Crop Progress

And the roller coaster weather continues. We find ourselves back down into the 70s for a few days before we get back into the 80s and possibly hit 90 next week. If you still have rice left to go in the ground, next week looks like a great time to do it – dry, warm conditions with another decent rain chance next weekend.

Over 80% of rice has been planted statewide with about 60% emerged. What we need most right now are days with light wind to get herbicide applications out on fields that have yet to receive them. Some fields are also ready for a post-emergence application as PRE applications begin to run out. However, current early season problem calls revolve around sickly looking rice that is being slowed by a combination of PRE herbicides that are still working plus cool, wet conditions. Beware of making some herbicide applications while temperatures remain cool as activity may be reduced. Also while the weather is cool, avoid herbicides that may injure rice or make already injured rice worse.

**Figure 1** shows the updated planting progress for 2014 (black line) compared to previous years. The report for last week moved planted acreage to 82% which is above the 5-year average of 77%.

**Figure 2** shows the number of DD50 units accumulated between March 16 to April 30. Generally speaking, you can see a trend over the years for an increase in the number of heat units during this period. Overall the last 10 years have been particularly kind. This year is very similar to 2013, 2008, and a number of years throughout the 90s.

Enroll fields in the DD50 Program here: [http://DD50.uaex.edu](http://DD50.uaex.edu).

Problems or questions: jhardke@uaex.edu / 501-772-1714.

**Figure 1.** Arkansas planting progress by Week of Year, 2008-2014.

**Figure 2.** DD50 units accumulated for the period of March 16 – April 30, 1983-2014.
Picture 1. Seedling death prior to emergence.

Determining Preflood Nitrogen Rates

It is that time of year to start thinking about applying preflood nitrogen (N) to rice. If your rice has been planted recently or has recently emerged I would encourage you to consider taking N-STaR (Nitrogen Soil Test for Rice) soil samples to determine your season total N rate as well as your preflood N rates. N-STaR is the first field-specific N soil test for rice and has been developed for silt loam and clay soils.

Already this season we have seen a large number of fields, especially on clay soils, that have recommended considerably lower N rates than the producer intended to apply. Using the N-STaR program to guide N fertilizer recommendations in rice is a great way to see if you are on track with your N fertilization program or see where you can potentially benefit from lowering your N rates or increasing your N rates and increasing your yield.

For those producers who are too close to flooding and cannot take N-STaR samples please see the attached 2014 Recommended N Rates and Distribution for Rice Varieties in Arkansas. This document can also be found under the Publications tab at the Arkansas Row Crops Blog or on the Rice Production page on the newly renovated University of Arkansas Division of Agriculture Cooperative Extension Service website. This document provides variety-specific “generalized” N rate recommendations for the commonly grown rice varieties in Arkansas.

Major changes to this year’s list are the inclusion of two popular cultivars: RiceTec XL753 and Mermentau. Over the past few seasons XL753 has been a very consistent cultivar with high yield potential. Variety x N trials have indicated that the N needs for this cultivar are similar to CL XL745 and will require 150 total units of N per acre (120 units preflood followed by 30 units at boot) to maximize yield on silt loam soils following soybean in rotation (please see guidelines for N rate adjustments based on soil texture and previous crop). Similar to Cheniere and Cocodrie, Mermentau has a recommended season total N rate of 150 total units of N per acre (105 units preflood followed by 45 units at midseason) and has also shown to be well adapted and have high yield potential.

Another change to this year’s format is the addition of a column that outlines Optimum Preflood N rates for producers who can flood timely and maintain a permanent flood for 3 weeks following flood establishment. The Optimum Preflood N application can allow producers that meet the requirements for timely flood establishment and maintenance to apply all
of their N preflood and eliminate the need for a midseason N application, while saving N fertilizer and maintaining yield potential.

Several cultivars have been removed from the 2014 list because they were either outdated or producers are no longer able to obtain seed for these cultivars. The cultivars that have been removed from the list are CL131, CL162, CL171-AR, CL181-AR, Neptune, Templeton, and Trenasse. If you or one of your producers has planted one of these cultivars and needs guidance on recommended N fertilizer rates and distribution please feel free to contact Trent Roberts (tlrobert@uark.edu) or Jarrod Hardke (jhardke@uaex.edu) for more information.

Please look for future updates which will discuss effective preflood N management in rice.

Picture 2. Rainbow over a rice field after an afternoon rain this week.

Of Diseases and Nitrogen Fertility

Different fields may require different levels of nitrogen fertilizers to raise productive rice. Similarly, nitrogen requirements of cultivars also vary. Unfortunately, more is not good when it comes to diseases. Excess nitrogen is favorable for diseases. It has been proven that excess preflood nitrogen fertilizers can be utilized by disease pathogens and opportunistic soil and seedborne microbes to survive and reproduce more. As a result, pathogens may increase to the point that they could overwhelm susceptible and moderately susceptible cultivars. If other conditions are favorable for the pathogens, resistant cultivars could also be compromised.

In the past few years, it has been shown that using N-STaR recommended nitrogen rates helps to reduce major diseases of rice across the Mid-South on silt loam soils. Prior to that, research showed excessive preflood nitrogen increased how much and how often diseases occurred (such as sheath blight, blast, kernel smut, and false smut). Recent research has also indicated excessive preflood nitrogen increases bacterial panicle blight severity in both susceptible and moderately resistant cultivars.

With late planting, neck blast, false smut, and bacterial panicle blight could be the possible diseases we may encounter the most this year. Sheath blight, leaf blast, and kernel smut could prevail anytime if conditions are favorable. Other stem, leaf, sheath, and panicle diseases and opportunistic fungi such as sooty molds could be intensified with excessive nitrogen.

Dr. Rick Cartwright shared his wisdom saying “If you want to produce lots of kernel smut and false smut, be sure to over-fertilize with nitrogen at the preflood growth stage. This is especially true for CL151, Roy J, and Francis, but works well with most varieties and hybrids” (http://www.arkansas-crops.com/2012/04/17/arkansas-rice-crop-update-for-the-week-of-april-16-2012/). Remember “more is not always better.”

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So far, there are no huge reports on seedling problems across the state. In a few early-planted fields, fungicide seed treatments appeared to be ineffective due to delays in emergence. You should still continue to plant high-quality seed treated with appropriate fungicides and insecticides to minimize seed rotting and encourage emergence. It appears we have adequate temperatures to maintain active crop growth. To read more on management tips to reduce rice seedling disease complex go to http://www.arkansas-crops.com/2014/04/17/seedling-disease-management/.

**DD50 Enrollment**

Some changes have been made to the online DD50 Program this year. Hopefully these and future changes will continue to make the program easier and more efficient to use. If you have any questions, or suggestions for improving the program, please let us know. You can access the online program here: http://DD50.uaex.edu/.

**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.

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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