



Arkansas Rice Update

Dr. Jarrod Hardke, Scott Stiles, & Dr. Yeshi Wamishu
June 18, 2016 No. 2016-14

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Crop Progress

“It’s not so much the heat that’ll get you, but the humidity.” It may get old hearing it said, but it doesn’t make it any less true. On the upside rice plants are extremely happy these days. Many fields are hitting their midseason stride with good height and color.

The forecast for the foreseeable future up and down the state is low to mid 90s and of course humid. No rain chances to speak of, 10-20% daily to account for summer afternoon pop-up showers. Irrigation efforts will be working overtime. If this level of heat continues throughout July I will begin to have serious concerns about our ability to keep up with irrigation needs on some of our rice acres.

Currently we’re experiencing warmer than normal nighttime temperatures. Some of these have been reminiscent of temperatures that, when they occur during grain fill, result in quality issues. However, there’s not a particular concern for them occurring now – other than to us and our air conditioning bills. Rice plants themselves are very good at cooling themselves and being successful in the heat.

Fig. 1. Progress under beautiful skies.



Potassium Deficiency

Be on the lookout for Potassium (K) deficiency just after midseason. It’s often difficult to properly identify until it becomes severe. However, in varieties the first clue is usually that the rice doesn’t “green up” after midseason N is applied.

Brown spot can appear in K deficient rice but is not a reliable indicator that rice is in fact deficient. Cultivars differ in their susceptibility to brown spot, so the presence or absence of brown spot alone is not a key for K deficiency, other factors must also be present.

K deficient plants after midseason will begin to appear shorter, display yellowing of the interveinal areas of the lower leaves starting from the leaf tip, leaf tips that eventually die and turn brown, and development of brown spot on all leaves.

Fig. 2. Severe brown spot on potassium deficient Jupiter.



A Further Explanation of Midseason N

The reason we apply midseason N to varieties really has to do with us historically not being very good at getting the flood across the field on a timely basis after the preflood N application.

The key is that until more recently very few of our acres had the ability to meet the conditions needed for efficient preflood N

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management. Land improvements and NBPT products like Agrotain have become keys to improving pre-flood nitrogen management.

When we split our N apps between a pre-flood and midseason app, we're applying more total N but making certain the plant has adequate N and we minimize weak areas and airplane streaking.

Traditional wisdom says the pre-flood N is feeding tillers and the midseason N is feeding the panicle and number of grains. In reality the midseason is just making up for whatever we didn't give the plant pre-flood. So if we can put out the plant's needs at pre-flood we're done, and we can do it with 20 units less N than if we use split applications.

If you (1) apply urea + NBPT to dry soil, (2) can flood in 7 days or less, and (3) can hold the flood for 3 weeks, then we recommend you use a single optimum pre-flood N rate. Meaning the pre-flood N rate is increased and you don't apply midseason N at all.

If for whatever reason you do not get adequate N uptake during vegetative growth (not enough pre-flood N was applied, couldn't get the flood on timely and lost some N) you can always come back with a midseason N application and be in better shape with the larger single pre-flood N rate than the two-way split pre-flood N rate.

If you're setting out to apply nitrogen to a variety in a two-way split – again the new recommendation has two components: (1) wait at least 3 weeks since the pre-flood N was incorporated, AND (2) be past green ring (beginning internode elongation). You can wait well past that minimum 3 weeks and you're fine, just don't wait so long that rice starts heading.

For hybrids, there has been evidence that the late boot application can improve stalk strength and milling yield. All hybrid yield needs are met with the pre-flood N application based on

their ability to take up both fertilizer N and soil N very well. DO NOT move the late boot application up to a midseason timing or risk enhancing lodging. If you feel you applied inadequate pre-flood N on hybrid, consider applying a very small amount of N at midseason (25-30 units N) and still make the late boot application.

Disease Update

Seedling Disease Complex

There are still reports of seedling diseases in a few fields from later planted rice. Fields with puddled water (**Fig. 3**) are more prone to seedling diseases if emergence is delayed. Seedling diseases usually occur in patches (**Fig. 4**). In situations where rice seedlings are completely dead (**Fig. 5**), it is recommended to manage diseases in those areas. In cases of seedling diseases caused by *Rhizoctonia* or *sclerotium*, if spot fungicide application is desired (based on the questions we received), strobilin fungicides are preferred over triazoles. Patterns of rice seedling damage often indicate the cause (**Fig. 6**).

Fig. 3. Fields with puddled water are more prone to seedling diseases.



