UNIVERSITY OF ARKANSAS
DIVISION OF AGRICULTURE
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ARKANSAS WHEAT

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Crop Status

Jason Kelley

The wet weather over the last few months has really taken a toll on many fields of wheat this year. Fields that are well-drained and have not had flood water on them still look good. However, many fields with poor drainage are going to have considerably lower yields due to excess water. Wet conditions that delayed nitrogen fertilizer applications have also contributed to the reduced yield.

Foliar diseases continue to be a problem in many fields. Stripe rust has been found in most areas of the state on susceptible varieties. Leaf rust has been slow to develop, but appears to be increasing with warmer temperatures. Powdery Mildew has been found at high levels in scattered fields planted to susceptible varieties. Septoria has been increasing and is at higher levels than have been seen for some time. In severe cases, Septoria can be found forming on the flag leaf or on one leaf below the flag leaf. Varieties that have been noted to have high levels of Septoria include; AgriPro Beretta, Armor 260Z, Delta King 7710, Pioneer 26R15, and Pioneer 26R22.

Wheat growth stages vary greatly statewide. Early wheat in southern Arkansas will finish flowering at the same time that wheat remains in the early boot stage in other areas. In most areas, the crop growth stage is two weeks or more behind what it was at the same time last year.

Forecasting Model Available to Predict Scab Epidemics

Gene Milus

Wheat growers can go to http://www.wheatscab.psu.edu/index.html for a user-friendly tool that uses real-time weather data for the seven days before flowering time to predict the risk of Fusarium head blight (scab) epidemics with greater than 10% severity. Predictions are available for at least 12 locations within the wheat-growing regions of Arkansas. The model was developed by researchers funded through the US Wheat and Barley Scab Initiative that receives its funding through the USDA, ARS. Instructions and FAQs are included on the website.

New fungicide available for scab

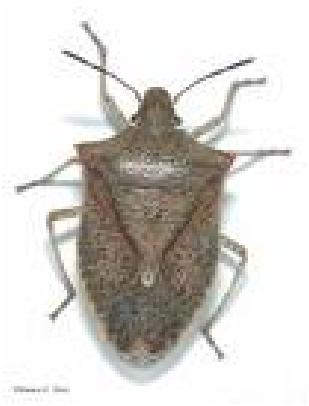
Proline fungicide from Bayer Cropscience has greater efficacy against Fusarium head blight (scab) than other registered fungicides for wheat. However, even with optimal timing and head coverage, Proline only provides “suppression” rather than “control” of scab. Proline should be applied at the rate of 5 fluid ounces per acre when wheat has just begun to flower, but no later than full flowering stage. It is very important to get adequate coverage of the heads because only the fungicide applied directly to heads is effective for suppressing head blight. Ground rigs with nozzles angled forward achieve the best head coverage and about 60% suppression of scab

symptoms in the field and DON toxin in harvested grain. Application by air usually does only a fair job of getting head coverage, and likely will provide approximately 30% suppression of symptoms and DON levels. Proline applied to leaves will control foliar diseases similar to Tilt, but flowering time is a bit too late for optimal control of foliar diseases.
Of the fungicides commonly used on wheat, Tilt and Propimax have some activity against head blight, but not enough to recommend their use for this disease. Strobilurin fungicides (Quadris and Headline) and combinations with a strobilurin fungicide (Quilt and Stratego) are not recommended for application after heading because strobilurin fungicides have no beneficial affect on head blight and actually increase the level of DON in the grain.

Stinkbugs in Wheat

Gus Lorenz, Glenn Studebaker, and Scott Akin

Each year we get a number of questions and calls about controlling stink bugs in wheat. However, if you check the wheat recommendations of various southern states, you will find that stink bugs are not even mentioned as a wheat pest. Still, anyone who has ever harvested wheat knows that the hopper walls of the combine are often lined with stink bugs. Wheat can be damaged by southern green stink bugs and by rice stink bugs, but it takes extremely high numbers of stink bugs to cause significant economic damage. Right now the predominant stink bug in many fields is the brown stink bug, *Euschistis* servus (see picture below). If they behave as they have in past years, they will pick up and move out of wheat in the next week or two and will be replaced with rice stink bugs and some green/ southern green stink bugs.



Brown stink bug

Green stink bug

Southern Green

Rice stink bug

Studies were conducted in the early 1980s looking at thresholds in wheat, using both southern green stink bugs, *Nezara viridula*, and rice stink bugs, *Oebalus pugnax* (see pictures above). They found that the damage caused by both species was similar. They also found that wheat was

most susceptible to stink bug injury when it was in the milk stage, and that wheat was considerably more tolerant of stink bugs once it reached the soft dough stage.

Specifically, they found that infestation levels of 1 bug/10 heads at the milk stage caused significant reductions in germination and kernel weight, but that this same level of infestation at the soft dough stage caused no significant reductions. The threshold of 1bug/10 heads would be extremely high, and as I told you last year, I have never experienced populations in wheat at this level. However, we did have a few fields that actually hit this threshold in a few areas, particularly around the edges of fields next to tree lines. I have reports from Roger Leonard and Angus Catchot, entomologists in Louisiana and Mississippi, respectively, indicating extremely high populations in wheat. My main concern is the infestation of adjacent corn fields. As you may know, stink bugs can be devastating to seedling corn and we sure want to make sure that we are watching corn early for developing stink bug issues, particularly next to wheat where they can get started. Otherwise, don't sweat it ... just realize that wheat is a nursery for developing future potential problems but not worthy of the grower's time and money.

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