



# Rice Notes

## University of California ~ Cooperative Extension

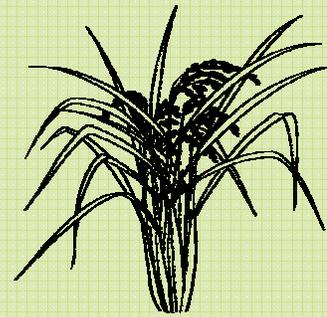
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JULY 2005 ISSUE

### RICE MEETING RICE EXPERIMENT STATION ANNUAL RICE FIELD DAY AUGUST 25, 2005

Registration: 7:30 to 8:30 AM  
General Session: 8:30 to 9:15 AM  
Station Tours: 9:20 to noon

Lunch provided



## 2005 Growing Season

I counted three “planting seasons” this year, early, mid, and late May. All separated with periods of soaking rain and cold temperatures. The problems seem to vary depending on in which “planting season” the field was seeded.

From what I have seen, the early planted fields fared pretty well once they got through a very sluggish stand establishment phase. The mid May planted fields have struggled all season long. The windy, cold conditions during that period in combination with planting and fertilizing into wet soil seriously hampered seedling growth and further complicated by seed drift. Mid May fields often were mottled in appearance due to the application of nitrogen in to wet soil. Many of these fields have yet to produce vigorous growth. Interestingly, M-206 planted during this period has been particularly problematic with slow root and canopy development being fairly common.

The biggest challenge thus far has been weed pressure. There have been multiple flushes of weeds due to the repeated wetting of the soil. This results in apparent lack of control when in fact it can be a new population emerging after the initial herbicide application. Heavy infestations of water grasses, sedges, and sprangletop are present in many fields. Further complicating control is the uneven growth of weeds in the same field. In contrast to a typical growth pattern, in several fields the sedge is more developed in the top check as opposed to the bottom check; the opposite of what is expected. A wide range of development in the weed population hampers herbicide efficacy. The extended drains for herbicides, such as Clincher, also impacts nitrogen management. The volatile loss of nitrogen in a drained field may be substantial but it is difficult to quantify under field conditions. This in combination with wet soil at planting complicates fertility management.

## Nitrogen Management

The adequate levels of tissue nitrogen vary by growth stage (Table 1).

*Table 1. Adequate range of tissue N.*

Growth Stage	% Total N
Maximum tillering	3.6 to 4.2
Panicle initiation	3.2 to 3.6
Flag leaf	2.8 to 3.2

Keep in mind that “more green” does not necessarily translate into higher yields. Field experiments have demonstrated that if adequate levels are present, additional nitrogen application does not improve performance. It will promote lodging, disease, and delay maturity. The latter is particularly relevant to the late planted fields. The leaf color chart or chemical tissue analyses are useful to determine actual levels. The gray area is in fields that are historically weak and have only marginally adequate tissue nitrogen levels. In which case, your experience with that field is decisive. Also in a year where yields will likely be down and the price is not great, excessive production inputs may not be prudent.

### ≈ Growth and Development

As is often the case, the late planted rice seems to be catching up. Early maturing varieties, such as M-202, planted in early May reached PI around 60 days, right on schedule. In contrast based my observations, the later plantings are reaching PI 5 to 7 days earlier (52 to 55 DAP).

While the impression is that this year has been exceptionally cool, the accumulated degree days (DD) are surprisingly similar to 2004 (Table 2).

*Table 2. Accumulated Degree Days to July 18, 2005.*

Planting date	2004	2005
May 1	1044	999
May 15	902	900
May 30	765	740

Using a threshold of 58° F, DD accumulation for rice planted on May 1 is lagging behind 2004 by only 45 units, and 2 and 25 units behind for May 15 and May 30 plantings, respectively.

### ≈ Armyworm

You may want to scout your fields for armyworms. Several hundred acres scattered throughout the area have been treated thus far. Army worm injury is the most serious during stem elongation and grain formation. Larvae will feed on leaves and the panicle near the developing kernels. Armyworms chew angular pieces from the leaves. They are most active at night, spending the daytime hours sheltered in the lower canopy. As a general guideline, treat only those areas of the field where more than ½ of the plants sampled (minimum of 10) have over 25% defoliation; or 10% of the sampled panicles are injured. Armyworms may remain active through August or early September.

### ≈ Raise the Water

The pollen is formed within each developing spikelet during the final stages of panicle development. Immature pollen grains are sensitive to low temperatures about 10 days after PI. Cold weather at this critical stage of pollen formation can result in low pollen viability and subsequent blanking. As always, it is a good idea to raise the water depth at PI or soon thereafter. The water can be gradually lowered after heading.

## **On a Final Note**

As many of you know, I have been filling in for Jack Williams in Sutter/Yuba Counties since his retirement. I will be reducing that additional responsibility. We anticipate that the University will hire a new farm advisor to cover rice in the south valley in the near future. Until that time, I will continue to provide service to Sutter, Yuba, Sacramento, and Placer Counties but at a reduced level. Many services will continue as usual, such as newsletters, meeting announcements, variety trials, and taking phone calls. Other aspects of the rice program, such as on-farm research, farm calls, and the grower meetings in the local CE office will be scaled back. I will continue to serve industry wide interests in this area. Please, bear with us during this transition period and remember that UC remains committed to our partnership with the California rice industry. Give me a call if I can be of assistance.

REGARDS,  
CASS MUTTERS, U.C. FARM ADVISOR