USDA ARS CEREAL RUST BULLETIN

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Issued by:

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Reports from this list as well as all Cereal Rust Bulletins are maintained on the CDL website (*http://www.ars.usda.gov/mwa/cdl*)

- Wheat stem rust was found in plots of susceptible cultivars in Kansas, Nebraska and Indiana.
- Wheat leaf rust is widespread throughout the central plains.
- Wheat stripe rust is light in the central plains and eastern Washington.
- Oat stem rust was found in Kansas.
- Oat crown rust is light in the central U.S.

The small grain harvest is underway from South Carolina to northern Oklahoma. In the spring grains area of the northern plains cool conditions have slowed crop development.

Wheat stem rust. ***Kansas*** –In early June, low levels of wheat stem rust were found on the susceptible hard red winter cultivar Winterhawk in central Kansas plots in Ellsworth and Stafford counties. On June 3, low levels of wheat stem rust were also found on Winterhawk in plots at Belleville in north central Kansas. In all cases the infections were concentrated in small foci with lesions on both stems and leaves. Stem rust observation maps can be found on the CDL website (http://www.ars.usda.gov/Main/docs.htm?docid=9757).

Nebraska **-** On June 9, severe levels of stem rust were found on a susceptible line in the Lincoln, Nebraska breeding nursery.

Indiana – In early June, low levels of wheat stem rust were found on a commercial variety in research plots in Spencer and Vanderburgh Counties in southwest Indiana.

Race Pgt-QFCS, a common wheat stem rust race in recent years, has been the only race identified so far this year.

Wheat Leaf Rust. **Oklahoma and Kansas** - In early June, high severity (60%) levels of wheat leaf rust were found in fields of Jagalene (*Lr24*), Jagger (*Lr17*) and Overley (*Lr41*) throughout north central Oklahoma and southeastern and south central Kansas (Fig. 1). Some fields have been sprayed with fungicide to control the rust. In varietal plots in south central Kansas, leaf rust was low in the resistant cultivars Fuller, Santa Fe and Art. In western Kansas, rust severity was less than 5% on most leaves. Losses due to leaf rust will be less than last year in Kansas. In north central Kansas fields of Overley, etc., leaf rust severities on flag leaves were much lower, but with continued favorable conditions for rust development, leaf rust will increase throughout this area and provide inoculum for the northern wheat growing areas.

Nebraska – In early June, low levels of leaf rust were found in fields and plots in southeastern and the central Panhandle of Nebraska. In plots in Lincoln, severities ranged up to 80% in plots of the susceptible cultivar Overley (*Lr41*).

South Dakota – In early June, leaf rust was found on winter wheat at very low levels in the mid-canopy of several fields in southeastern South Dakota. In the past week conditions have been favorable for more rust infection with storms blowing up from the south and rust spores being deposited on the leaves with rain.

Colorado – In early June, leaf rust was widespread in northeast Colorado plots. Rust was generally light, but will likely increase with recent rain.

Illinois –In early June, low levels of leaf rust were found in fields and severe levels in plots of soft red winter wheat in southern Illinois.

Indiana – In early June, low levels of leaf rust were found in fields in southwest and east central Indiana. In southwest Indiana plots infection on the flag leaves ranged from 5-15% severity on the Pioneer 25R47 variety. No leaf rust was found in fields or plots in southeastern Indiana as of early June.

Lr gene postulations of current soft red winter, hard red winter, and hard red spring wheat cultivars are available in a searchable database at:
http://160.94.131.160/fmi/iwp/cgi?-db=Lr%20gene%20postulations&-loadframes

Wheat stripe rust. ***Oklahoma*** – In early June, severe levels of stripe rust were found in a field in the Panhandle of Oklahoma. The rust arrived so late that it did not affect the wheat yield.

Kansas – On May 22, stripe rust was observed at trace levels in Kansas in Saline county (central Kansas). In early June, low levels of stripe rust were observed in Reno county (central KS) and Sumner county (south central, KS) plots of cultivars known to be susceptible to stripe rust. Lesions were 2 to 3 cm long and actively producing spores suggesting that the infections had taken place at least 3 weeks ago. On June 8, several small foci of stripe rust were found in susceptible varieties 2137, TAM 110 and TAM ll2 in northwest Kansas. A few stripe lesions were identified on varieties previously identified as moderately resistant. This observation on the MR varieties has been reported late in the growing season in the past two years.

Colorado – In early June, wheat stripe rust was found in plots in Julesburg, in northeast Colorado.

Nebraska – In early June, trace levels of stripe rust were found in the central Panhandle of Nebraska.

Pacific Northwest – On June 2, stripe rust on susceptible entries was found in the experimental plots near Pullman, Washington. The incidence was less than 1% and severity less than 5%. The first appearance of stripe rust near Pullman was about two weeks later than last year.

Oat Stem Rust. In early June, light levels of stem rust were found in an oat field in Sumner county in south central Kansas. Infections were observed on leaves and stems in the many foci throughout the field.

Oat stem rust observation maps can be found on the CDL website (http://www.ars.usda.gov/Main/docs.htm?docid=9757).

