



PLANT DISEASE AND INSECT ADVISORY

Entomology and Plant Pathology
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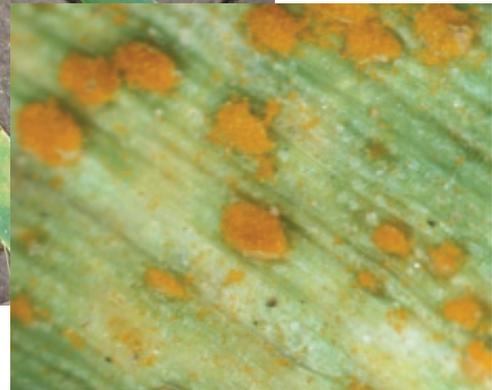
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Nov 10, 2008

Wheat Disease Update

Bob Hunger, Extension Wheat Pathologist

Fall infections of wheat leaf rust: Over the last week, I have received reports of severe leaf rust in early planted and volunteer winter wheat in the panhandle and northwestern Oklahoma. As in the past, the question of the need to try to control these fall infections with leaf rust has also been asked. When looking at leaf rust infected plants, the lower/older leaves will be yellowed and covered with rust pustules, but the youngest 2 or 3 leaves should be green and healthy. As temperatures drops through November, the older rust-infected leaves die and new infections are greatly slowed and inhibited. As a result, the infection cycle is broken and the rust incidence on new leaves should decrease and/or disappear. The primary concern with fall infections of leaf rust 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.



To summarize, controlling leaf rust on wheat in Oklahoma in the fall is of questionable economic return and is not recommended. This is not only my conclusion, but also the consensus of colleagues from Arkansas and Kansas. Grazing can help reduce the level of rust spores (inoculum) in the field, and as colder temperatures set-in, spread of rust from infected to healthy (new) leaves should be greatly slowed.

Other disease reports: Several other wheat samples have come in from across the state. Mostly these have been yellow wheat with no clear pathogen/disease associated as the cause. Some spot blotch (caused by *Bipolaris sorokiniana*) has been isolated, but it was only a minor contributor at the most to the yellowing on the wheat. Fusarium also was found in the crown area of one plant, but again, this was not prevalent in the sample and was not contributing to the yellowing in the wheat. All of these samples tested negative for wheat streak mosaic virus, high plains virus, and barley yellow dwarf virus. My conclusion is that much of the yellowing observed has been due to soil moisture/nutrient conditions as Jeff Edwards discussed in the October 30 edition of the PASS Extension Newsletter (<http://www.pss.okstate.edu/extension/>).

Wheat in plots near Marshall, Oklahoma is showing a yellowing or leaf firing, but I cannot associate these symptoms with any disease or pest problems. The roots and soil from symptomatic and non-symptomatic plants were tested for nematodes. Lesion and ring nematodes were found in both with slightly higher numbers in the symptomatic plants and soil. Hessian fly pupae were found on two tillers of wheat in these breeder plots at Marshall, but the incidence of pupae did not indicate that the damage was from Hessian fly. Fertilizer practices and pH also may be involved, and are thought to be the most likely cause.

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

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