

# Arkansas Rice Update

Dr. Jarrod Hardke, Dr. Trent Roberts, and Scott Stiles

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## Crop Progress

Notice that the title has changed from “planting progress” to “crop progress”? It’s about time. No, all of the rice is not in the ground yet, but we’re getting very close. The progress report on Tuesday placed us at 85% planted and the remainder of what will be planted has been going on this week. There will be some late holdouts as there always are – some because of weather and some for other reasons.

Early (very early) acreage distribution numbers from DD50 enrollment indicate that the dominant cultivars being planted this year include RiceTec CLXL745, Roy J, Jupiter, CL151, and RiceTec XL753.

**Table 1** shows the current distribution of our rice crop by emergence date for acres currently enrolled in the DD50 program. **Table 2** shows the projected flood date for rice acres currently enrolled in the DD50 program. A large percentage of rice acres will soon be ready to go to flood and I’ve observed a number of fields around the state already doing so. Still, the majority of rice I have seen is starting to reach past the 3-leaf stage and will not be far from getting there with continued warm temperatures.

While it would have been nice to actually have a spring season rather than going directly from winter to summer, the increased temperatures are just what the doctor ordered to get this crop going in the right direction. Let’s hope the trend continues without going to extremes.

**Table 1. Percent of rice acres emerging during listed weeks of 2013 according to current DD50 enrollment.**

Emergence Date	Percent
April 6-12	0%
April 13-19	6%
April 20-26	19%
April 27 – May 3	17%
May 4-10	27%
May 11-17	17%
May 18-24	11%
May 25-31	2%

**Table 2. Percent of rice acres set to go to flood during listed weeks of 2013 according to current DD50 enrollment.**

Flooding Date	Percent
May 15-21	0%
May 22-28	18%
May 29 – June 4	54%
June 5-11	18%
June 12-18	9%
June 19-25	1%
June 26-July 2	0%

**Picture 1. Time for a flood.**



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There are still areas in the state that are getting rice in the ground both fast and furious. Based on acres enrolled in the DD50 program, the majority of our rice crop appears to be heading toward a harvest date in the range of the third or fourth week of August. If you put a late-season cultivar in the ground at this point, you'll be looking at an October harvest. The odds will not be in your favor.

**Picture 2. Going to an early flood with multiple-inlet irrigation.**



While we are all hoping for a mild early fall, some projections do paint a picture of an active hurricane season which could lead to a difficult harvest after an “eventful” planting season. Yes, “eventful” is a polite way of putting it. While we are behind compared to recent years, I’ve heard a number of growers comment about this year’s weather being more of a return to the normal weather of past years. I think we can

handle that, so long as prices don’t return to the normal levels of years past.

With the majority of our rice acres preparing to go to flood, but also a number of fields in the 2-3 leaf stage looking for some help, this week’s articles focus on pre-flush N applications and current urea prices.

### **Pre-flush Nitrogen Management**

More and more producers are looking to apply early-season N to their rice crops somewhere around the 2-3 leaf stage. What are the benefits of early-season N and are they worth it? Nitrogen applied at the 2-3 leaf stage is often applied as ammonium sulfate (21% N) and flushed in with water that also helps activate post-emergence herbicides. Applications of N at this point in the growing season often result in increased growth, darker green color, and an increase in tillering. Fields that have thin stands or stunted growth are potential candidates for this pre-flush N application to help increase rice tillering and shorten the time until establishment of the permanent flood. Although the benefits of pre-flush N are easy to see, they are often purely aesthetic and contribute little to nothing in terms of increased rice yield. There is no doubt that pre-flush N applied at the 2-3 leaf stage increases growth and general appearance, but the efficiency and cost of this early N may not be worth it.

