Pest e-alerts

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Vol. 15, No. 10 http://entoplp.okstate.edu/pddl/pdidl **Apr 4, 2016**

Wheat Disease Update

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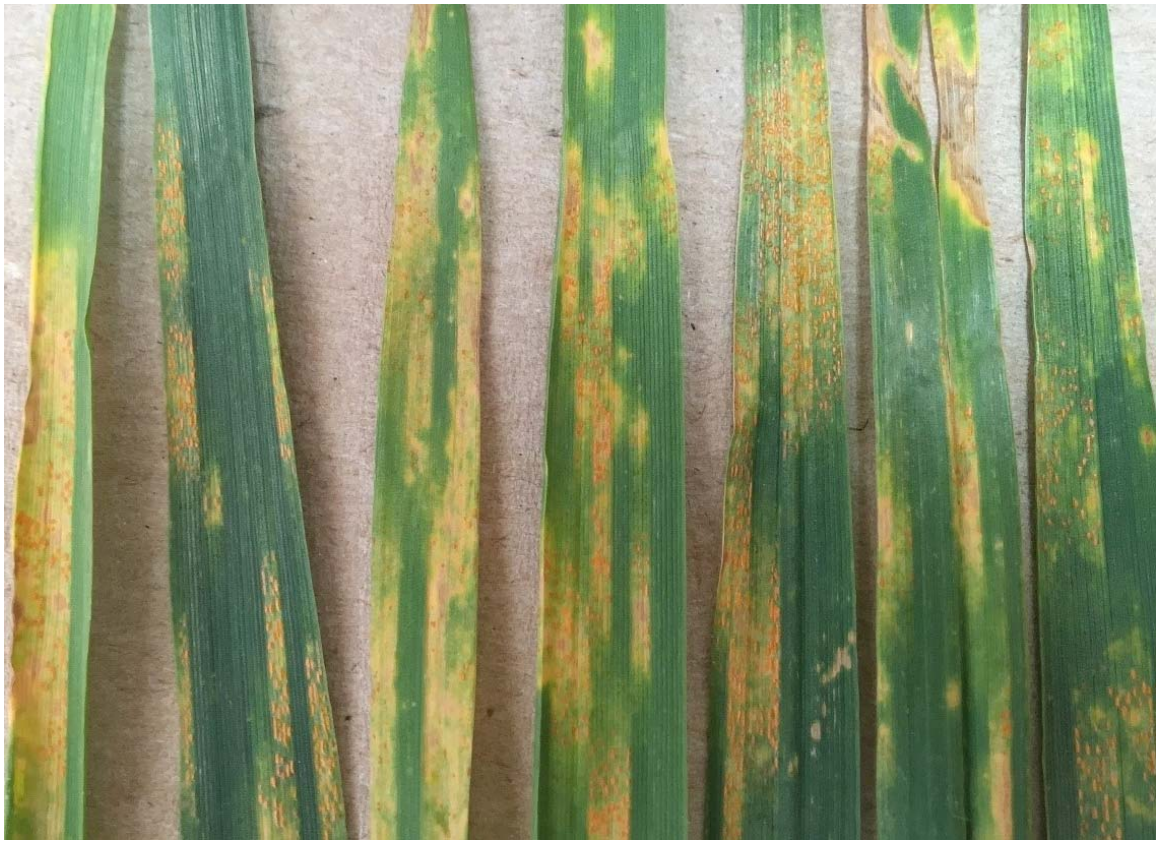
Wheat has advance in maturity across OK this past week flag leaves definitely are emerging around Stillwater. From reports I've received I believe across the state wheat ranges from flag leaves emerging to heads starting to emerge (although wheat in far northwest OK and the panhandle may not be quite as far along). I didn't hear specifics but was told that freeze damage has been observed around Kingfisher in central OK. With frost/freezing temps again last night, additional damage is possible. Drought, although not as bad as last year, also is creeping back into the picture. One producer from southwestern OK indicated to me that "leaves are rolling-up at 2 o'clock in the afternoon." I didn't see any wheat that looked stressed, but in several locations had to dig 4" or more to find moist soil.

In my trips this past week to central OK (Watonga) and to more north-central OK (Blackwell), I could find stripe rust, but it doesn't appear to me that it had advanced (become more severe). In fact, Zack Meyer (Extension Educator; Kingfisher Co.) sent me a photo that shows the telial spore stage of the stripe rust fungus forming on wheat leaves. Look closely at the photo and you can see minute yellowish-orange pustules of stripe rust also present on the leaves (especially the greener leaf). The telial stage is considered more of a survival spore stage and indicates that stripe rust is encountering unfavorable conditions and starting to shut down. Although this is good news, stripe rust can quickly "reactivate" if favorable temperature and moisture are resumed.

Unfortunately there also is a lot of active stripe rust still in the state as I have had numerous calls from across OK to discuss spraying options, and Greg Highfill (Extension Educator; Woods Co.) sent me a photo showing moderate/severe and active stripe rust on wheat in northern-central OK.

