



Pest e-alerts



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Wheat Disease Update – 08-November-2016

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Fall 2016 has been mild/warm and relatively dry. Because of the dryness, fall foliar diseases should be relatively sparse, but some areas have received sufficient rain or had sufficient dews to favor development of wheat foliar diseases. That is the case around Stillwater as you can see in the photo below. This picture, which was taken November 5th in one of Dr. Brett Carver's wheat breeding nurseries at Stillwater, was planted September 14th. The variety is Jagalene, which is highly susceptible to both leaf and stripe rust (I could find no stripe rust).



Wheat foliage ('Jagalene') showing a highly susceptible reaction to leaf rust with an intermediate severity level. Note younger leaves show no leaf rust. This nursery is located in Stillwater, OK, and was planted 9-14-2016 with this photo taken on 11-5-2016.

I am not a proponent of spraying in the fall to control fall foliar diseases such as leaf rust because leaf rust development slows and stops once we get to winter temperatures in late November-January (basically <60 F). Typically the lower/older leaves with leaf rust pustules die, but the youngest leaves 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 typically is not necessary. 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.

Other samples that have come to the lab for diagnosis appear to be related to abiotic conditions such as dryness or low fertility. Some leaf spots have been observed on these samples, but they are either secondary or of low incidence and not a cause of major concern. Dr. Misha Manuchehri (OSU Weed Specialist) sent the following photo showing leaf spots she observed on plants in a trial located near Perkins, OK. Dr. Manuchehri is bringing a sample for us to isolate from, but this appears to be tan spot. Leaf spotting diseases such as tan spot and septoria leaf blotch typically do not appear until late February or March.



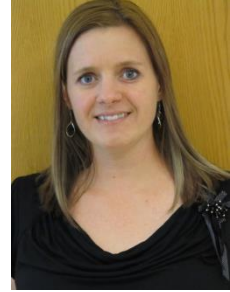
Leaf spots (most likely tan spot) on wheat foliage (variety not known). This nursery is located near Perkins, OK. Photo taken the first week of November 2016 by Dr. Misha Manuchehri.

For all the foliar wheat diseases (leaf rust, stripe rust, powdery mildew, tan spot, and septoria leaf blotch), control in the spring is more critical than control in the fall. I have heard of growers adding a shot of fungicide with a fall herbicide application to limit disease present. I have no data to support the value of such an application, but there may be some value to it because plants are smaller and not growing as actively so limiting the amount of foliage loss due to a disease such as tan spot will contribute to the overall health of the wheat going into winter. **BUT ESPECIALLY**, watch these fields starting in late February to see if an application is merited because control of foliar diseases is much more critical in the spring than in the fall.

Greetings from Jana Slaughter

Hello everyone,

It is exciting to be the Senior Laboratory Technician at the Oklahoma Plant Disease and Insect Diagnostic Laboratory (PDIDL). I am married to Greg Slaughter and we are raising two boys Gavin who is five and three year old Jubal. I grew up on a small farm in Southern Colorado near Alamosa where we grew alfalfa and raised sheep. As a teenager, I worked in potato fields identifying and removing plants with viruses. My agriculture education was greatly increased at Oklahoma State University where I earned a Bachelor's of science in Horticulture followed by a Master's degree in Plant and Soil Sciences in 2008. Upon graduation, I moved back to Southern Colorado to work as a crop consultant with Agro Engineering Inc. At Agro, I advised farmers in potato, barley, wheat, canola, and alfalfa production. In December 2012, my husband Greg began working for Charles Machine Works and we moved to Perry, Oklahoma. After living in Oklahoma for a few months, I began working part-time as a lab technician at PDIDL and have been there since that time. In the spring of 2015, I started The Land Steward and serve as crop advisor for producers in the Noble County area. As an advisor, I have assisted with insect and disease management of wheat, canola, soybeans, corn, and grain sorghum. My responsibilities as the Senior Lab Technologist are identifying arthropods and assisting with the diagnosis of plant disease samples sent into the lab. For insect identification we accept images sent to gotbugs@okstate.edu or physical samples sent to NRC 127.



Some tips on sending digital and physical insect samples

- Take a picture next to a size reference such as a pencil, paper clip, or ruler
- Include information about the location where the sample or image was taken
 - Please write your City or County
 - Kitchen sink, bathroom, bedroom, backyard, doghouse, type of plant, etc.
- Put samples in a plastic bag and if they are alive, please double bag the sample
- Include your address and other contact information
- Do not tape the insect down if possible, it squishes and distorts the specimen
- Do not send in an envelope without padding because the specimen will get squished in the mail.

Plant Disease and Insect Diagnostic Laboratory

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