CEREAL RUST BULLETIN

Report No. 8
July 1, 2008

Issued by:

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- Wheat stem rust has been found in susceptible winter wheat plots in Kansas, Nebraska, South Dakota and Minnesota.
- Wheat leaf rust is widespread and increasing throughout the northern Great Plains and northern soft red winter wheat area.
- Wheat stripe rust is light in limited locations in the Upper Midwest.
- Oat crown rust is at light levels in the northern oat growing area.

Winter wheat harvest has started from southeastern Virginia to southern Nebraska. The spring planted small grain crop in the northern states is behind normal growth stage.

Wheat stem rust. In late June, high levels of wheat stem rust were found in varietal plots at Belleville in north central Kansas. This was the most stem rust observed in these plots in the last 10 years. Also in late June, high levels of wheat stem rust were observed in the southern part of Nebraska in plots at Lincoln to light levels at North Platte and Sidney. In all cases there was no wheat stem rust found on the commonly grown varieties.

On June 30, light levels of wheat stem rust were found in entries in the stripe rust winter nursery at Brookings, South Dakota. The pustules had developed in the last 7 days. Pustules were primarily on the stems although some also were found on the leaves.

On July 1, light levels of wheat stem rust were found on the leaves and stems of susceptible winter wheat cultivars (e.g. McNair 701) at the Rosemount, Minnesota nursery.

On June 21, several infection sites of wheat stem rust were found in plots at Delphos in west central Ohio.

A collection from Prosper, TX was identified as race RFCS, appeared to be a new race (similar to QFCS except virulent on *Sr7b*). All other collections were identified as race QFCS. Wheat stem rust observations map can be found on the CDL website: http://www.ars.usda.gov/SP2UserFiles/ad_hoc/36400500Cerealrustbulletins/2008wsr.pdf.

Wheat leaf rust. During the fourth week in June, plots of susceptible winter wheat cultivars such as Jagalene in east central South Dakota and southern Nebraska had high levels of rust

severities, while resistant cultivars had 0 to trace levels of infection on the upper leaves. In late June, high levels of wheat leaf rust were found in fields of susceptible varieties in southern Nebraska. Throughout this area fungicide usage on winter wheat was very common this year with many fields receiving multiple applications. In late June, high levels of wheat leaf rust were found in plots of susceptible winter wheat cultivars in east central South Dakota and east central Minnesota (e.g. Jagalene 60%). In late June, susceptible spring wheat cultivars had leaf rust severities of trace to 5% on lower leaves in southern Minnesota and southern South Dakota fields (Fig. 1).

Scouts in North Dakota found wheat leaf rust in 11 of the 117 fields they surveyed the fourth week of June. Five of the fields with wheat leaf rust were winter wheat fields; the other six were spring wheat fields. The spring wheat fields were in east central North Dakota and had severities of 1% or less; the winter wheat fields were in southeastern and south central North Dakota and had severities as high as 25%.

This year wheat leaf rust is widespread, but the rust is at lighter levels than last year in the northern plains on both spring and winter wheats. High amounts of rust inoculum arrived from the southern plains winter wheat region, but because the crop matured slower than normal the rust also developed at slower rate. Now with a return to warmer conditions the rust will increase.

More leaf rust is expected since some of the northern spring wheat cultivars currently grown have less effective resistance to leaf rust than those commonly grown 10-15 years ago. Therefore, many of the wheat fields in the spring wheat region will be treated with fungicide, which will prevent losses due to leaf rust and FHB (scab).

In mid-June, moderate levels of leaf rust were found in winter wheat plots in south central Pennsylvania and southwestern Wisconsin.

Wheat stripe rust. In late June, light levels of wheat stripe rust were found at Sidney in the southern Panhandle of Nebraska and south central South Dakota winter wheat plots. In mid-June, low levels of stripe rust were found in susceptible entries in plots in northeastern Colorado and southwestern Wisconsin. Hot temperatures have slowed stripe rust infections to almost a complete remission in the Great Plains states.

Oat stem rust. There have been no new reports of oat stem rust since mid-May when rust was found in plots at Manhattan in northeastern Kansas.

Oat stem rust observations map can be found on the CDL website:
http://www.ars.usda.gov/SP2UserFiles/ad_hoc/36400500Cerealrustbulletins/2008osr.pdf

Oat crown rust. In late June, light levels of crown rust infection were found in oat plots in northeastern Kansas, southeastern Nebraska, east central South Dakota and southern Minnesota. In late June, high amounts of crown rust were observed on the upper leaves of oat in spreader rows in the St. Paul, Minnesota buckthorn nursery.

