



PLANT DISEASE AND INSECT ADVISORY

Entomology and Plant Pathology
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Wheat Disease Update Bob Hunger, Extension Wheat Pathologist

Reports of wheat diseases were mostly lacking in September and most of October, but over the last couple of weeks there have been a couple of reports in which you may be interested including seedling root rots (and possibly nematodes), and leaf rust.

Wheat leaf rust: Although I have not noticed any leaf rust (Fig 1) on wheat around Stillwater, just this week I received a report of fairly severe leaf rust in Grady County. Southern Oklahoma has received more moisture than northern Oklahoma, so I would suspect that this is not an isolated occurrence in southern Oklahoma. This was in a field of early planted (about September 1) Jagger, which is susceptible to leaf rust. For the most part, controlling leaf rust on wheat in Oklahoma in the fall is of questionable economic return and is not recommended. Grazing will help to reduce the level of rust spores (inoculum) in the field, and as colder temperatures set-in, spread of the rust from infected to healthy (new) leaves will be greatly slowed. As the older leaves die and new infections are inhibited, there should be a break in the infection cycle and a significant lowering of the rust incidence. The major concern here 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 in the spring. Hence, monitoring of these fields next spring is recommended to see if application of a fungicide to control the rust is indicated.

Seedling root rot: Seedlings of wheat from a field near Marshall, OK were examined about two weeks ago that showed symptoms of common root rot as indicated by darkening of the sub-crown internode (Fig 2). The fungus that causes common root rot was isolated from this diseases tissue (Fig 3a and 3b). Swollen and stubby roots also were common on these samples, which could indicate low pH or possibly nematodes. However, low pH has been ruled-out so nematodes may have been a problem in this field.

Elsewhere around Oklahoma: Rick Kochenower (Agronomy Area Research & Extension Specialist) indicated that he has not seen any indications of rust or other diseases on wheat in the panhandle, which agreed with Roger Gribble's (Area Extension Agronomy Specialist) assessment of wheat across north-central Oklahoma. Mark Gregory (Area Extension Agronomy Specialist) across southern/south central Oklahoma also indicated no major disease occurrence, but did indicate that with the greater moisture across southern Oklahoma he was not surprised that some rust was beginning to be seen.



Fig 1. Pustules of Leaf Rust on seedling wheat.



Fig 2. Darkening of the sub-crown internode of wheat plants due to Common Root Rot.



Fig 3a, b. Views of the fungus *Bipolaris sorokiniana* growing from and sporulating on a piece of infected wheat root. This fungus causes Common Root Rot.

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