

Field Notes
April 3, 2009
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Last year by this time we had 6 of 8 verification fields planted and most them already emerged. This year we have only 2 of a possible 9 planted. We are facing the same problem most rice farmers are facing in their fields. First we were too dry to plant or too early, and then it started raining. We needed the moisture, but now we have wet fields intended to be drill seeded. If it keeps up much longer we will have to water seed where we can. Seed that already has Dermacor on it cannot be water seeded.

The photograph below is typical of what we are seeing in the fields right now. It might look like Command bleaching, but there is no Command on the field and none nearby. The problem is cold temperature injury. The farmer in whose field we took this picture this morning said he knew what was wrong with his rice, he was wearing a jacket. He is exactly right.



This photograph illustrates the classic cold temperature injury symptom; a chlorotic band or spot on the leaf with a necrotic center. Those are 5 dollar terms that mean it is white and the tissue in the middle is dead or dying.

In addition to the leaf spot, the older leaf to the left is drying out because the cold weakens the cuticle and the north wind is both cold and dry and literally sucks the moisture out of the leaf. Much of the injury is due to desiccation rather than actually killing cells as a consequence of freezing the cell contents.

If you check out the heat units for March 2008, March 2009 and the 30 year average for March (all available in the DD50 program) it tells the story in plain numbers. The 30 year average for March is 336 heat units or 336 hours at which the temperature was above 50°F. In March of 2009 we have had 408 hours above the threshold value. Well, why am I writing about it being too cold if we had more heat units this year than the 30 year average? The problem is that 127 of the 408 were between March 4th and March 11th. And 40 of those were before March 8th, the earliest date you could plant and qualify for crop insurance. That means that we have really had only 241 heat units since planting got serious. In 2008 we had 393 heat units with the majority occurring after March 15th. It's just too cold.

Below are two photographs of seed midge damage. The damage is somewhat atypical in that we usually see the area where the embryo should have been completely hollowed out. In this case the roots had apparently started to develop then were chewed off. There was no evidence of herbicide injury or of water mold. The endosperm of the seed was still firm and had no foul odor. The field affected was completely wiped out. About two weeks ago I noticed swarms of midges near the Rice Research Station. That was about the time this field was planted. If there has been any benefit from the lower temperatures and windy conditions it has been the disappearance of these swarms. The field had been flooded for about two weeks prior to planting and the water was clear. That is about the perfect scenario for midge problems to develop. They are only a problem in water seeded rice, just the opposite of chinch bugs which only a problem in dry seeded rice, especially drilled rice.

