AgriLIFE EXTENSION
Texas A&M System

PLANT PATHOLOGY & MICROBIOLOGY

PLPA-2008Wh11-01

Leaf Rust of Wheat in the Texas Panhandle, Texas South Plains, and Texas Rolling Plains (Fall 2008)

Figure 1

Leaf rust is caused by *Puccinia triticina*. Leaf rust (sometimes called orange rust, brown rust or dwarf rust) occurs on either side of the leaf and on the leaf sheath as small, reddish-orange pustules containing the rust spores (Figure 1). The disease first appears on older leaves, and the fungus spreads up the plant as the growing season progresses. In most years, leaf rust causes more damage in Texas than any other wheat disease.

The first evidence of leaf rust is the development of small, round, bright reddish-orange pustules scattered or clustered over leaf blades and sheaths. Sometimes a chlorotic or yellowish halo surrounds the pustule (Figure 2).

Disease is most prevalent between 59 - 72° F and can cause a reduction in the number and size of kernels. However, the pathogen is still active at lower and higher temperatures. Leaf rust reduces forage production in fields where it is utilized for grazing. New races of the rust fungus originate naturally and challenge wheat varieties.

Leaf rust has been observed through late November in the Texas Panhandle, Texas South Plains, and Texas Rolling Plains and probably more severe on early planted wheat and volunteer winter wheat. As temperatures continue to drop, the activity from this fungal pathogen will be slowing down and halt as we start getting constant freezing temperatures. In case of a mild winter, the potential could exist for some of the fungal inoculum to survive and start infection early on in the spring. In 2007, leaf rust was still active until late November/early December. However, little disease was observed the following spring even though there was a mild winter. It is not recommended that fungicides be applied in late fall. Older infected tissue will dry out as temperatures fall and new growth should be looking better. Fields that have leaf rust should be scouted early on in the spring to ensure that no fungal survival occurred. Most likely, no active rust will survive if winter is at its normal.

Figure 2

Prepared by Dr. Ronald D. French-Monar
Assistant Professor and Extension Plant Pathologist
Texas AgriLife Extension Service; The Texas A&M System
November 25, 2008