Pest e-alerts

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## Wheat Disease Update

Bob Hunger, Extension Wheat Pathologist

**Correction**: In my last update, I indicated Prosaro® (Bayer CropScience) as the only fungicide labeled for application at a growth stage (GS) later than full head emergence (GS 10.5). Caramba® (BASF) also is labeled for application through GS 10.5.1, which is the beginning of anther emergence (flowering). Sorry for the omission.

Rain over the last week was extremely beneficial to wheat across Oklahoma, with the cool, cloudy and wet weather also serving to slow down wheat progression. Wheat around Stillwater is basically at flowering. Gary Strickland (Extension Educator; Jackson Co. in SW OK) indicated wheat in his area experienced some hail damage, and Greg Highfill (Extension Educator; Woods Co. in NW OK) indicated that although not widespread, he has seen a bit more freeze damage than expected. Overall though, my impression is that freeze damage is minimal.

**Freeze damage on wheat in NW OK. Photo credit Greg Highfill.**

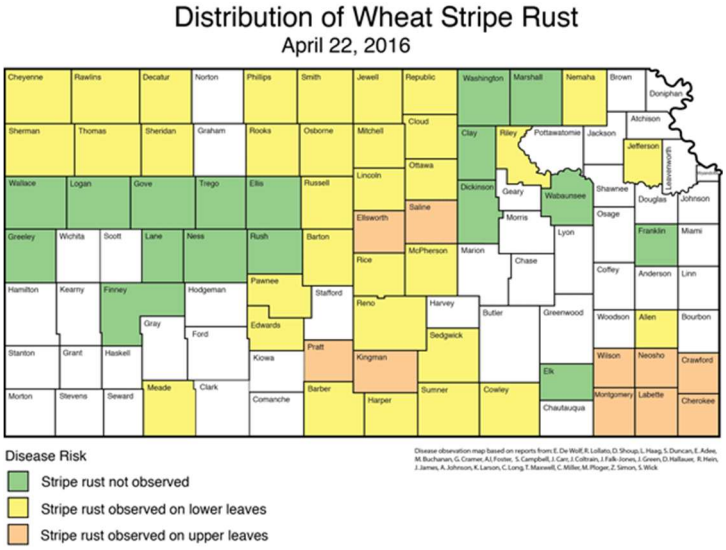
Cool temperature and rain also will facilitate foliar disease development. Especially over the last several days, there has been extended periods of dew on wheat, which provides an optimum environment for increasing foliar diseases. As temperature now rises, leaf rust should become more common. In fact, reports from Texas (see below – "Reports from Other States") indicate increasing leaf rust in Texas. Brian Olson (Senior Agriculturalist OSU) spent yesterday rating breeder lines here at Stillwater. He reported seeing some active stripe rust, but increasingly more powdery mildew, leaf rust, and barley yellow dwarf. Dr. Brett Carver (OSU Wheat Breeder) reported much the same at the Pasture Research Center near Marshall, OK (about 30 miles west of Stillwater). However, stripe rust is still active as indicated by the photo below from J. Wes Lee (Extension Educator; McClain Co. in central OK).

**Stripe rust sporulating on wheat in central OK. Photo credit J. Wes Lee.**


**Texas**: Taken from the USDA Cereal Rust Bulletin (Report No. 2; April 20, 2016): "Wheat leaf rust increased rapidly in plots at Castroville in south Texas and Baton Rouge in southeastern Louisiana. Dry conditions from Oklahoma into Nebraska likely limited leaf rust development there, but recent rains will be conducive for new development."

**Texas:** Dr. Clark Neely (Small Grains & Oilseed Extension Specialist, Texas A&M AgriLife Extension, College Station); April 15, 2016: "With regards to wheat stripe rust, leading up to this past week I was observing numerous teliospores around central and south Texas indicating that the stripe rust was shutting down; however, Texas received a significant round of rainfall this week with much of the state predicted to receive between 2 and 7 inches over the next 7 days. I would anticipate some reactivation of the stripe rust in areas where it was declining and continued infection in northern/western regions that are just now seeing it. There was a recent report from Dawson County, TX (western TX) which cited heavy stripe rust pressure. Until now stripe rust pressure has been limited in this part of the state."


**Kansas:** Drs. Erick DeWolf/Romulo Lollato (Extension Wheat Pathologist/Wheat & Forage Specialist, Kansas State University); Apr 22, 2016: "Reports of wheat stripe rust continued to roll in this week. The disease was already established in many parts of south central and southeast Kansas. Stripe rust has moved to the upper in some fields within these regions now. This movement to the upper canopy is important because these leaves contribute the majority of the energy used to make grain. The other key update comes from western Kansas where the disease was reported at low levels this week. The first reports came from irrigated fields but a few dryland fields were subsequently found to have stripe rust also."



# New Mobile App for Plant Diagnostic Sample Submission

Rick Grantham, Director, PDIDL and Jen Olson, Plant Disease Diagnostician

The Sample Submission app allows farmers, gardeners, landscapers, arborists, agricultural specialists and others to submit digital photo samples to a university plant diagnostic lab for diagnosis or identification. The app contains sample submission forms for plants ranging from small houseplants to large-scale agronomic crops. The user completes each form by responding to simple, customized questions. After entering a description of the problem and attaching corresponding photos the sample submission is sent to the selected diagnostic laboratory. This app was originally designed and used by eight states but Oklahoma and PDIDL have now been added to the list of plant and insect diagnostic labs.

The android version must be downloaded directly from Dropbox link below. You can either open the file from your phone or tablet or download the file to your PC and then move it to a folder on your device. Then open the file from the device's file system (typically in "Apps -> My Files"). Depending on your device's settings – you may have to give permission to allow installation from sources other than the Google Play store.

https://www.dropbox.com/s/vdddr5yt5hj14av/app-debug.apk?dl=0

Once the app is installed on your device (for either system) you will need to complete the "Selected Lab", "Submitter Information", and view the "Tips for Taking Photos" sections.

We will let you know when the version for iPhones or iPads is updated to include OK. When available – it may be downloaded from the iTunes Store, search for "Plant Diagnostic Sample Submission" and choose which device you are using. Here is a link to the app @ iTunes Store:

https://itunes.apple.com/us/app/plant-diagnostic-sample-submission/id669269520?mt=8

You are then ready to begin using what we hope will be a useful tool for submitting digital samples when not in the office.

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

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