CEREAL RUST BULLETIN

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- Wheat leaf rust is increasing in the central Great Plains.
- Wheat stripe rust is decreasing in the southern Great Plains.
- Aecial development of crown rust is moderate on buckthorn bushes in Minnesota.
- Barley stripe rust is light in eastern Washington.

Much of the wheat crop in the Central Plains is slightly behind normal crop development and in good condition. The winter wheat harvest has commenced from southern Texas to southern Georgia. Much of the spring wheat crop has been planted and is in good condition.

Wheat stem rust. Traces of wheat stem rust were found in plots of susceptible wheat at Castroville in south Texas.

Wheat leaf rust. During the second week in May moderate levels of leaf rust were reported in central Texas and low levels in the Panhandle area. In north central Texas stripe rust was predominate at the boot and heading growth stages, but leaf rust is currently more prevalent. In south Texas, leaf rust was severe on green leaves of susceptible wheat.

In early May, severe leaf rust was observed in plots and fields throughout Oklahoma. In early May, plots of susceptible wheat in central Oklahoma had 60-90% severities. Leaf rust and drought are causing yield reductions across the wheat growing areas of Oklahoma. In mid-May, 60% leaf rust severities were observed on flag leaves of *Triticum cylindricum* (common goatgrass) growing in roadside ditches in north central Oklahoma.

In mid-May, plots and fields of susceptible wheat in south central Kansas had 40% severities while in central Kansas fields 5% severities were observed. In south central Kansas wheat plots, 40% rust severities were observed on Jagger, Jagalene, Cutter and Karl 92 cultivars. No leaf rust was observed on Overley, Deliver and Santa Fe. In some plots in south central Kansas, it was observed that leaf rust and stripe rust were competing for the same location on the leaf.

In mid-May, leaf rust in the southern Great Plains was not as severe as last year, because the cooler temperatures in late April and early May slowed rust development. If temperatures increase and moisture conditions are good, leaf rust should increase and provide inoculum for the northern wheat growing area.

On May 11, leaf rust infections that had over wintered were found on the lowest leaves of winter wheat plants of the susceptible cultivar Cheyenne at the Rosemount Experiment Station in east central Minnesota.

In early May, leaf rust covered 1 to 5% of the mid-canopy leaves of susceptible lines at the Kinston station in east central North Carolina. During the second week in May, traces of leaf rust were found in fields in north central Tennessee.

In mid-May, 60 to 100% severities were reported on susceptible cultivars in the San Joaquin Valley nurseries in California. Light leaf rust was found in winter wheat in south central Washington. This is the first report of leaf rust in Washington east of the Cascade Mountains.

From leaf rust collections made in mid-March in Arkansas the following races were identified: MFGJ (Lr11 and 24, 26 virulence, identified from McCormick), TBBJ (Lr2a virulence) and TNRJ (Lr9 and 24, 41 virulence). In mid-March the following races were identified from collections made in central Texas: KDBG (Lr24 virulence, identified from Jagalene and Cutter), KFDS (Lr24 and 26 identified from Jagalene), MCDS (Lr17 virulence, identified from Jagger,), and TNRJ (Lr 9. 24, and 41 virulence, identified from Lockett, TAM 107 and Thunderbolt).

Wheat stripe rust. In mid-April, stripe rust was increasing throughout the Texas Panhandle and by late April most plots of susceptible cultivars had rust severities over 80% on flag leaves. In north central and central Texas, stripe rust was predominant in April but by mid-May the warmer temperatures had caused stripe rust development to cease.

In Oklahoma, by mid-May, dry and warm weather had slowed stripe rust development throughout the state. Stripe rust did cause yield reductions in much of the wheat producing areas of Oklahoma.

In mid-May, wheat stripe rust was prevalent in much of Kansas at varying degrees of severity. The disease was most severe in the southern and western areas of the state. Resistant cultivars such as Overley, Cutter and TAM 111 were still resistant. In some areas of Kansas, the more susceptible cultivars such as 2137,

OK102 and Trego were hit very hard with stripe rust. Some estimates are for a 20-40% yield loss for the highly susceptible cultivars.

In mid-May, stripe rust development had slowed in Arkansas.

By early May, wheat stripe rust was found across the coastal plain from Georgia to Virginia. In mid-May stripe rust was found on Virginia's Eastern Shore and significant stripe rust was found in borders in nurseries in Painter, VA. In early May, 15% stripe rust severities were observed in a north central Tennessee wheat field.

By early May, stripe rust was present throughout the Pacific Northwest and was severely damaging susceptible winter wheat crops in northwestern Oregon and south central Washington. Fungicides were sprayed to control stripe rust in Washington wheat fields in an area that had the most stripe rust in the last 20 years. In early May in east central Washington and northern Idaho, susceptible winter wheat experimental fields had 60% stripe rust severities. In both Oregon and Washington nurseries stripe rust severities ranged from 0 to 60% in winter wheat cultivars.