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

Barley leaf rust. In late June, traces of barley leaf rust were found in plots in west central Minnesota. In mid-June, high levels of barley leaf rust were found at Cumberland, Pennsylvania.

Stripe rust on barley. There have been no new reports of stripe rust on barley since bulletin #7.

Rye leaf rust. During late June light levels of leaf rust were found in spring rye plots in southern 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 bulletin #6. Aecial collections from southeastern MN and south central WI were identified as rye stem rust.

Fig. 1. Leaf rust severities in wheat fields - July 1, 2008

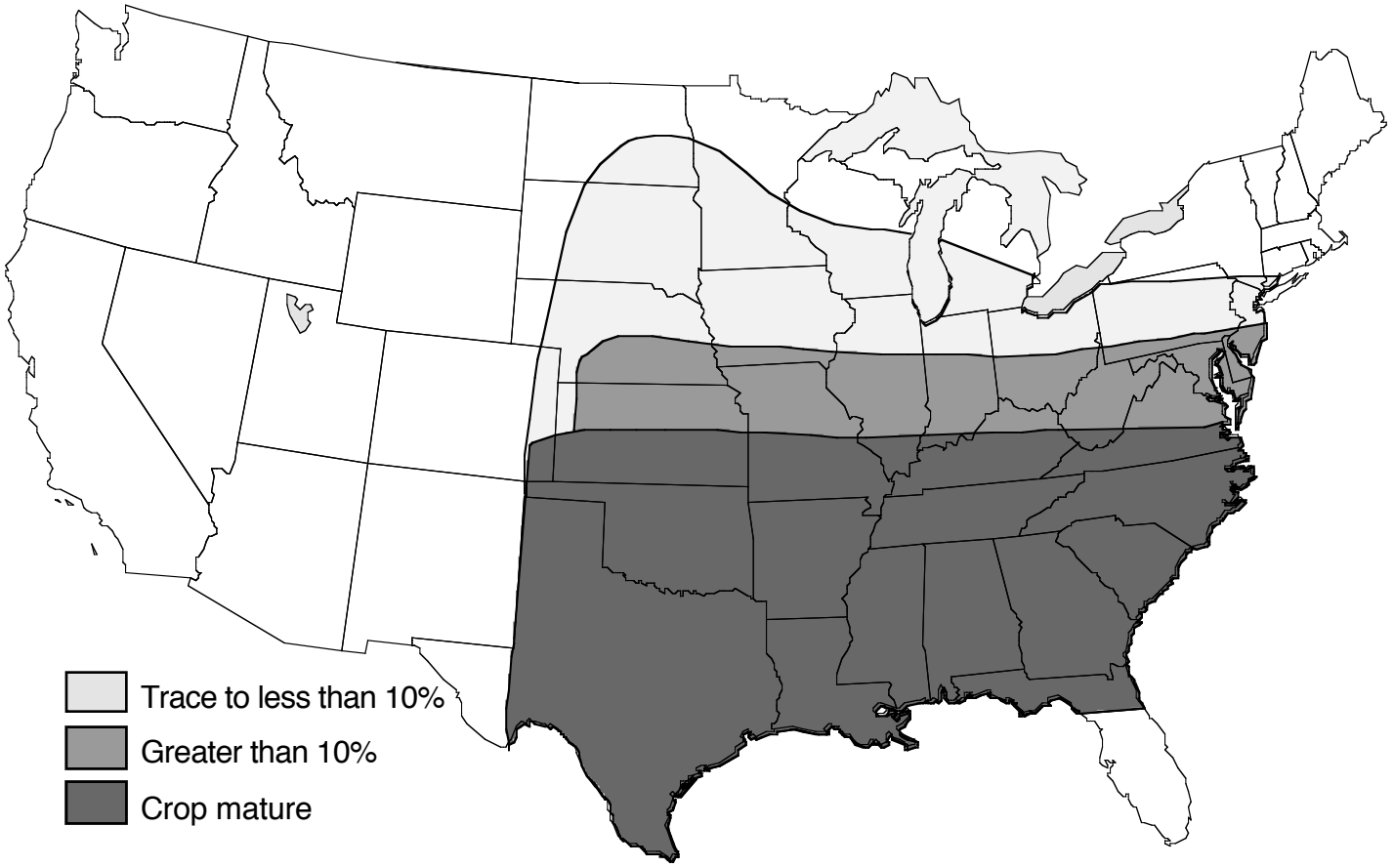

Fig. 1. Stripe rust severities in wheat plots and fields - July 1, 2008