



**Jason Kelley - Wheat and Feed Grains Extension Agronomist**

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## **Freeze Damage Update**

Low temperatures were low enough statewide for one night or several nights during April 6-9<sup>th</sup> to cause wheat injury. Temperatures as low as 17 degrees have been reported in producer fields near Ft. Smith to low-mid 20's across much of Northeast Arkansas. In much of East-central Arkansas low temperatures of 26 to 29 degrees were very common with the exception of certain areas of Crittenden County with lows of 23 degrees. Cold temperatures also reached Southeast and Southwest Arkansas. A low temperature of 29 degrees was recorded at the Southeast Research and Extension Center near Rohwer and reports indicate that all of Southwest Arkansas had temperatures at or below freezing.

On Monday April 9<sup>th</sup>, field evaluation and reports from across the state indicated very little visible injury symptoms, however sensitive vegetation such as bermudagrass and johnsongrass were black from freezing weather in many instances.

On April 10<sup>th</sup> many wheat fields were evaluated in Craighead County and wheat plants from Mississippi County. The appearance of these fields were "normal" from a distance, but often had a dull appearance or "something was just not right with the plant color". Upon closer inspection, it became apparent that there was a considerable amount of stem damage in these fields. Low temperatures in these fields were down to 25 degrees one night and upper 20's for two more nights. Most of Northeast Arkansas or where temperatures dropped below 28 may see similar problems.

### **Freeze Damage Symptoms:**

#### **Stem Damage:**

In areas of the state where temperatures dropped to 28 or below, stem damage is a real possibility. The stem damage that is being found has been located between the top two nodes. What will often be found is a soft/rubbery/watery section of stem. This area may up to 2 inches long. Currently there is little stem discoloration, but this will likely become more apparent over time. In fields with stem damage, the head or developing head in the boot can be easily pulled out of the stem. The question is will the heads on these stems produce grain - not likely with the amount of damage that we are seeing. Damaged stems are very weak and bend over as shown below:

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## White Heads

Many fields were headed or in the process of heading when the cold temperatures hit. On Monday of this week, exposed heads appeared normal, but as the week has progressed, heads that were a “normal” green color are now changing color in many instances. Below is a head that was subjected to approximately 27 degree temperatures for two nights. Today it looked yellow and in a few days it will be white or brown. This head will likely be sterile.



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# ARKANSAS WHEAT



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**Keep in mind the full extent of wheat injury will not be known for several days or weeks. I will have more information on freeze damage symptoms as they become apparent this week.**

**Contact Information:**

Please contact your local county extension agent in Arkansas or the author by email at [jkelly@uaex.edu](mailto:jkelly@uaex.edu), if you have questions or comments regarding the newsletter.

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