



Pst e-alerts



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Wheat Disease Update

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On April 6, I traveled a route from Clinton (85 miles west of OKC) in west central Oklahoma going northeast through Custer County to Kingfisher (40 miles northwest of OKC) and then to Marshall (35 miles west of Stillwater). Although there was some good wheat on this route (e.g. the variety trials at Kingfisher and Marshall), it is poised to decline quickly unless rain is received. Most of the wheat I looked at in Custer County northeast of Clinton was small and fields were terribly dry. Wheat in this area seemed to be at GS 6-7 and I'm guessing was planted quite late due to the dry fall. The most common problem I saw were greenbug, especially in Custer County. However, as the photos show, there were many mummies present indicating the population should be crashing shortly. I also saw some stripe rust but only an infection here and there. Around the variety trial at Kingfisher, wheat was mostly around GS 9 and I saw no aphids or disease. At Marshall, wheat was at GS 8 and there was some stripe rust but at a low incidence.

On April 7, I traveled to Frederick in south central OK looking at wheat along the



way. At a variety demo 20 miles west of OKC right at I-40, I found the wheat at GS 8 with just a little touch here and there of stripe rust. Soil moisture here looked good; this area must have caught a decent rain in the last week or so. The same could be said at another variety demo straight south about 15 miles south at Minco. Here the wheat in the field surrounding the demo was at GS 9, there was good soil wetness, and the wheat looked good. I did not see any rusts or powdery mildew, but there were occasional BYD spots. Further southwest near Apache (30 miles north of Lawton) wheat was at GS 9-10 and looked very good in the variety trial as well as in fields. However, some leaves were beginning to roll and the need for moisture to continue the crop was evident. I didn't see any aphids or diseases in wheat west of Apache, but in the variety trial just south of Apache I found some stripe rust and greenbug; both at a very low incidence.

The rest of this trip was spent with Aaron Henson (Extension Educator, Tillman County) and Mark Gregory (Area Extn Agron Spec – SW Oklahoma) looking at wheat in Tillman County. Wheat in this area was mostly at GS 9-10 with awns occasionally just emerging from the boot. Some fields we visited were dry and impacted by drought, while others looked good but needed another drink soon. A few fields were outstanding and had good soil moisture. One field in particular was the best wheat I have seen since 2012. It was a field of Ruby Lee that was at GS 10 and had been sprayed on 15-Mar because of reports of severe stripe rust in the area and in northern Texas to the south. A 20 ft strip of unsprayed wheat was left on the outside of the north and west side of the field because of power lines and wind. This strip served as an excellent control to indicate the effect of the spray. The line between sprayed and not-sprayed was visible from the road and even more evident in the field (see below).



Stripe rust - note yellow cast to wheat in foreground that changes to deep green in background (as indicated by the dividing arrows in the image).

Within the not-sprayed strip, flag leaves were green with leaves beneath the flag hit hard with stripe rust (see photos). The field was sprayed a second time on 05-Apr because it has such good potential. Leaves in the sprayed area are completely green. I have difficulty explaining the complete lack of stripe rust on the flag leaves in the not-sprayed area. Likely the flag leaves were not yet emerged at the time of the first spray and then conditions after spraying did not allow spread of stripe rust to them. However, in talking to Aaron and Mark it seems there were conditions after the 15-Mar spraying that would have been conducive for spread of stripe rust. At any rate, this is an excellent example of how a timely spray did a tremendous job of protecting yield potential.



Other diseases observed across the Oklahoma include wheat streak mosaic, which has been detected in samples from several places including around Stillwater and from Noble County just north of Payne County (where Stillwater is located). However, I have not received indication yet of severe WSM; part of this may be related to the drought in western OK where WSM is

typically more common. Recently samples from northwestern OK are beginning to come into the diagnostic lab, but results from some of those samples are still pending.

Update: I also wanted to mention that Dr. Jeff Edwards and I just completed an update of CR 7668 – Foliar Fungicides and Wheat Production in Oklahoma – April, 2015, available via PODS at: <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-4987/CR-7668web.pdf>



Texas: Dr. Charlie Rush (Professor, Texas A&M AgriLife Research, Amarillo) 3-Apr-2015: “I haven’t checked all fields as closely as those around Bushland but there are a lot of GB and Russian wheat aphids as well as bird cherry. Russian seems predominate in my fields. We sprayed last week but will likely sustain significant yield loss from not spraying earlier. I suspect we’ll start getting lots of calls and samples that end up being BYDV, although some WSM is also showing up. Mild winter with more moisture than last few years has resulted in a crop that has looked very promising up to now but without good subsoil moisture what we had in the upper layers of the soil profile is disappearing fast and obvious symptoms of drought are beginning to appear.”

Plant Disease Corner - April

Jen Olson, Plant Disease Diagnostician

Cedar-Apple Rust (C.A.R.):

Will ‘Christmas in April’ be celebrated in your area this year? We’ve had a few phone calls and emails from Tulsa County regarding cedar-apple rust (C.A.R.). If you have recently had a good rain event in your area, expect to see the galls on eastern red cedar (left). You may also see stem galls that are caused by other rust diseases, but these are less common (next page). The fact sheet [EPP-7611 Cedar-Apple Rust](#) was recently updated and includes high quality images. When the galls are present, susceptible apple, pear, quince and hawthorn trees should be treated with fungicides. Review E-832 Extension Agents’ Handbook of Insect, Plant Disease, and Weed Control for labeled products.

If you see C.A.R. in your area, please drop us an email or picture. This will help us better determine distribution of this disease.





Swollen branch galls on this juniper are caused by a rust fungus related to cedar-apple rust.

Pine Problems:

Drought continues as the primary cause of pine tree decline. However, two diseases caused by fungi are prevalent at this time. They will both initiate new infections this spring. If you have producers that have had on-going problems with Diplodia tip blight or Dothistroma needle blight, they should apply chemicals soon. Two new fact sheets ([EPP-7330 Diplodia Tip Blight and Canker of Pine](#) and [EPP-7331 Dothistroma Needle Blight of Pine](#)) are available and they outline management for these fungal diseases. Products containing copper hydroxide should be applied to prevent new infections. Applications for Diplodia tip blight are generally made in April to protect new needles as they elongate. Applications to protect against Dothistroma needle blight are made in May or June. It is also helpful to remove and discard diseased branches, and rake up and destroy fallen needles.

Even if clients have large trees, it is beneficial to treat the lower branches. The diseases are often most severe around the base of the tree due to reduced air circulation and increased humidity.

FYI, Mike Schnelle, Eric Rebek and I are holding a workshop on pine tree problems on May 14 at OSU-OKC. The workshop will be available for in-service credit. Please consider attending, especially if pine problems are common in your county.



Younger needles are stunted and a large area of this pine tree has damage from Diplodia tip blight.
Diseased needles and branches should be removed by pruning.



The discoloration on the pine needles is due to Dothistroma needle blight.

Ponder this:

I took this image of spinach in my garden. Note that most of the plants are normal and healthy, but one plant looks different. It is disfigured and discolored. When a plant looks unusual and it is surrounded by healthy plants, the 'sick' plant should be removed and discarded in the trash. If left in place, it may be a reservoir of a pathogen and it could spread to nearby plants. In my husband's words 'I wouldn't want to eat that anyway!' This is something to keep in mind as you visit landscapes and gardens this spring.



Garden spinach with one unusual 'sick' plant and many healthy plants.

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

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