



Arkansas Rice Update

Dr. Jarrod Hardke

August 19, 2016 No. 2016-23

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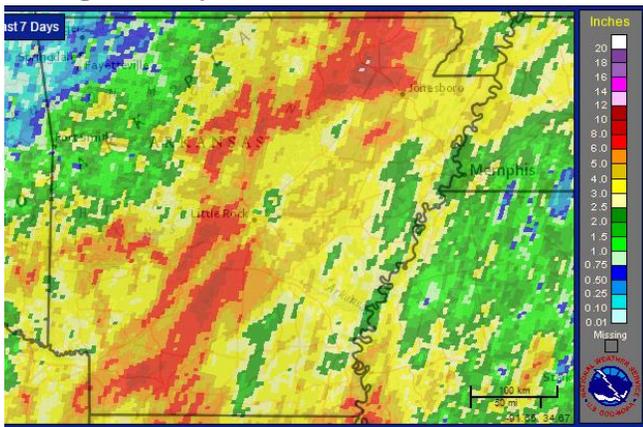
Crop Progress

Hee Haw sang “Gloom, despair, and agony on me...” That line unfortunately fits around the Arkansas Delta these days for rice and other crops. Many growers speak of their rice these days as though they’re watching a funeral procession, not a march toward harvest.

Northern Arkansas – primarily Lawrence, Randolph, and Clay Counties – have been inundated with the most rain over the past week (Fig. 1). Heavy rains there and further north into Missouri has led to severe flooding. I would estimate that 20,000 rice acres are currently underwater due to flooding.

The Black and Current Rivers are the primary issue but remember all points drain to the White River that runs through the heart of the Delta also. When all is said and done there is the potential for up to 100,000 rice acres to be affected by flooding in some way.

Fig. 1. 7-day rainfall totals for Arkansas.



Officially only 2% of the rice crop had been harvested when these conditions hit. A large portion of the crop would have likely been ready to harvest this week and much would have been cut. Instead we will start harvest season off at least 7-10 days behind schedule.

Sprouting of Kernels in Standing Rice At Unprecedented Levels in the State

Despite the flooding (and comments on how to manage that are after this), sprouting is the most widespread concern this week. Seeing sprouted kernels in lodged rice isn’t a big surprise, but we have kernels sprouting in standing rice in virtually every field that has been checked over the past few days.

Fig. 2. Sprouting rice kernels on a panicle.



Why is the rice sprouting on the panicle?

Three factors are at play for this to happen which are really unprecedented at this time of year. We have 1) kernels near harvest moisture, 2) warm temperatures, and 3) sustained moisture for 2-3 consecutive days.

What do I do about it?

The immediate answer is that there is nothing you can do at this point. The goal is to get the crop out of the field as fast as we can and get it dry. Be advised that after another rain event this weekend it is supposed to get cool and dry (low humidity too) and have a north wind. Grain in the field will dry quickly and try to get away from us.

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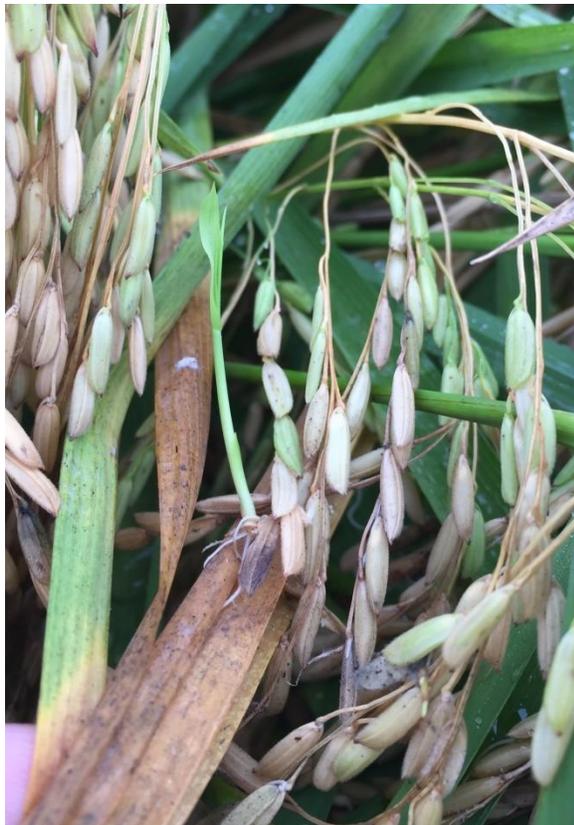
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Considering the use of a harvest aid?