In mid-May, stripe rust was widespread throughout the Pacific Northwest. In southeast Washington 100% severities were observed on susceptible entries in the winter wheat nurseries and 40% severities in the spring wheat nurseries. In eastern Washington winter wheat fields with 5% rust severities were sprayed with fungicides. Stripe rust is common in spring wheat fields with less than 2% severity on the lowest leaves. The recent wet and cool weather have been ideal for stripe rust infection in the Washington.

Oat stem rust. By early May, stem rust on oats had increased to moderate levels in plots at Castroville in south Texas. In mid-May, 80% stem rust severities were observed in *Avena fatua* (wild oats) in San Luis Obispo County in California.

Oat crown rust. In early May, crown rust was heavy in oat plots at Castroville in south Texas. In mid-May, no crown rust was found in central Kansas oat plots. In mid-May, oat crown rust was observed in *Avena fatua* (wild oats) in San Luis Obispo County in California.

Buckthorn. By the third week in May, aecial development was moderate to heavy on buckthorn, the alternate host for oat crown rust, at the St. Paul, Minnesota nursery. Despite the slow leaf

emergence of the buckthorn, due to the prolonged cool temperatures in May, the aecial development is more severe than normal.

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

Barley leaf rust. In early May, 40-80% leaf rust severities were reported in barley plots in Butte and Glenn counties in California. In mid-May, 60% rust severities were found in barley plots in north central Oklahoma at Lahoma.

Stripe rust on barley. In mid-May, 1-2% severities were reported in fields and plots in eastern Washington. This was the earliest detection of barley stripe rust in eastern Washington for the last five year.

Rye rusts. In mid-May, 60% leaf rust severities were observed in rye fields in north central Oklahoma.

Fig. 1. Leaf rust severities in wheat fields - May 19, 2005

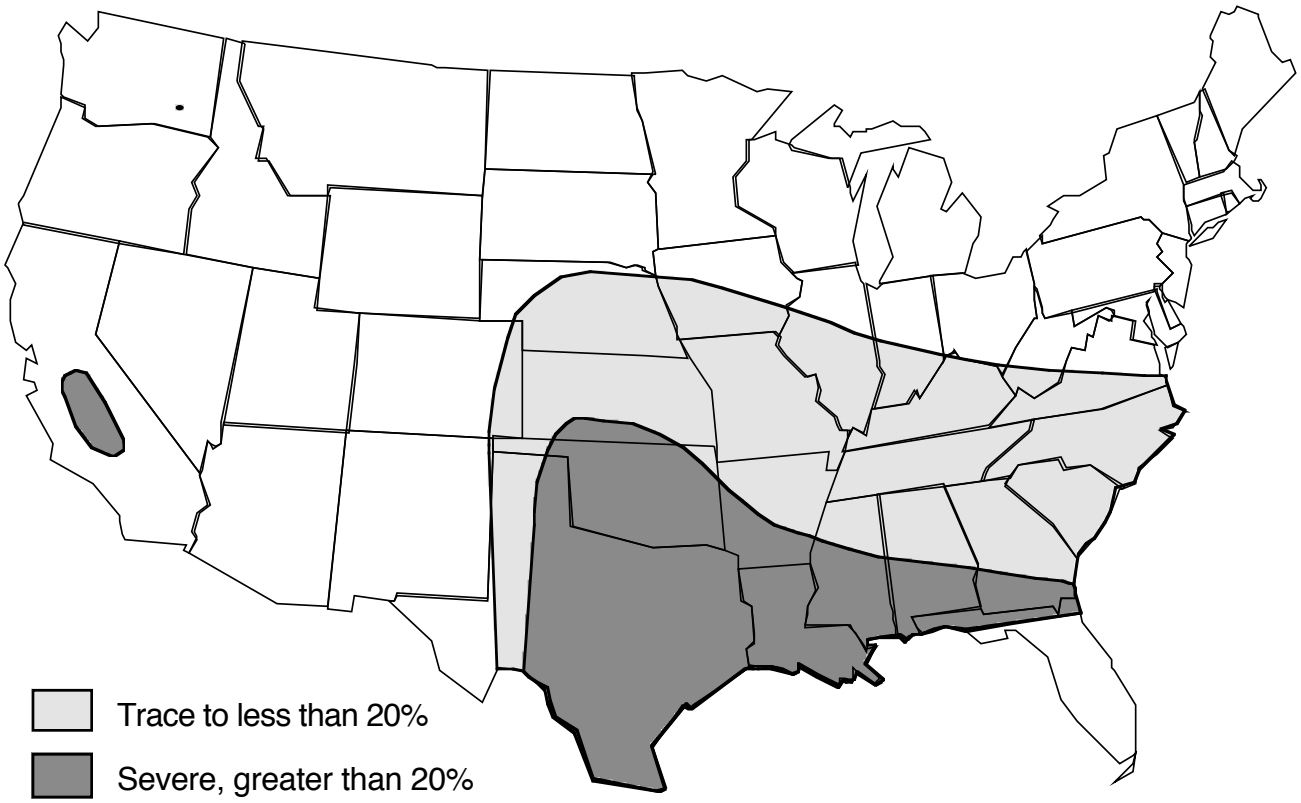

Fig. 2. Stripe rust severities in wheat fields - May 19, 2005