

Row Crop News

Jefferson County Cooperative Extension Service
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RICE

By Dr. Chuck Wilson, Extension Agronomist-Rice

Planting Dates – With 30 percent of the crop left to plant and the calendar rapidly approaching May 20, we are reaching decision time. Drastic conditions require drastic measures. However, not everyone is in that condition, **YET!** *Table 1*, below, shows estimated yield potential in a given planting window. You can expect about a 10 percent yield loss when planting in late May. The yield loss drops to 20 to 30 percent in June.

Relative Yield Potential	Actual Yield Potential	Seeding Date Range	
		Begin	Cut-off
%	bu/A		
95.0 - 100.0	166 - 175	March 23	May 20
90.0- 94.9	158 - 165	May 21	June 1
85.0 - 89.9	149 - 157	June 2	June 11
80.0 - 84.9	140 - 148	June 11	June 18
70.0 - 79.9	123 - 139	June 19	June 30

Table 1. Predicted relative yield potential for drill seeded rice in central Arkansas by seeding date.

(† Actual yield potential is based on a 100 percent relative grain yield of 175 bu/A at 12 percent moisture.)

In the past, we have provided cut-off dates for specific varieties. We have moved away from those types of recommendations and now provide more general guidelines for late-planted rice. In general, late-planted rice is anything planted beyond **May 10 in Northern Arkansas, May 15 in Central Arkansas and May 20 in Southern Arkansas**. Specific variety recommendations for late-seeded rice (June seeding dates) should be made on yield performance in seeding date studies, disease ratings, seed availability and planned seeding date.

Although specific cut-off dates for each variety are no longer given, some general recommendations can be obtained from planting date studies and disease ratings. Of the current available varieties that have been tested in seeding date studies, *Bengal*, *Jupiter*, *Wells* and the hybrids are recommended for late planting. *Francis* can be added to this list for some growers because it yields very well when planted late. **HOWEVER**, be careful planting *Francis* late in areas where an adequate flood may not be possible. *Francis* is very susceptible to rice blast and this disease tends to be more likely for late-planted rice. I would definitely not plant *Francis* after May 15, if I had any questions about my ability to maintain a good flood.

I have limited data on *Cheniere*, but my limited experience is that it is not as bad planted late as *Cybonnet* or *Cocodrie*. There are certain varieties that historically do not perform well planted late and should be avoided. Examples include *CL 161*, *CL 171 AR*, *Cybonnet*, *Cocodrie*, and all very early season varieties, such as *Spring*. In general, “our best varieties are our best varieties planted late.”

When is the absolute last day to plant rice? Well, it depends. What are your alternatives and how do they compare to June-planted rice? The last day to plant might be June 1, if your alternatives are more economical than rice. However, for most varieties, rice planted after June 20 is very unlikely to mature in the fall. I have planted rice around July 1 a couple of times, but have never gotten it to mature enough to harvest.

Water-Seeded Rice - With all of the wet fields, and more rain currently on the way, many are considering water-seeding to get the rice planted. There are a couple of things to think about if this is something you are considering. First, pre-soaked seed works best. It is easier to plant now than in the past since rice is packaged in the super bags. The seed should be soaked for 24 – 48 hours and drained for 24 – 48 hours prior to flying onto the field. This gives the rice a head start and allows it to germinate in warmer temperatures than in the cold field water. After the rice gets a leaf about one inch long and is beginning to put out roots, the flood should be removed (if possible) to allow the rice to peg down. If the rice is water seeded for stand establishment, it is possible to allow the field to drain down and treat the field as a dry-seed field from this point on. This makes weed and fertilizer management much easier and more effective.

One of the problems with some of these fields is that they are flooded and have no levees. That’s OK for zero-grade fields but not for contoured fields. Without levees in place, it will be difficult to manage the water and may result in significant seedling drift. So while it may be tempting to water-seed these fields, caution should be used.

Nitrogen Management – A few of the early planted fields will soon be ready for pre-flood fertilizer. I have had some questions about cutting nitrogen (N) fertilizer rates since the cost is so high. There are ways to potentially cut N fertilizer but it will be much easier in the near future when a Nitrogen soil test is unveiled. Until then, we have to depend on our current knowledge to determine nitrogen fertilizer rates.

