

# St. Francis County **Rice News**



July 14, 2008

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**CROP CONDITION AND STATUS** – Our crop is looking good but is still somewhat behind normal.

According to recent estimates, Wells is still the most widely grown variety at about 25 percent of the acres. Clearfield rice is planted on more than 40 percent of the acre, and hybrid rice is planted on more than 20 percent of the acres.

**RICE DD50 PROGRAM** – It is not too late to enroll your fields in the rice DD50 Program. It is available at <http://dd50.uaex.edu>. If you choose to not use the Internet, enrollment cards can be submitted to the St. Francis County Extension office, or call our office at 870-261-1730. This program can be very helpful in time and labor management for your rice crop. It predicts the timing of 30 critical stages and management practices throughout the growing season. These predictions include timing for nitrogen fertilizer application, herbicide timings and cutoffs, midseason growth stages, scouting periods for insects and diseases, irrigation termination, and harvest. To enroll, the field size, variety and emergence date are needed. Farmers are encouraged to enroll all fields, or at least all acres, even if several fields have the same variety and emergence date.

**MIDSEASON NITROGEN** – Several fields are nearing midseason, and some are already past. The recommended timing for midseason is between green ring and half-inch internode elongation.

Midseason fertilizer can be applied anytime between these



growth stages. However, if the crop appears to be “running out” of nitrogen, do not wait to apply the nitrogen. In this situation, apply the nitrogen as quickly as possible. Remember that the hybrids generally require the second application of nitrogen at late boot rather than the normal midseason timing. In our research plots, we do not see a yield or quality difference with the timing of this boot nitrogen. However, we have observed reduced lodging when the nitrogen is applied at boot rather than at midseason.

N Source	Fertilizer Uptake (%)		Grain Yield
	Preflood	Midseason	
Urea	66	80	138
UAN	41	65	120
LSD	3	3	5

We have already received some questions regarding liquid fertilizers as a substitute for urea at midseason in light of the high costs of urea. Several myths help sell these products to growers. One myth is that liquid fertilizers are more efficiently taken up than granular (prilled) urea. This is not true. Our research data shows that granular urea is taken up at about 80 percent efficiency. In comparison, UAN (32 percent N) is only taken up at about 65 percent efficiency.

Even at equal rates of nitrogen, the granular urea is superior to the liquid fertilizer. At reduced rates of nitrogen, which are being sold by some fertilizer dealers, liquid fertilizers are not adequate. Although the cost of urea is at record levels, it is still the preferred source and still the most economical source of nitrogen for rice.

Also, remember that midseason is the critical cut-off date for several rice herbicides. Try to make sure that these fields are cleaned up before the rice moves past half-inch internode.

### **POTASSIUM DEFICIENCY**

Now is the time to start looking for potassium deficiency. This is first noticed after midseason. However, sometimes, textbook symptoms are not evident. It is common to see only increased stem rot and/or brown leaf spot. These diseases typically become prevalent in potassium deficient fields. The best way to remedy these situations is to follow a sound nutrient management plan. This includes soil testing and applying recommended rates of fertilizer, particularly potassium.

Application of potassium fertilizer after the symptoms have appeared may or may not cause the plant to completely recover. The benefits depend on how soon or, more commonly, how late the application is made. As the rice nears the late boot stage, much of the yield potential associated with potassium nutrition is already established. This normally occurs during the vegetative growth stage, similar to nitrogen. Subsequently, late applications of potassium do little to improve the potassium nutrition status of the plant.



As the rice approaches the boot stage, stem rot and brown leaf spot can become severe enough to cause substantial yield losses. While the complete yield potential cannot be re-gained, some benefit may be observed from reducing the impact of these diseases. There has been some interest in applying fungicides to control these diseases. This is an area of current research, and definitive recommendations for fungicides cannot be made at this time.



While Quadris and Stratego do have the ability to control stem rot, two problems must be overcome.

First, limited research suggests that these fungicides must be applied early (soon after midseason) to achieve adequate control. Secondly, getting the fungicides through the canopy and to the stem rot lesions is a problem. This may be particularly true as some of these lesions may be below the water level. Therefore, our recommendation at this time is to take care of the potassium problem.

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