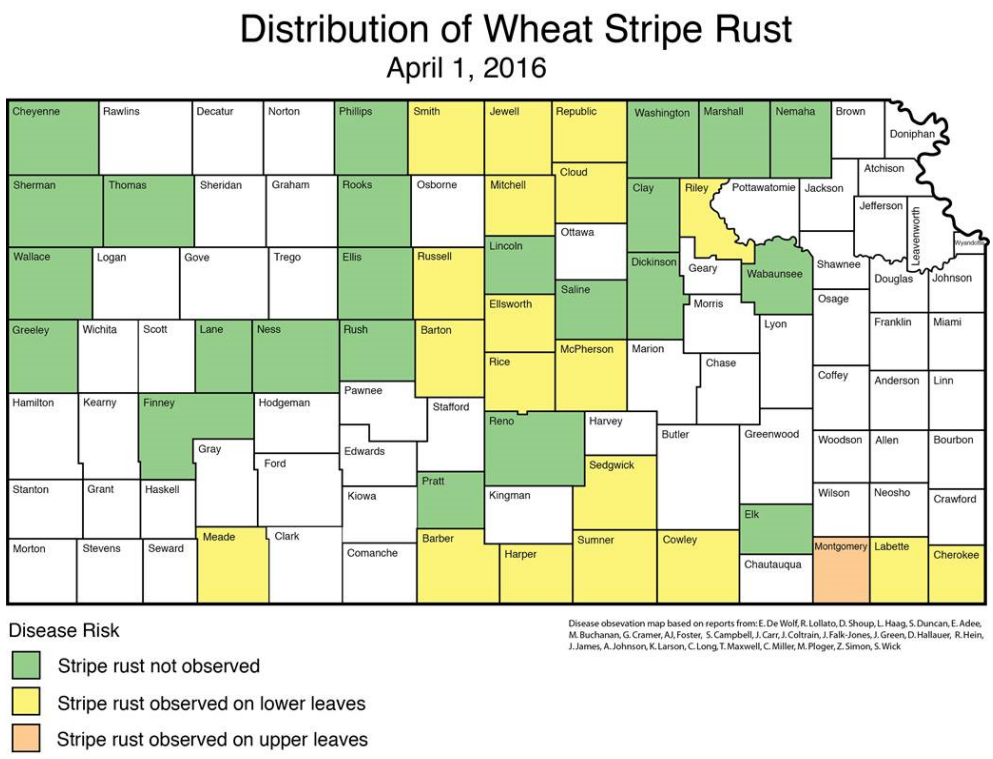
Telial/uredinial pustules of the stripe rust fungus. Photo credit Zack Meyer.



Stripe rust in Woods Co. Photo cedit Greg Highfill.

Kansas: Dr. Erick DeWolf (Extension Plant Pathologist; Kansas State University; Manhattan, KS); Apr 1, 2016: "The Kansas wheat crop is progressing rapidly through the jointing stages of development in much of the state. Wheat in the Southeast portion of the state is at or fast approaching flag leaf emergence. The crop is generally considered to be two or three weeks ahead of schedule.

Scouting reports indicate that stripe rust is becoming established in the 2016 wheat crop. This past week, stripe rust was reported in many counties in central and eastern Kansas. The disease is still at low levels in most fields with a few exceptions in Southeast Kansas. This early establishment of stripe rust increases the risk of severe yield loss and growers should continue to monitor the situation carefully. If weather conditions become favorable, the disease could spread rapidly from the lower leaves, where it is now established, to the upper leaves that are critical for grain development. Leaf rust is still active in the western tier of counties bordering CO but remains at low levels in most fields. Powdery mildew is severe in some fields in central and eastern Kansas."



Nebraska: Dr. Stephen Wegulo (Professor/Extension Plant Pathologist; University of Nebraska-Lincoln, Lincoln, NE); Mar 31, 2016: "Yesterday March 30, 2016: Jennifer Rees, UNL Extension Educator, found trace levels of actively sporulating leaf rust in wheat fields in Nuckolls Co. in south central Nebraska. Nuckolls Co. is in the southernmost tier of counties that border Kansas. She did not find actively sporulating stripe rust; however, in one field there was

evidence of stripe rust that was active last fall."

Colorado: Dr. Kirk Broders (Assistant Professor; Colorado State University; Ft. Collins, CO); Mar 29, 2016: "As I mentioned last week stripe rust is now present in eastern Colorado with a confirmed report of stripe rust in the Prospect Valley region northeast of Denver. We have received several reports of stripe rust from that same region. This past week was windy with some precipitation in this area of Colorado, so spores were spread but there was limited moisture to promote additional infection. There is rain in the forecast for this coming week and the rain is certainly needed for the wheat, but also will provide a favorable environment for stripe rust to increase because temperature is supposed to be staying in the 50s-70s for the days and 20s-40s at night. If you already have noticeable levels of rust in your field you may want to consider including a fungicide at tillering (GS 4) or when you make your herbicide application. If you do not currently have rust in your fields or in your region, I would recommend waiting until closer to flag leaf and monitor the spread of stripe rust in the state. CSU Extension specialist Wilma Trujillo was able to examine wheat in the southwest part of the state near Lamar, where stripe was present last fall. We examined these leaves and found no evidence stripe rust was able to overwinter in this region of the state. It is still early in the season, but there is certainly the possibility for stripe rust to become a serious problem in the state again this year. There is also the threat of leaf rust we should not forget about. Leaf rust has been present in western Kansas for the last 2 weeks and has likely moved into eastern parts of the state. I have not received any specific reports, but would appreciate your feedback if you have observed either stripe rust of leaf rust in your fields".

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

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.