



# Pest e-alerts



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## Wheat Disease Update

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**Oklahoma:** 21-May; Dr. Bob Hunger, OSU Extension Wheat Pathologist: Wheat across southern and central OK has lost or is quickly losing its flag leaves from a combination of diseases and maturation although some green tissue remains in flag leaves of varieties with resistance to stripe and leaf rust, barley yellow dwarf, or in wheat that was sprayed with a fungicide. Around Stillwater the wheat is in the late mild to soft dough stage. This past week weather across OK was wet and cool, but starting

yesterday sunny, warm-to-hot temperatures, and wind will quickly advance the crop. Tomorrow I and two graduate students are headed for the panhandle so I'll report on that area of the state the middle of next week.

Over this past week, samples have continued to come into the Diagnostic Lab with root rots including take-all, sharp eyespot (*Rhizoctonia*) and to lesser degree, dryland root rot (*Fusarium*). Although cool and wet to this point, neither I nor the lab has yet received any samples or reports of *Fusarium* head blight (scab) or of stem rust.

**Arkansas:** Dr. Gene Milus, Wheat Pathologist, University of Arkansas: "End-of-season disease situation: March and April generally were favorable for wheat and unfavorable for diseases. The one exception was stripe rust on susceptible and very susceptible varieties in some areas of the Arkansas River Valley and Southwest Arkansas. Delta wheat growing regions were not impacted by stripe rust most likely because the rust fungus did not overwinter there and stripe rust could not get an early start when conditions were favorable. The stripe rust epidemic is over, and no further spread or damage is expected.



Crop maturity will limit the development of diseases south of I-40. Leaves and stems of wheat near Stuttgart have matured, but grain is still only in the soft dough stage. These plants seem to have matured too early and may produce grain with low test weight. Some varieties near Lonoke have matured, and others are not far behind. Fields of Roane and Beretta near Biscoe and plots near Newport appeared to have another week of grain filling yet. We need dry weather between now and harvest.

Leaf rust has increased quickly in plots at Newport in Jackson County. Susceptible varieties include Progeny 185, 26R22, Dixie 454, Delta King 9577, Croplan Genetics 8302, Roane, Progeny 166, and Oakes. Low levels of leaf rust were present at Lonoke and Biscoe. Conditions are still favorable for leaf rust, and there appears to be a lot of spores blowing around.

Stagonospora leaf blotch is prevalent at Newport, Lonoke and Biscoe but is confined to the lower half of plants in most cases. In a few cases, lesions were on flag leaves and glumes (glume blotch). Leaf and glume blotch will continue to spread with rain or dew.

Head blight or scab was found at Newport, Lonoke and Biscoe, but the incidence was low – one in a thousand heads or less in most cases. Scab will continue to increase with rain or dew.

Plants with barley yellow dwarf matured earlier than nearby healthy plants and likely will produce shriveled grain. Although barley yellow dwarf is widespread, the incidence and severity are low compared to some previous years.

Bacterial streak, common root rot, and take-all were found, but only common root rot appeared to be serious in one field near Biscoe.

It is way too late to apply any fungicide now, but Prosaro or Caramba fungicides that were applied near flowering should reduce the incidence and severity of scab as well as any leaf rust, leaf blotch or glume blotch that may develop between now and harvest. Other fungicides such as Tilt, Quadris, Stratego, or Headline are not effective on scab but are effective against leaf rust, leaf blotch and glume blotch.”



**Kansas:** 21-May; Dr. Erick DeWolf, Plant Pathologist, Kansas State University: “Stripe rust remains a significant threat in Kansas. I have been surveying in parts of South Central and Southwestern Kansas this past week. Parts of these regions near the Oklahoma border have been extremely dry this spring and many growers are reporting thin stands and expect below average yields. As one

progresses north into central Kansas, the optimism about crop yields improves. The growth stage of the wheat in this area is highly variable with most fields in the early stages of grain development, but a few fields have just completed flowering. Stripe rust could be easily found on the flag leaves in most fields. The incidence of disease on these upper leaves ranged from trace to more than 20 percent. Severity is generally less than 10% at the current time.

Reports from Northeast, North Central and Northwestern Kansas indicate that stripe rust is very active in these regions of the state. I have received a small number of reports of severe stripe rust in fields in North Central and Northwestern Kansas. Severity of stripe rust in these problem fields exceeds 30 percent. The wheat in this area of the state has been heading or flowering this week. Stripe rust is likely to cause severe yield loss in Northern Kansas, and many growers have attempted to reduce potential losses with fungicides.

Nearly all varieties with Jagger in the pedigree appear to be moderately or highly susceptible to stripe rust now. Preliminary observations suggest that Jagger, Jagalene, Fuller, JackPot, PostRock, Santa Fe, Hitch, Smoky Hill, Shocker, Danby, Art, Overley, Protection and Hawken should be considered vulnerable. Some varieties with known susceptibility are also affected including: TAM 112, 2137, Above, and Ripper.

Varieties that appear to have moderate or high levels of resistance to the new races of stripe rust include TAM 111, Armour, Aspen, and Hatcher. The variety TAM 111 is very popular in Western Kansas and this resistance should help reduce the potential yield losses in this region.

Only low levels of leaf rust have been observed in Kansas to date. No reports of stem rust.

**Nebraska:** 19-May; Dr. Stephen Wegulo, Plant Pathologist, University of Nebraska: "Stripe rust is now widespread in south central and southeast NE. Incidence and severity range from trace to nearly 100% depending on the field. Some fields have a lot of stripe rust whereas in some nearby fields there is none or very little.



Yesterday I surveyed fields in Webster and Nuckolls Counties in south central NE. I found a dramatic epidemic of stripe rust in one field in Nuckolls County (see images). The field has what looks like three different cultivars with one cultivar very susceptible and the other two cultivars moderately susceptible to moderately resistant. I did not find leaf rust in the fields I surveyed. The wheat in all the fields I surveyed was at the heading stage but not flowering yet, or just starting to head."

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