Remember that nitrogen is the fuel. It is the most

important fertilizer nutrient and will have a major impact on yield if not managed properly. Our rate recommendations are based on the variety response to nitrogen fertilizer at different locations and in different years. The recommendation is the average of the lowest fertilizer rate that gives the highest yield. For example, some years it may require 120 pounds N/acre for *CL 171 AR* and some years it may require 150 pounds N/acre to achieve the best yield. The recommendation is 135 pounds/acre (the average of 120 and 150). This should demonstrate the variability and flexibility in nitrogen fertilizer. We also tend to be conservative because we do not want to recommend too much nitrogen fertilizer and cause a lot of lodged rice. With that in mind, I know that many farmers adjust our recommendation based on their experience on their farm. That is the way fertilizer should be applied. However, if growers are interested in cutting fertilizer rates, two things should be considered:

1. **Use Agrotain.** This product has had a major impact on N efficiency for Arkansas rice production. Without this product, nitrogen losses were significant and farmers were always behind when the rice reached mid-season. With *Agrotain*, it is possible to get the kind of fertilizer efficiency that we see in research plots and are less dependent on midseason N.
2. **Look at mid-season N.** If I am interested in cutting fertilizer rates, then I cut the midseason N. I will have little impact on yield if I cut back on midseason N, but I will have a major impact on yield if I cut pre-flood N. The pre-flood N sets the yield and must be done right. Apply to dry soil with *Agrotain*, flood as quick as possible, hold the flood for three weeks, etc. If any of these conditions cannot be met, then the dependency on midseason N will remain high.

If I had my mind made up to reduce nitrogen fertilizer rates, I would probably increase my pre-flood N rate by about 20 pounds N/acre and cut out the midseason. However, I would only do this on fields that have good management capabilities (see previous paragraph).

Rice Research Verification Program – Jefferson County - The zero-grade field was water seeded in *RT CL XL730* at a rate of 30 pounds/acre on April 24, 2008. Water was held on the field for 14 days. The field has now been drained. Rice has pegged and looks good, with emergence established on May 12, 2008.

Upcoming Rice Events

Field Day – July 24 - Southeast Research and Extension Center (SEREC) – Rowher

Rice Field Day – August 13 - Rice Research and Extension Center - Stuttgart

WHEAT

*by Tim Kring, Research Entomologist and
Dr. Gus Lorenz, Extension Entomologist*

Armyworm Management - There have been sporadic reports of true armyworm feeding in wheat this past week. The question is: “Are they really causing any damage?” Armyworms hide primarily on the ground under litter during daylight hours and feed on wheat at night. They feed on the lowest leaves first and work their way up. The first visible symptom is the lack of a lower wheat canopy where the leaves are completely consumed. Look under debris, at the base of plants or in soil cracks to confirm the presence of larvae.

The most important risk factor from armyworms is the developmental stage of the plant at the time of attack. Wheat in the late stage of development (soft dough and later) can be completely defoliated with no measurable loss to yield. However, severe defoliation in the boot stage and in flowering wheat can reduce yields and may warrant treatment. Fortunately, armyworm populations typically build late in the wheat production season when wheat has already reached the later developmental stages.

Arkansas thresholds do not recommend treating wheat once it has reached the soft dough stage, even if plants are completely defoliated. However, in rare situations, armyworm densities may get so large that stem cutting just below the head starts to occur. Obviously, serious yield damage would result in these situations, so fields should be observed closely to determine if head cutting is occurring. **The Arkansas threshold states that growers should “Apply insecticides when larvae are present and head cutting is occurring after wheat has reached milk/soft dough stage.”** This threshold is based on sound research conducted here in Arkansas and much of it under extremely high numbers of armyworms. This threshold has the potential to reduce insecticide costs and save money for growers.

If treatment is warranted, refer to the **University of Arkansas Insecticide Recommendations Guide (MP144)** for the currently labeled insecticides.

