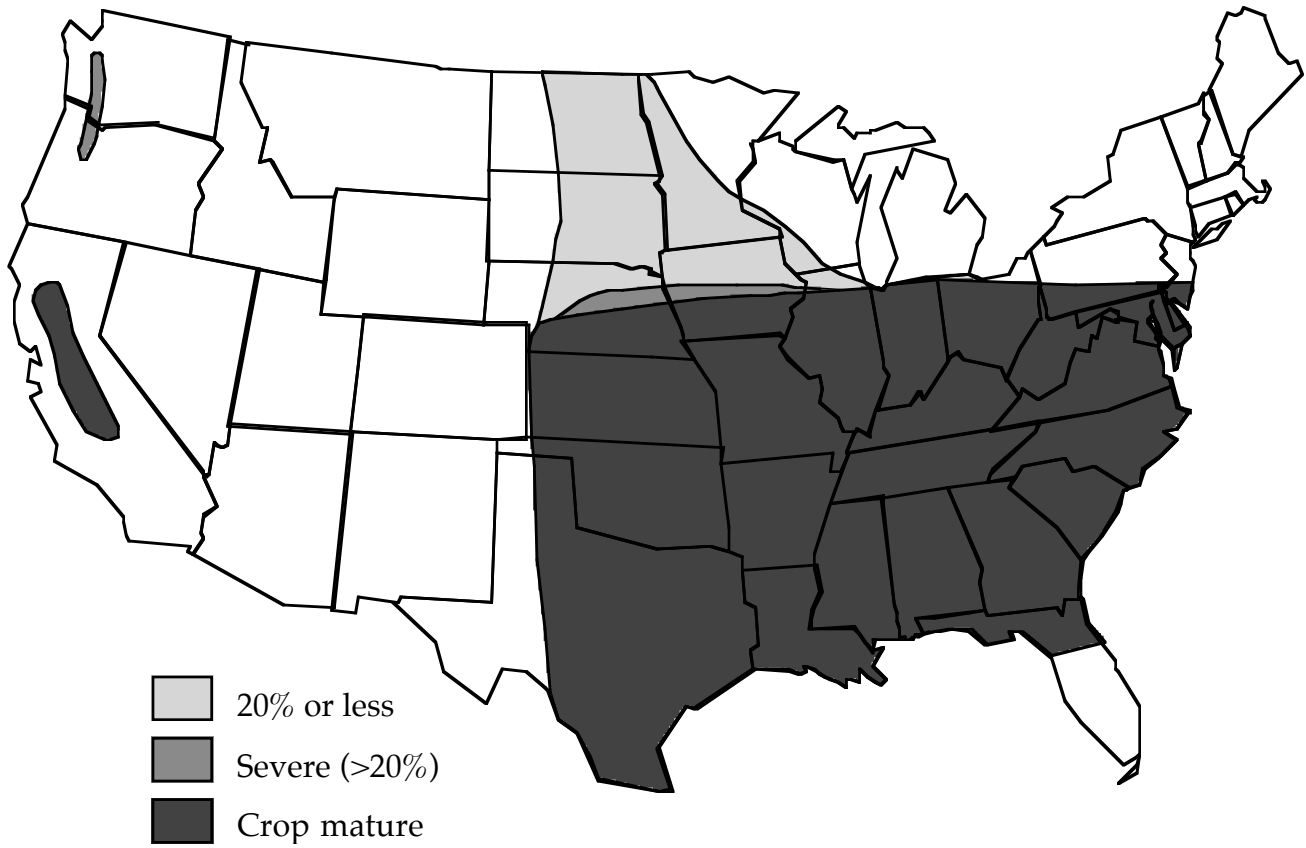


Fig. 2. Stripe rust severities in wheat fields - July 8, 2004

