



Pest e-alerts



Entomology and Plant Pathology, Oklahoma State University
127 Noble Research Center, Stillwater, OK 74078
405.744.5527

Vol. 17, No. 36

<http://entopl.okstate.edu/pddl/pddl>

11/9/18

Wheat Disease Update – 09-November-2018

Dr. Bob Hunger, Extension Wheat Pathologist
Department of Entomology & Plant Pathology
Oklahoma State University

I have been surprised at the lack of wheat leaf rust during fall 2018 as conditions in Oklahoma (mild temperature and lots of moisture) seemed favorable to me for this foliar disease to occur. A lower number of early planted wheat acres is about the only thing to which I'm able to attribute the lack of fall leaf rust. Yellowing of wheat leaves observed over the last several weeks was attributable to cold, wet soils coupled with nitrogen leaching to lower in the soil. However, over the last two weeks or so, wheat leaf rust has made its appearance in the Southern Great Plains. The first report I received came from Dr. Charlie Rush, a wheat researcher located in the Texas panhandle. Dr. Rush indicated to me, "We are seeing a lot of leaf rust throughout the panhandle, especially in early planted wheat." This was shortly followed by a report (https://webapp.agron.ksu.edu/agr_social/eu_article.throck?article_id=2026) indicating leaf rust is building in central and western Kansas. That caused me to look harder around Stillwater, with the result being the finding of leaf rust pustules on the lower leaves of 'Jagalene' border rows in Dr. Carver's dual purpose observation nursery (Figure 1). The Diagnostic Lab also received a sample this week of wheat with lower yellow leaves with many developed and developing leaf rust pustules, and I also have had reports of leaf rust in western OK (Blaine County). HOWEVER, don't think that every field observed with yellowing is the result of leaf rust as the cold, wet soils and nitrogen leaching have also caused this extensively in Oklahoma this fall.



Figure 1: Wheat foliage ('Jagalene') showing a susceptible reaction to leaf rust. These are older leaves down low in the canopy of early plant wheat

Leaf rust in the fall typically brings up the question of spraying to control this infection. I am not a proponent of spraying in the fall to control leaf rust because leaf rust development slows significantly once we get to winter temperatures in late November-January (basically <60 F) with freezing temperatures at night. Typically over the winter, the lower/older leaves with leaf rust pustules die-out with cold temperature, with the emerging leaves missing infection and are green and healthy. Grazing helps to remove leaf rust infections, is not harmful to cattle, and also “opens” the canopy so there is increased air circulation and drying that are less favorable to development of leaf rust. Given these considerations, spraying to control leaf rust in the fall usually is not recommended. The primary concern with fall leaf rust is that with a mild winter and sufficient moisture, the rust will survive through the winter and inoculum will be present in fields to start the disease early in the spring. Hence, monitoring of fields through the late winter and early next spring is recommended to see if application of a fungicide to control rust is indicated in the early spring.

Disease and Insect Diagnostic Laboratory

The pesticide information presented in this publication was current with federal and state regulations at the time of printing. The user is responsible for determining that the intended use is consistent with the label of the product being used. Use pesticides safely. Read and follow label directions. The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Cooperative Extension Service is implied.

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, and Title IX of the Education Amendments of 1972 (Higher Education Act), the Americans with Disabilities Act of 1990, and other federal and state laws and regulations, does not discriminate on the basis of race, color, national origin, genetic information, sex, age, sexual orientation, gender identity, religion, disability, or status as a veteran, in any of its policies, practices or procedures. This provision includes, but is not limited to admissions, employment, financial aid, and educational services. The Director of Equal Opportunity, 408 Whitehurst, OSU, Stillwater, OK 74078-1035; Phone 405-744-5371; email: eeo@okstate.edu has been designated to handle inquiries regarding non-discrimination policies: Director of Equal Opportunity. Any person (student, faculty, or staff) who believes that discriminatory practices have been engaged in based on gender may discuss his or her concerns and file informal or formal complaints of possible violations of Title IX with OSU's Title IX Coordinator 405-744-9154.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is issued by Oklahoma State University as authorized by the Vice President, Dean, and Director of the Division of Agricultural Sciences and Natural Resources.