Rice Notes

University of California ~ Cooperative Extension

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Once again we are facing a difficult planting season. Stand establishment, weed control, and nitrogen are particularly problematic in wet springs like this one. Below are a few points that you might want to keep in mind. As always, if I can be of assistance don't hesitate to give me call.

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MANAGING LATE PLANTED RICE

WEEDS

The primary objective now of groundwork is to dry the soil to kill pregerminated weeds. Working wet soil may just transplant them although it may be unavoidable given the difficulty of getting the soil dry this year. Consider taking the extra time to work the soil to allow it to dry, at least in the top 1-2" where most of the weeds arise.

Herbicide program tradeoffs are likely because it is hard to achieve optimum weed control when weeds pregerminate and get a head start on the rice. For example, timing of water applied materials is more critical. To avoid crop injury with Bolero®, it should be applied at the two leaf stage of the rice, but watergrass should be less than two leaf. This narrow timing window may be lost because the weeds are ahead of the rice. Ordram® is less injurious, move the timing up to account for pregerminated weeds. The same idea is also true with Cerano®, which can be applied at day of seeding. Consider reserving it for those fields which have had an opportunity to dry out thoroughly; Cerano® in a wet field with pregerminated seeds may result in poor grass control. All these early applied materials still have a role, but may not work as well unless the seed bed gets dried out first.

A backup program involving foliar materials, such as Abolish®, propanil, Clincher® or Regiment® in sequences or combinations are options. Timing and possibly rate will be affected if weeds pregerminate. Foliar applications provide a greater degree of flexibility.

FERTILIZER

Switching to dry fertilizer and using lower N rates are useful strategies. What are the consequences of dry vs. aqua? Both urea and ammonium sulfate are viable alternatives but differ in their form and concentration. Urea is 45-46% N and is a neutral salt so will move with the water until it converts to the ammonium form (about two days), after which it adsorbs on soil colloids. Urea is subject to volatile loss when applied to bare, moist soil so must be incorporated promptly after application. In contrast, ammonium sulfate is 21% N, does not require conversion, adsorbs on soil colloids as soon as it dissolves and is much less subject to volatilization. The higher concentration of urea can lead to streaked applications, but may be cheaper to apply because less material is used. Plant response should not differ between these two materials, but experience suggests that broadcast N is generally less efficient than N which is banded into the soil.

As we move through the month of May and into June, N rates should come down to accommodate a shorter growing season and to offset the gain in soil N from more complete mineralization of organic N. In very late fields consider using only starter at planting and top dress later, based on crop need and leaf analysis.

Some rice may get planted without any preplant N. In such a case consider 20% to 30% of the total N rate be applied within the first 20 days after planting (probably as ammonium phosphate or blend), and the balance split equally between early tillering (about 6 leaf stage) and the mid-tillering (8 leaf stage) to panicle initiation (10 leaf stage). An important point is to not apply too much early on plants that are under water. This is a recipe for algae. Wait for emergence or drop the water to make sure the plants are emerged.

VARIETY CHOICE/PLANTING DATES

Guidelines for preferred planting dates for optimum performance are given in Table 1. Keep in mind the dates given in Table 1 are conservative and for risk avoidance. Planting later than what is given is certainly possible, but risk increases with lateness.

SHRIMP/MIDGE/ALGAE

With wet seedbeds and warm temperatures, shrimp eggs may be primed and ready to go, so be on the alert. Although midges are very difficult to predict, they seem to be associated with slow flooding and warm temperatures. With the potential for water competition because everyone will flood at the same time, this combination could occur, especially if it suddenly gets warm. With late planting and wet soils, the chances are good we will see some hot weather on young stands that are not yet emerged. This is ripe for algae to bloom, so again, be watchful.

TILLAGE AND SEEDBED PREPARATION

Is crusting a problem? This is uncertain and probably varies with the soil, but some field observations suggest that crusts can affect stand establishment. It may be a good idea to do a light tillage to break the crust. A crust will soften under water so that roots can penetrate. But, if it is smooth and slick, seed may move and won't have a chance to root.

Land planes don't work very well in moist soil so you may have to use some sort of float or skip this step completely if the ground is reasonably smooth. Rollers may have less appeal this year if you can't get the seedbed dry.

The objectives of seedbed preparation remain the same, with emphasis on drying to kill weeds and to prepare a surface that will provide a seedbed appropriate for maximum stand establishment.

TABLE 1. SUGGESTED PLANTING DATE RANGES FOR PUBLIC VARIETIES.

VARIETY BY MATURITY GROUP	PREFERRED DATE RANGE	OPTIMUM	COMMENT
VERY EARLY			
S-102	MAY 1 – MAY 25	MAY 10	AVOID EARLY PLANTING IN WARM
M-103	MAY 1 – MAY 25	MAY 10	AREAS WITH ALL VERY EARLY
M-104	MAY 1 – MAY 25	MAY 10	VARIETIES. ADVANCE ALL DATES 5-
CM-101	MAY 1 – MAY 20	MAY 5	10 DAYS IN COOL AREAS.
EARLY			
M-201	APRIL 25 – MAY 20	MAY 5	AVOID COOL AREAS
M-202	APRIL 20 – MAY 25	MAY 5 –10	AVOID COLD AREAS
M-204	APRIL 25 – MAY 20	MAY 5	FOR WARM AREAS
M-205	APRIL 25 – MAY 20	MAY 5	FOR WARM AREAS
M-206	APRIL 20 – MAY 25	MAY 5 – 10	ADAPTED TO MOST AREAS
L-204	APRIL 25 – MAY 20	MAY 5	FOR WARM AREAS
L-205	APRIL 20 – MAY 20	MAY 5 - 10	SUITED TO ALL BUT COLD AREAS
CALHIKARI 201	APRIL 25 – MAY 20	MAY 5	AVOID COOL AREAS
A-201	APRIL 25 – MAY 20	MAY 5	FOR WARM AREAS
CALMATI-201	APRIL 25 – MAY 20	MAY 5	FOR WARM AREAS
AKITAKOMACHI	APRIL 20 – MAY 20	MAY 5	FOR MOST AREAS
KOSHIHIKARI	APRIL 20 – MAY 20	MAY 5	FOR MOST AREAS
LATE			
M-401	APRIL 20 – MAY 5	MAY 1	FOR WARM AREAS
M-402	APRIL 20 – MAY 10	MAY 1	FOR WARM AREAS

ALTERNATIVE STAND ESTABLISHMENT METHODS

This will be the third year of the UC Alternative Stand Establishment Methods Field Trial at the Rice Experiment Station. The original intent of this experiment was to develop alternative cropping systems for combating herbicide resistant watergrass in fields where other options have not been successful. This spring several growers and pest control advisors expressed interest in trying minimum tillage systems for a variety of reasons including herbicide resistant watergrass management, fuel savings from reduced tillage, or problems with preparing fields due to late spring rains. Although this is a work in progress, the results thus far are encouraging. If you are considering an alternative seeding technique and would like to know more about our project results, give me call or email (rgmutters@ucdavis.edu).

CASS MUTTERS
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