

Field Notes  
 June 13, 2006  
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Following is a table of DD50 program predictions and observations in our verification fields this year. As you can see, in almost all cases the predictions are ahead of the observations in contrast to a number of complaints we received early on that the predictions were well behind the crop. While we cannot fully explain the differences we can speculate the major difference is in making a judgment as to establishing an emergence date. None of these are run from planting.

Another observation we have seen every year is the delay in maturity associated with delaying flood establishment. It does not seem to matter if the crop is dry planted or water seeded as much as it does whether it is pinpoint flooded or flooding is delayed. This has been especially true where rice is drill seeded on heavy clay soils which cannot be flooded early. We were told that when we started the verification program and have since confirmed it. I do not know exactly why rice on heavy soils in particular and drilled seeded rice in general will not tolerate an early flood without stand loss. We have pushed the envelope earlier and earlier each year at some locations with moderate success while at others rice simply will not tolerate early flooding. This year the cool weather in April and part of May really set us back. We had to flush some fields three times before we could hold water on them. As of last week we finally have a permanent flood on everything.

The Vermilion field of Jupiter is the only pinpoint flooded field and has the closest predictions and observations. All of the Clearfield fields were delayed flooded. The fields in Avoyelles and Concordia are on heavy clay and were drill seeded. The Evangeline parish field was water seeded, but not pinpoint flooded and was drained for water weevils which delayed it.

<b>DD50 Predictions Versus Observations</b>						
<b>Variety/Parish</b>	<b>Drain for Straighthead</b>		<b>Green Ring</b>		<b>PD</b>	
	<b>Predicted</b>	<b>Observed</b>	<b>Predicted</b>	<b>Observed</b>	<b>Predicted</b>	<b>Observed</b>
CL 131/Jeff Davis	13-May	18-May	23-May	30-May	2-June	8-June
Jupiter/Vermilion	9-May	9-May	19-May	16-May	30-May	30-May
CL 161/St. Landry	7-May	13-May	17-May	21-May	24-May	2-June
Cheniere/Avoyelles	9-May	26-May	19-May	6-June	N/A	N/A
Cheniere/Concordia	18-May	30-May	28-May	6-June	N/A	N/A
CL 131/East Carroll	N/A	N/A	N/A	N/A	N/A	N/A
CL 131/West Carroll	12-May	28-May	22-May	5-June	N/A	N/A
Cheniere/Evangeline	16-May	18-May	26-May	28-May	2-June	2-June



The photograph at left was taken last week in one of the verification fields. It depicts early panicle differentiation (PD) or as it is sometimes called, panicle 2mm which is in reference to the approximate length of the panicle. In this case the panicle is closer to 1 mm long. In the course of a day it will easily reach 2mm in length. If we were checking a field in the morning and found this to be a representative size we would call PD on that day. If it was late afternoon we would call PD the next day. While this might seem like splitting hairs it is just better to try to be as accurate as possible whenever we describe the stage of growth of the majority of plants in a given field. If we get sloppy here it could come back to bite us later on when some precision might be required. Sometimes PD is confused with panicle initiation (PI) which is almost coincident with internode elongation. The two stages are definitely not the same and the terminology though close should not be interchanged.

Last week while walking our verification field in West Carroll the grower stopped dead in his tracks and said what is this? He had just spotted the plant in the photograph at right. If you have attended any of the Rice Research Station field days in recent years, you may have seen similar plants in the plots. The purple pigmented plant is a rice plant that is completely normal in all aspects except that it has genes for purple pigmentation. In research these plants are used as markers where one study ends and another begins in small plots. They can also be considered a novelty. I have often wondered why with all the interest in water gardens no one has looked into use of this type of rice. How it ended up in the field of CL131 is curious. I spoke to Dr. Linscombe who said because it survived two applications of Newpath it must be an outcross.

By the way, the annual Rice Research Station field day is Thursday, June 29<sup>th</sup>.



The seedling in the photograph at right appeared in the May 17<sup>th</sup> issue of Field Notes. Below are comments from Dr. Richard Dunand explaining its features in detail. I had to wait until now to use the information because we had too many field problems to pass up.

In deep seeded rices, the mesocotyl (structure between the seed and secondary root system which is just starting to form in the seedling photo) is generally thought to be influenced by oxygen levels (lower as you go deeper in the soil) and coleoptile (structure between the secondary root system and the soil surface) is generally thought to be influenced by light. If this is true then the mesocotyl elongates until some level of oxygen is sensed and then the coleoptile elongates until it reaches the soil surface. This is mostly commonly noted in a system in which the soil is dry or has a chance to dry periodically. Soil that is continuously water logged or kept very moist (low oxygen) from the time of seed placement interestingly enough results in no to little mesocotyl development. Usually those emerging seedling have only a coleoptile and no roots, not even primary roots. Of course this is just the opposite of a dry seeded/dry soil system.

In the photograph at bottom right are black rice bugs. These relatives of stink bugs feed on rice at the base of the leaf and are usually detected by the presence of yellowish leaves that may appear to be damaged by herbicides or disease. Often only half of the leaf blade shows the symptoms with the mid-vein acting as some sort of boundary. The yellowish colored plant tissue is at the base of the leaf. The pattern continued from the point of injury to leaf tip on the side of the mid-vein of the affected leaf. The rice in this field was in early boot, typical of the time these insects often appear.