**2013 Recommended Nitrogen Rates and Distribution for Rice Varieties in Arkansas**  
<http://www.aragriculture.org/crops/rice/Publications/nratetable2013.pdf>

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A few things to remember concerning early-season N applications:

1. Ammonium sulfate is a great N source with little potential for ammonia volatilization losses, but comes at a lower analysis and much higher cost per unit of N than urea.
2. Rice at the 2-3 leaf stage has a very limited root system and very low biomass per acre, therefore it is only able to take up and utilize a small percentage of these early-season N applications.
3. Nitrogen that is not utilized by the plant will undergo nitrification and has the potential to be lost through denitrification following the establishment of a permanent flood.
4. Early-season N applications very rarely result in a significant increase in rice yield (<20% of the time).
5. The majority of soils cropped to rice in Arkansas have sufficient organic matter to supply the sulfur required to produce rice. Sulfur deficiency is only a problem on sandy soils with low organic matter.

Work conducted by Dr. Rick Norman indicated that pre-flush N applications resulted in very low N uptake efficiencies with as much as 50-70% of this pre-flush N being lost. Increasing pre-flush N rates resulted in lower efficiencies simply because the rice plant is too small to utilize more than 7-10 units of N at the 2-3 leaf growth stage. The majority of the N applied above 10 units is lost following the establishment of a permanent flood. In contrast, properly managed pre-flood N can achieve 70-

80% uptake efficiency and is directly related to rice yield. A common statement that is made concerning these early pre-flush N applications is that it “puts my mind at ease” or “I sleep better at night”. Although these statements are true and do carry some weight it is important to also focus on the bottom line. In a world of uncertain economic times and a need for increased profitability in rice production there is no need to throw money at a crop when the data does not justify the need. If you do not have rice with a very thin stand, stunted growth, or are at risk of sulfur deficiency, then you should really consider eliminating pre-flush N applications early in the rice growing season. With more and more focus on economic and environmental sustainability there is little evidence to support this practice on a wide scale. Now more than ever we need to avoid spending money on production practices with no consistent or significant yield impacts or economic returns to the investment.

## State Urea Prices

Retail urea prices in the state continue to drift sideways. A cold and wet spring combined with additional supply has led to a weak urea market. Currently, urea prices are 27% below (about \$200/ton) the price levels seen at this time last year. Shown in the graph, urea prices increased significantly near the end of March 2012.

Along with the planting delays this year and the possibility of lower corn and rice acreage, input dealers are better supplied. Nitrogen imports by the U.S. during the first quarter of 2013 were up roughly 7% compared to the first

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quarter of 2012. All of these factors have helped prevent a repeat of the urea price spike seen last year.

World urea prices have been under pressure in recent months as well. Exports from China have reached record levels and new production capacity has been coming online elsewhere – specifically Qatar and Vietnam. From July 2012 through February 2013, China exported 7.2 million tons of urea, up from 3.0 million tons during the same period the previous season.

Urea prices look very weak for the remainder of the year. Strong exports from China are expected to start in early July when its’ export period opens up. At present, the Chinese urea export tax is 77% until July 1, after that a minimum 2% level will apply until November 1. Urea production in China has continued to increase in 2013 as they have added roughly 20 million tons of new production capacity in the last year. A continuation of this trend also increases the likelihood of significant urea exports from China in the second half of this year.

The current outlook projects a continuation of weak U.S. and world urea prices for the balance of 2013.

**Need Help with DD50 Enrollment? Call or E-mail Me or Your Local County Extension Agent**

If you prefer to enter them yourself, please visit <http://dd50.uaex.edu/dd50Logon.asp>.

**Additional Information**

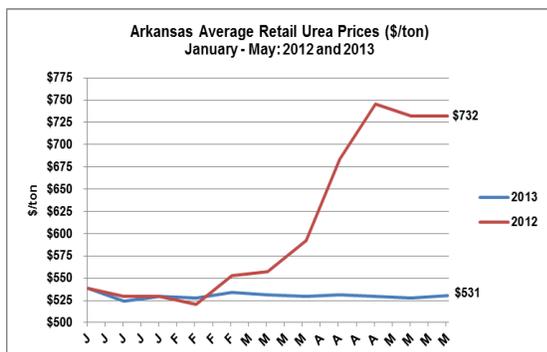
Arkansas Rice Updates are published periodically to provide timely information and recommendations for rice production in Arkansas. If you would like to be added to this email list, please send your request to [jhardke@uaex.edu](mailto:jhardke@uaex.edu).

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

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