Exercise extreme caution if considering the use of sodium chlorate. Salting rice is a tool – but much like a hammer, it helps when it hits the nail and hurts when it hits your thumb. Under average harvest conditions you want to salt rice at 18-25% moisture and harvest in no more than 4-7 days. But under these ‘never-before-seen’ conditions you need to hold your horses. Salting may stop the sprouting issue, but if the grain moisture is already falling fast due to the sudden dry conditions you could find yourself chasing shattering rice. Don’t trade one heartache for another. Harvest what you can without a harvest aid and when you do decide to use one, do it carefully and sparingly.

Fig. 3. One-leaf rice seedling resulting from a sprouting kernel trying to root down on an adjacent flag leaf.



How will this sprouting affect the yield and quality of my rice?

Most of this sprouting won’t result in a form of direct yield loss. The more progressed the sprouting (larger it is), the more likely it falls off the plant and is lost. This is not the case for most sprouting kernels luckily. Some of the larger sprouts may carry out of the combine though. Sprouts may dry prior to harvest and break off allowing them to make it in the bin.

What this will do is negatively affect your milling yield. These kernels will almost definitely break up severely in the milling process and lower your head rice yields. Your grade likely won’t be affected because unless there is lodging associated with it there should be very little staining.

Don’t co-mingle good and bad rice!

The worst of the sprouting in fields can be found in areas that have thicker, denser canopies that have held moisture longer. These areas are usually around the outside edge of the field where the rice has been double-drilled. If you think this is the case (and yes it can be hard to tell) then you should open up the field and harvest that area first. Keep that rice separate! Don’t ruin good rice by co-mingling it with bad rice. Maximize profit on your good rice!

Fig. 4. Various stages of sprouting rice kernels from standing rice.



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Managing Submerged Rice

As mentioned before, the Black and Current Rivers are reaching out of their banks and submerging nearby fields. Here is the bottom line of the various scenarios we're being presented with and what the outcomes are:

1. Rice needs to escape submergence in 7 days or less. In the 7-10 day range it is hit or miss on what direction the crop will go. At 10 days or more it likely becomes a walk-away situation. Essentially the crop becomes so waterlogged that it will lose its ability to stand itself up, then collapse and rot.
2. Late boot stage rice – if rice is only underwater for a few days, there is some concern that there will be sheath rot leading to limited or no panicle emergence.
3. Green heading rice – should continue developing for a few days. The main concern there is staining and discoloration of the developing kernels (such as with lodged rice).
4. Heading near mature rice – it will be ok for a few days. The main concern is again some staining but also that the kernels will begin to rot after a few days. Sprouting or germination of kernels is also possible.

For all of the growth stages listed the 7-day window applies to maintain a standing and truly viable crop. Once the field has been under to that extent, not only is it important to get the water off but it can also be critical to get fresh water on the field. Yes, I said get the water off and then get it back on – but only if you're not anywhere close to maturity of course.

Fig. 5. Soybeans sprouting in the field.



Fig. 6. Corn sprouting in the field.



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Additional Information

Arkansas Rice Updates are published periodically to provide timely information and recommendations for rice production in Arkansas. If you would like to be added to this email list, please send your request to rice@uaex.edu.

This information will also be posted to the Arkansas Row Crops blog (<http://www.arkansas-crops.com/>) where additional information from Extension specialists can be found.

More information on rice production, including access to all publications and reports, can be found at <http://www.uaex.edu/rice>.

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