



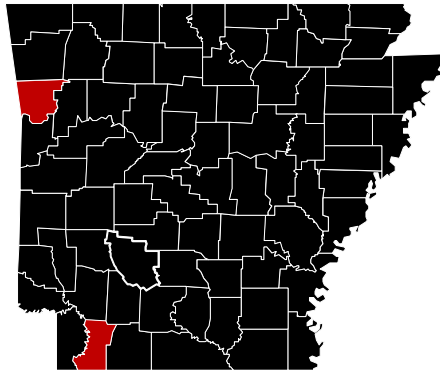
Jason Kelley - Wheat and Feed Grains Extension Agronomist
Gene Milus – Plant Pathologist

March 31, 2011

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Disease situation (Gene Milus). I am not aware of any serious disease threats at this time. Soilborne viruses have been reported from only a few fields. Stripe rust and leaf rust have been reported in Louisiana, but the incidences and severities do not appear high at this time. However, Steve Harrison (LSU wheat breeder) believes that there is a new race of the stripe rust fungus in Louisiana this year. Stripe rust has been found in the southwest corner of Arkansas and at Kibler near Fort Smith.

Locations with Confirmed Stripe Rust as of March 31, 2011



Leaf rust has been found only in a field of hard red winter wheat being grown for seed near Lonoke. This variety appears to be very susceptible to leaf rust and demonstrates the efficacy of leaf rust resistance in adapted soft red winter wheat varieties. Stripe rust and leaf rust spores likely have blown into Arkansas from Louisiana over the past several weeks, and low levels of infection are likely to have occurred across Arkansas. These initial infections may be difficult to find now without rigorous scouting. Septoria leaf blotch and Stagonospora blotch have been found on the lowest leaves near the soil, and can be expected to move up the plant following rainy weather. Powdery mildew was found at low levels on several soft red winter wheat varieties at Kibler, but mildew was more severe on several hard red winter wheat varieties.

Strategies for using foliar fungicides. Given the high prices for wheat, there likely will be greater interest in using a foliar fungicide. It is important to remember that the economic returns for fungicide applications are greatest when varieties are affected by certain diseases and when fungicides are applied in a timely manner. The overall goal should be to keep the flag and flag-1 leaves free of disease for as long as possible. Historically, the greatest returns have been from controlling stripe rust followed by Septoria leaf blotch and Stagonospora leaf and glume blotch. Powdery mildew usually does not develop on the upper leaves, and leaf rust usually develops late in the season. Therefore, the economic returns for controlling powdery mildew or leaf rust

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ARKANSAS WHEAT



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likely will not be as great as for controlling stripe rust, or the leaf and glume blotches. Tan spot should be a concern only where wheat is planted into stubble from the previous wheat crop. Although there are minor differences among the foliar fungicides registered on wheat for efficacy against certain diseases (see accompanying table), all registered fungicides have efficacy against foliar diseases likely to occur in Arkansas. Application timing and rate may be more important than which product is applied. Recently, an additional fungicide (Alto, active ingredient cyproconazole) has been registered for use on wheat. It has been used on wheat for a decade or so in Europe, but little or no efficacy data from the US are available.

The window for applying foliar fungicides in Arkansas ranges from flag leaf emergence (Feekes growth stage 8) to heading (growth stage 10.5) or flowering (growth stage 10.5.1), depending on the fungicide. (See harvest restrictions for the various fungicides in the attached table.) Knowing the disease reactions (See Wheat update 2010 at: http://www.aragriculture.org/News/wheat_update/wheat_update_2010.pdf) and scouting on a weekly basis from flag leaf emergence through flowering are useful for determining if a foliar fungicide is needed and if so, the optimal time for application. Disease thresholds (http://www.uaex.edu/Other_Areas/publications/PDF/MP154/WheatDisThresh.pdf) can be used as a guide for determining the need and optimal timing of fungicide applications for foliar diseases.

The recent availability of Caramba and Prosaro fungicides and a forecasting system allow for suppression of scab (*Fusarium head blight*, FHB) and associated yield and quality losses. Scab is likely to be a serious problem if rainy weather occurs before, during and after flowering, as happened statewide in 1990 and 1991. A few localized, light to moderate scab epidemics have occurred in Arkansas since 1991. Scab severity also is affected by the level of resistance in wheat varieties. Scab ratings for some commonly grown varieties are listed in Wheat Update 2010. To suppress scab, Prosaro or Caramba (see accompanying table) should be applied at flowering growth stage (Feekes 10.5.1). The forecasting model predicts the probability of scab based on weather data preceding flowering stage and is easy and quick to use. I will be sending scab alerts during the next few weeks to keep people informed about the scab situation in Arkansas. You can access the FHB 2011 Risk Assessment Tool (forecasting model), sign up to receive FHB Alerts via email and/or text messaging, and find additional information about scab at www.scabusa.org/.

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