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Fig. 4. Seedling diseases usually occur in patches and may follow the drill lines.



Fig. 5. Fields spots with complete seedling death may follow with weeds.



Fig. 6. Damage by herbicide shows directional pattern.



Hydrogen Sulfide Toxicity

We have seen and also received reports of hydrogen sulfide toxicity symptoms (**Fig. 7**) from a few rice fields with history in a span of two weeks after flooding. If left undetected or unmitigated this problem can cause significant yield loss. When scouting for this phenomenon, pull up a few rice plants from the bay or bar ditch and also from the levee and compare the roots after washing them well. To read more on scouting for hydrogen sulfide toxicity read: <http://www.arkansas-crops.com/2016/06/03/scouting-hydrogen-toxicity/>.

Fig. 7. Hydrogen sulfide toxicity symptom from a field with history two weeks after flooding.



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Market Update

June USDA Supply/Demand

The USDA made only minor changes to the June 2016/17 long grain balance sheet:

- Beginning stocks were increased by 0.5 million hundredweight (cwt) on an upward revision to 2015/16 imports.
- The net result was a 0.5 million cwt increase in 2016/17 ending stocks to 38.5 million cwt. This is a sharp increase above the 23 million cwt ending stocks of 2015/16.
 - The mid-point of the 2016 season-average farm price for long grain was increased 50 cents to \$10.50 per cwt. or \$4.73 per bushel.
 - The 2015 season-average farm price for long grain was left unchanged at \$11 per cwt or \$4.95 per bushel.
 - As of June, the projected 2015 PLC payment rate for long grain is \$1.35 per bushel; medium grain is projected at \$1.22 per bushel.

Long-grain rough rice shipments were poor last week, coming in at the third lowest level of the 2015/16 marketing year. There was one shipment of 1,998 metric tons (MT) to Mexico. However, weekly sales rebounded to the highest level since March 3 on a strong 30,000 MT sale to Venezuela. Thru June 9, long-grain rough rice sales are now 1.28 million MT compared to 1.221 million last year.

Long-grain milled rice shipments were down from the previous week at 13,122 MT. Export sales increased last week to 8,163 MT, with 7,071 MT of the total going to Canada. Long-grain milled rice export sales now total 923,729 MT compared to 1.08 million MT last year. Milled rice sales to Mexico and Colombia are running well below last year.

Increased export sales week-to-week are supportive but a projected 38.5 million cwt. carryout next year is burdensome. In the meanwhile, large speculators are still in charge of commodities. Though small in comparison to their net long position in corn and soybeans, large speculators did have a net long position in rice of 654 contracts last week.

Questions regarding acres and yield estimates will continue to provide plenty of risk premium in grain prices for another 60 days. On June 30 we'll know how many additional rice acres we gained, if any. Prevent plant acres should be low this year. Bottom line, the major crops (corn and soybeans) have substantial risk built into prices. If this has offered spillover support to rice, there will need to be continued justification for the premium. This is especially true considering how much rice ending stocks are projected to grow in the 2016 marketing year.

Last Monday NASS rated the U.S. rice crop at 68% good/excellent compared to 67% the previous week and 69% last year. Arkansas'

Table 1. U.S. Long Grain Rice Supply/Demand.

million hundredweight	2015/16 Estimated	2016/17 Projected
Beginning Stocks	26.5	23.0
Production	133.0	181.0
Total Supply	180.0	224.5
Domestic & Residual	88.0	105.0
Exports	69.0	81.0
Total Demand	157.0	186.0
Ending Stocks	23.0	38.5
Stocks-to-Use %	14.6%	20.7%
Low Farm Price (\$/cwt.)	\$10.90	\$10.00
High Farm Price (\$/cwt.)	\$11.10	\$11.00

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crop was rated 59% good/excellent. Updated weather models for the majority of the growing season were released Thursday. Temperatures are expected to be above normal for the next 90 days. Precipitation is forecast to be normal for the Midsouth.

July US forecast:

<http://www.cpc.ncep.noaa.gov/products/predictions/30day/>

July-Aug

http://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=1

Upcoming USDA reports:

The next USDA supply/demand report is July 12. It will include the acreage estimates from the June 30 NASS *Acreage* report. USDA currently estimates U.S. 2016 long-grain acres near 2.452 million, up 31% from 1.874 million last year.

CBOT Futures Prices:

[Rough Rice Futures Settlements](#)



The DD50 program can be found at <http://DD50.uaex.edu>. Enroll fields now to help with timing most major rice management practices.

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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