Insecticides for armyworms are best applied late afternoon since the worms primarily feed at night.

Watch Neighboring Fields - Fields near wheat that has an armyworm infestation should be monitored for worms in rice, corn, grain sorghum and cotton or soybeans. Armyworms may move from drying wheat fields into the more green and lush crops—walk and look at fields before too much damage is done.

Wheat Diseases – Late Season - Scab or head blight occurs on all small-grain crops and is especially prevalent in humid regions. One or more spikelets on a head appear bleached. If the rachis is infected, the entire head is bleached. Pink or orange mycelium and dark fruiting bodies can be seen with a hand lens. Significant yield losses may result from floret sterility and poor seed fill. *Fusarium* species are the causal agent in nearly all cases of scab. Crop rotation with at least a one year break from cereal and grass cultivation is advised. Scab can be particularly damaging following corn. Deep plowing and seed treatments have also been found to be helpful.



Jason Kelly University of Arkansas Cooperative Extension

Rapid Drydown - There has been a vast change in wheat fields during the past couple of weeks in regard to color changes in fields as grain moves into and beyond soft dough stage. This could bode well for fields where armyworms have entered, but could also hinder complete grain fill if dry down is too fast.

ROUNDUP ON WHEAT

by Dr. Bob Scott, Extension Weed Scientist

In cases of severe glyphosate drift to wheat, the flag leaf will die back and individual spikelets may turn black. Damage to the collar region will result in a reduced flow of plant energy to the seed head. This results in

malformed, damaged seed heads and a significant yield loss.

CORN/GRAIN SORGHUM

Wet Feet – Neither corn nor grain sorghum respond favorably to “wet feet” during the early growth period. Many fields are showing spots due to potholes and standing water this spring.

Even if field levels of nitrogen are acceptable, stunted plants and root systems may not be able to pick up the fertilizer. Temperatures have not been the greatest for any crop and corn is certainly a crop that needs DD60's to grow well. Currently, we aren't getting the level of heat accumulation needed for best growth.

Hopefully, as temperatures increase and plants grow, the “wet feet” look will become more improved. Stunted plants may never grow to the same level or produce as well as unhindered plants.

Extension Demonstrations – Variety Plots – The Jefferson County Cooperative Extension Service has two corn variety demonstrations this year. One set of plots is on the Guenther Farms at Rob Roy Plantation and the other is on Jason Young – Ellis Place south of Sherrill along Hwy 31, where cotton variety plots have been planted in the past. More information on these plots will be provided in later newsletters.

SOYBEANS

Early Planted Beans - Some early-planted soybeans have endured cooler temperatures and have not grown off as well as expected. Some have experienced problems with insects or other feeding damage from slugs. Early planting is out the window now. Growers are into the conventional planting window of May – June or even July for some wheat bean situations.

SOYVA - The U of A Extension Soybean Variety Selection Program (SOYVA) can be a great help to producers needing to plant for specific situations such as rootknot nematode, race specific cyst nematodes or disease approaches like Stem Canker, Sudden Death Syndrome and Frogeye leaf spot. Hook up to the link for SOYVA at: <http://soyva.uaex.edu/default.asp>.

IRRIGATION

Computer Scheduling – Farmers or consultants wanting to maximize irrigation efficiency should use the Irrigation Scheduling computer program (IRRIG) offered by the U of A Extension Service. The IRRIG program is run on Jefferson County Extension variety demonstrations for eligible crops like corn, grain sorghum, soybeans and cotton. Use this link to learn more about the IRRIG program:

http://www.aragriculture.org/computer_programs/irrigation_scheduling/default.asp.



WELCOME BRADLEY (BRAD) PHILLIPS

For those who have not met our new County Extension Agent – Agriculture with row crop duties, we hope you soon will.

Brad Phillips comes to the Jefferson County Cooperative Extension Service with a Masters Degree from the University of Arkansas, Fayetteville, in Soil Science. At one point, he did a little work under Chuck Wilson, Extension Rice Specialist.

Call Brad at 870-534-1033, and get him on your farm soon.

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