

# CEREAL RUST BULLETIN

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From:

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Agricultural Experiment Station)

- Stem rust is widespread at trace severities across the northern Great Plains on winter wheat, barley, and in plots of susceptible spring wheat.
- Oat crown rust is severe in southern Minnesota and eastern South Dakota.

The winter wheat harvest has begun from Pennsylvania to southeastern South Dakota. In the northern Great Plains, most of the spring-sown grains are in good condition. Some fields still are behind normal crop development for this time of the year.

## **Wheat stem rust**

In mid-July, traces of wheat stem rust were found in plots and fields of winter wheat in southeastern South Dakota where the crop was at the hard dough stage. Traces of stem rust were also found in winter wheat plots in southwestern North Dakota and in plots and fields of winter wheat at the soft dough stage in east central North Dakota. In early July, stem rust severities were light to moderate in fields in south central Wisconsin and light in southeastern Wisconsin at soft dough. Losses to stem rust will be minimal because the crop is so close to harvest.

By mid-July, traces of wheat stem rust were found in plots of the susceptible spring wheat Baart in west central Minnesota, eastern South Dakota and central North Dakota. A more severe case of wheat stem rust, 20% severity, was observed on the susceptible spring wheat cultivar Max in a southeastern North Dakota plot at the early milk stage. In mid-July, the durum cultivar, Mindum, which was released over 50 years ago, had traces of stem rust in plots in east central Minnesota at the heading stage. The stem rust development this year throughout the northern plains was normal and equal to last year on the same date. The stem rust resistance in the spring wheats remains highly effective in the northern plains. Without this highly developed stem rust resistance, spring wheats would suffer significant losses throughout the northern plains.

In mid-July, traces of stem rust were found on winter wheat in plots in Cayuga county in western New York.

In mid-July, hot spots (1-20% stem rust severities) were reported in winter wheat plots in the Palouse area of Washington. There could be some rust losses in late maturing cultivars.

There have been no new wheat stem rust races identified since Cereal Rust Bulletin #6.

## **Wheat leaf rust**

In mid-July, trace to 5% severities were common on flag leaves in plots and fields of winter wheat in east

central and eastern South Dakota and southeast North Dakota. Leaf rust severities in the northern plains are much lower than normal this year, because leaf rust development in the southern and central plains was also much less than normal. Initial leaf rust development in the northern plains comes mainly from windborne spores from the south which deposited with rains on wheat fields in the north. In mid-July, in susceptible spring wheat plots, trace-5% severities were common, while in spring wheat fields, no leaf rust was observed in the northern Great Plains.

In mid-July, in eastern Washington, leaf rust is light to moderate in spring wheat plots and increasing at a slow rate.

There have been no new wheat leaf rust races identified since Bulletin #6.

### **Wheat stripe rust**

In early July, stripe rust was severe in plots of susceptible winter wheat in the Palouse area of Washington, but stripe rust was not a problem in commercial fields with adult plant resistance.

### **Oat stem rust**

In mid-July, traces of oat stem rust were found in plots in south central Minnesota and southeastern South Dakota and in one field in southeastern South Dakota as well as on wild oats (*Avena fatua*) in southeastern North Dakota. Much less oat stem rust was found in the northern Great Plains the past two years than in previous years. The reduced amount of oat stem rust seems to be associated with a decline in oat production.

There have been no new oat stem rust races identified since Cereal Rust Bulletin #6.

### **Oat crown rust**

In mid-July, trace-40% crown rust severities were found on oat flag leaves in plots and fields throughout the Dakotas and southern Minnesota. In plots, in southeastern South Dakota, 40% severities were common, while in central North Dakota plots, trace severities were common. On wild oats (*Avena fatua*), 20-40% severities were common in southeastern North Dakota fields. Crown rust was reported light to moderate in south central and southeastern Wisconsin. The most severe crown rust was found where rust occurred early and conditions were conducive for rust development. Buckthorn growing in close proximity to oat fields provided the initial inoculum in these areas, i.e., southeastern South Dakota and southern Minnesota. Losses will be more severe than last year with the latest planted fields suffering the most damage.

### **Barley stem rust**

Barley stem rust was found in mid-July for the first time this year at trace amounts in plots in west central Minnesota, a field in south central South Dakota and in plots and fields in southeastern North Dakota. Traces also were found on wild barley (*Hordeum jubatum*) growing on the roadside in northeastern South Dakota. At this date last year, barley stem rust also was found in trace amounts over this same area. Some losses occurred in late maturing fields in 1995, and could occur again this year.

### **Barley leaf rust**

During mid-July, traces of barley leaf rust were found in eastern South Dakota plots and also on wild barley (*Hordeum jubatum*) growing on the roadside in southern Minnesota and northeastern South Dakota.

### **Barley stripe rust**

By mid-July, barley stripe rust was increasing in northern Idaho plots and fields. A range in adult plant resistance to barley stripe rust was observed in plots of different cultivars.

### **Barley crown rust**

In mid-July, trace to 25% severity barley crown rust readings, were recorded in barley plots and fields and wild barley in southeastern North Dakota.

### **Rye stem rust**

There have been no new reports of rye stem rust.

### **Rye leaf rust**

In mid-July, 2% rye leaf rust severities were observed in a plot of the spring rye cultivar Prolific in east central Minnesota.

### **Rust on grasses**

During the first week in July, stem rust was found on quackgrass (*Agropyron repens*) which was growing within 50 yards of the common barberry (*Berberis vulgaris*) in southeastern Minnesota. During the third week in July, trace-1% severities of stem rust and leaf rust were observed on quackgrass growing in a field in west central Minnesota.