CEREAL RUST BULLETIN

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From:

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- Wheat stem rust is severe in overwintering foci found in fields in central and east central Louisiana. Potential for spread to midwestern wheat fields is high this year.

- Severe wheat stripe rust was found in a field in northeastern Louisiana. Damage is likely to be local.

The winter-sown small grain crop is generally in good condition. In the southeastern U.S. soft red winter wheat area, the crop is in good shape and near normal maturity. In the southern plains, the damage from the April freeze varies from field to field, depending upon the planting date, cultivar , moisture condition, and degree of grazing. Many winter wheat fields in southern Minnesota had severe winter injury. The injury occurred this spring during several days of very cold (6 - 8 F) temperatures after the wheat had begun to grow and the snow cover was gone. Throughout most of the spring grain growing-area, the water-soaked soils and cold temperatures have delayed field work, and planting is two weeks behind normal .

Wheat stem rust. During late April, overwintering stem rust centers were found in central and east central Louisiana fields and plots. For example, these stem rust centers were scattered throughout a 40-acre field of CK 9835, and in varietal plots 60 miles away, the rust was so severe that much of the wheat in some plots was killed by stem rust. These sites in Louisiana were the only locations where wheat stem rust was found during rust surveys the last week of April in the southeastern U.S., southern Oklahoma and northern Texas. The severe stem rust in these Louisiana areas will provide substantial inoculum for susceptible wheat farther north in the midwestern soft red winter wheat region.

Wheat leaf rust. During the last week in April, 60% severities were observed in plots of susceptible soft red winter cultivars in the southeastern U.S., while in fields trace to 10% severities were more common on the flag leaves. By the first week in May, in the coastal plain

of South Carolina, wheat leaf rust pustules were found on flag leaves and the potential is there for losses to occur on late planted wheat.

During the last week in April, wheat leaf rust severities in north central Texas and southern Oklahoma fields ranged from trace to 2% at 100% prevalence, and in plots, severities rangedfrom trace to 40%. In late April, leaf rust was found on flag leaves in extreme southern Kansas while rust progress was developing slower than expected because of the cool weather. In this area, freeze damage had little effect on the rust because only the leaf tips were burned back.

By late April, leaf rust was being found throughout the Sacramento Valley of California, but because of the advanced crop development, losses are not expected to be significant.

Wheat stripe rust. During late April, the first location of stripe rust in the south central U.S. was in a 50-acre field of Mason in northeastern Louisiana. The rust was severe and was found throughout the whole field. Generally every year stripe rust is found in few locations along the southern Mississippi Valley.

During the last week in April, in the Sacramento Valley of California, wheat stripe rust foci were found in fields of the fall-sown hard red spring wheat cultivar Express. Several entries in statewide hard red spring wheat nurseries showed susceptible reactions. There may be a race change occurring in California where wheat stripe rust appeared on cultivars which have had effective resistance since the mid-70s.

In late April, wheat stripe rust was found in the Skagit Valley in western Washington on the lower leaves (20%) but not on the upper leaves. Recent weather has been favorable for further development of stripe rust. In the area west of Pascoe, stripe rust hot spots have been found and the crop maturity has been delayed because of the cold spring. Rust will probably be a problem in this area and in some cases the wheat will be sprayed for disease control.

Oat stem rust. During the last week in April, overwintering centers of stem rust were found in an oat field in east central Louisiana and in oat varietal plots in southwestern Alabama and central Louisiana. These locations will provide oat stem rust inoculum for areas farther north. Also, throughout the southeastern U.S., traces of oat stem rust were found in varietal plots in southern Georgia, southwestern Mississippi and northwestern Louisiana.

Oat crown rust. In late April, crown rust was severe and widespread from the southeastern U.S. to central Texas. In southeastern U.S. and central Texas varietal plots, crown rust was severe (>80%), while in oat fields, severities were moderate (1-20%). In plots in southwestern Alabama and central Louisiana, the rust was so severe it killed some of the oats. This widespread crown rust development is equal to the rust development of the last three years in the southern U.S. These southern areas of severe crown rust development may provide inoculum for areas farther north.

Barley stem rust. As of May 5, no barley stem rust has been reported in the U.S. this year. Limited amounts of barley are grown commercially in the southern states. Stem rust on barley rarely occurs in this area.

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

Stripe rust on barley. During late April, barley stripe rust was widespread in California's fall-sown spring barley crop. Some advanced lines that tested resistant last season are susceptible this season. Many of the commercial cultivars are extremely susceptible, while UC 603 exhibits a high level of tolerance. Total crop damage will be less than in 1996, since stripe rust onset was late this season while crop development was earlier.

During the last two weeks in April, cool, wet weather slowed stripe rust development in winter barley plots near Corvallis, Oregon. In late April, 20% stripe rust severities were observed on lower leaves of barley growing in the Skagit Valley of Washington. Weather has been rainy the past 2 weeks, so stripe rust is expected to build up. No stripe rust has been reported on barley west of the Cascades in Washington.

Rye leaf rust. During the last week in April, in central and north central Texas plots, rye leaf rust severities ranged from 1-5% on the flag leaves. In a field of rye in southern Alabama, 20% leaf rust severities were observed on the flag leaves in late April. As of May 5, no rye stem rust has been reported in the U.S.

Fig. 1. Leaf rust severities in wheat fields on May 6, 1997