

PLANT DISEASE AND INSECT ADVISORY



Entomology and Plant Pathology
Oklahoma State University
127 Noble Research Center
Stillwater, OK 74078



Vol. 4, No.20

Website: <http://entopl.okstate.edu/Pddl/advisory.htm>

Nov 10, 2005

Wheat Disease Update Bob Hunger, Extension Wheat Pathologist

Reports of wheat diseases were negligible in September and most of October, but since then there have been several reports of leaf rust and root rot-type symptoms from several areas of the state.

Wheat leaf rust: During the past two weeks I have noticed some leaf rust pustules on Jagger in research plots located near Stillwater; however, not what I would consider as “severe” levels of infection. In contrast, Mark Gregory (Area Extension Agronomy Specialist, Southwestern OK) reported to me last week that yellowing and a severe level of infection were observed in a field located in the Weatherford-Thomas area. I suspect what Mark was reporting is similar to what I and Bart Cardwell (Extension Educator, Garfield County) observed in a field of ‘2137’ in Garfield County yesterday (see Figures 1 & 2). In this field all but the outer one or two strips of wheat were yellowing from the rust, with all but the youngest two or three leaves showing sporulating pustules, flecks, and yellowing. As in the past, my recommendation is to not spray these fields for leaf rust now. When strongly freezing temperatures arrive, leaves with these sporulating pustules will die. Hopefully, the weather through the winter will be such that the leaf



rust fungus will not be able to overwinter (although this has not been the case the last 3-5 years). Grazing wheat heavily infested with leaf rust also may help reduce the inoculum in a field, and is not known to cause any problems to cattle. Be sure to watch these fields next spring to see if leaf rust overwintered as these fields may be candidates for severe leaf rust in the spring and merit a fungicide application.

Figure 1. Yellowing of wheat (variety 2137) in Garfield County due to leaf rust on 08-Nov-2005. Note the lack of yellowing in the wheat (foreground) planted adjacent to the edge of the field.

Figure 2. Closer view of foliage of 2137 wheat infected with leaf rust. Older leaves closer to ground are more yellow and have abundant sporulating pustules. Younger, more recent leaves show flecks or are mostly green.



Root rot-like symptoms: There have been several reports of “root rot-like” symptoms, including weakened seedlings, and yellowing and death of seedling wheat. These have come from southwestern OK (Gary Strickland – Extension Educator, Jackson County) and also from Garfield County near Garber. Seedlings from the field in southwestern OK looked to me to be consistent with infection by the fungus *Pythium*, which is known as a “root-nibbler.” Hence, the *Pythium* can prevent seedlings from developing strong root systems quickly, which when combined with subsequent drought can cause seedling yellowing and death. However, this was over the entire field, which usually is not typical of *Pythium* or any other root rot. I think the field in question near Garber was more a result of moisture and temperature than disease. The field was planted about 20-Sep. About that time a heavy rain fell, but since then it has been dry with fluctuating temperatures. There was another 3-5 inch rain about 1 week ago. Here again, the stand of wheat was not as consistent as desired, but I think this was due more to the weather than disease.

Finally, Mark Gregory (Area Extension Agronomy Specialist, Southwestern OK) also reported that he saw a field just covered with “honeydew,” but could not find any aphids and saw only limited predators (lady beetles). Other than this and the one aphid I and Bart saw yesterday in Garfield County, I have not had any indications of significant aphid infestations (although I did have one report of a heavy leaf hopper infestation near Clinton).

Dr. Richard Grantham
Director, Plant Disease and Insect Diagnostic Laboratory

Oklahoma State University, in compliance with Title IV and VII of the Civil Rights Act of 1964, Executive Order of 11246 as amended, Title IX of the Education Amendments of 1972, Americans with Disabilities Act of 1990, and other federal laws and regulations, does not discriminate on the basis of race, color, national origin, sex, age, religion, disability, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert E. Whitson, VP, Dean, and Director for Agricultural Programs, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Dean of Agricultural Sciences and Natural Resources.