Oat Crown Rust. In early June, light levels of crown rust were found in a field in Sumner County in south central Kansas.

Buckthorn. Cooler and drier than normal conditions the past two weeks have slowed aecial development in the buckthorn nursery at the St. Paul, Minnesota. Buckthorn serves as the alternate host for oat crown rust. In late May, aecia were common on buckthorn in central New York.

Barley leaf rust. There have been no new reports of barley leaf rust since the last bulletin.

Stripe rust on barley. There have been no new reports of stripe rust on barley since the last bulletin.

Rye rusts. In early May, severe levels of rye leaf rust were observed in a Sumner County field in south central Kansas.

Stem rust on barberry. In late May, moderate number of aecial infections were found on susceptible barberry bushes (alternate host for stem rust) growing in southeastern Minnesota, Wisconsin and western Idaho.

New barberry/stem rust web resource: In addition to the CDL's Barberry and stem rust pages, APHIS has created a new website for their Barberry/Black Stem Rust program. The page can be found at:

http://www.aphis.usda.gov/plant_health/plant_pest_info/barberry/index.shtml

Fig. 1. Leaf rust severities in wheat fields - June 10, 2009

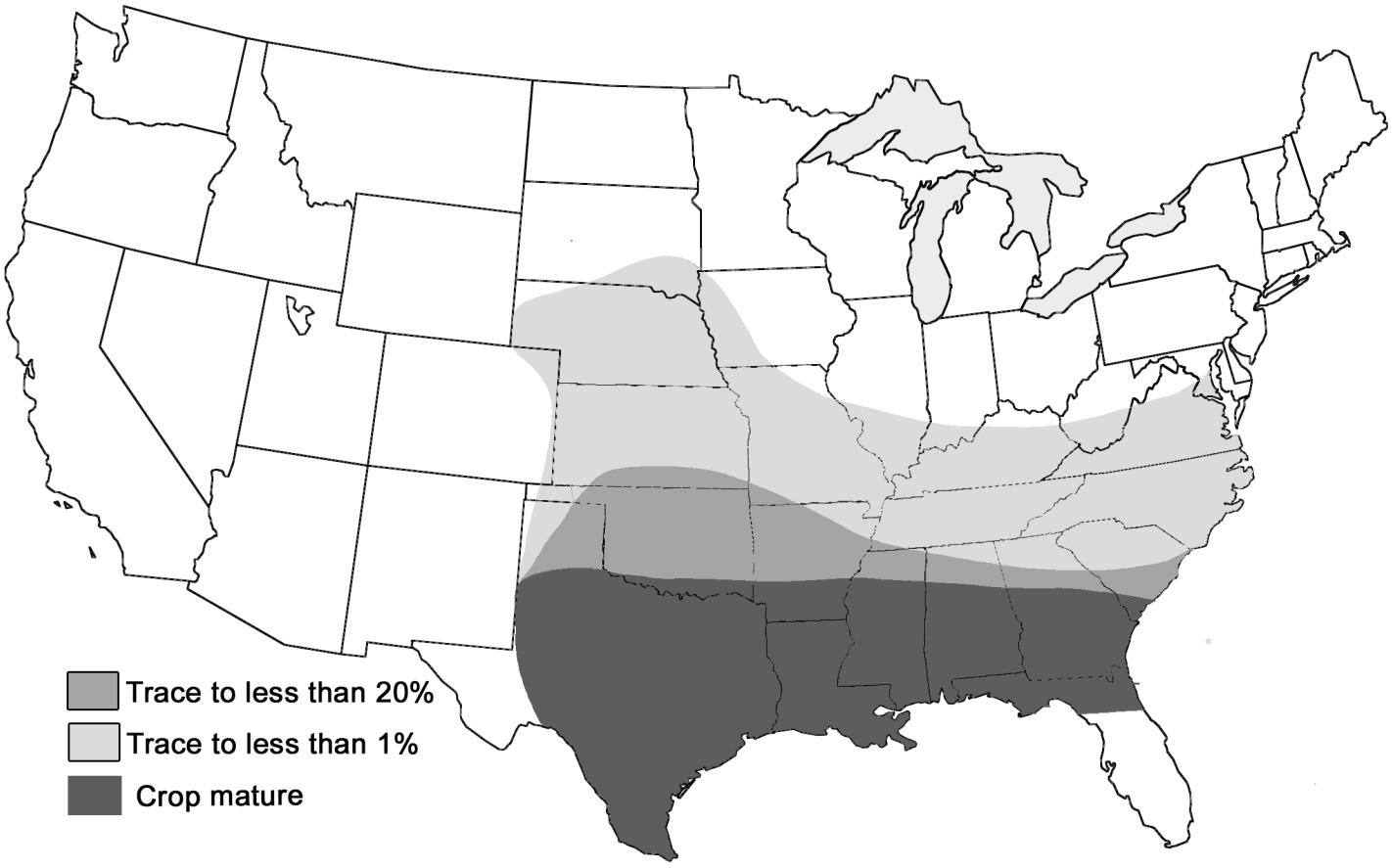

Fig. 2. Stripe rust severities in wheat fields and plots - June 10, 2009