

Field Notes
May 25, 2012
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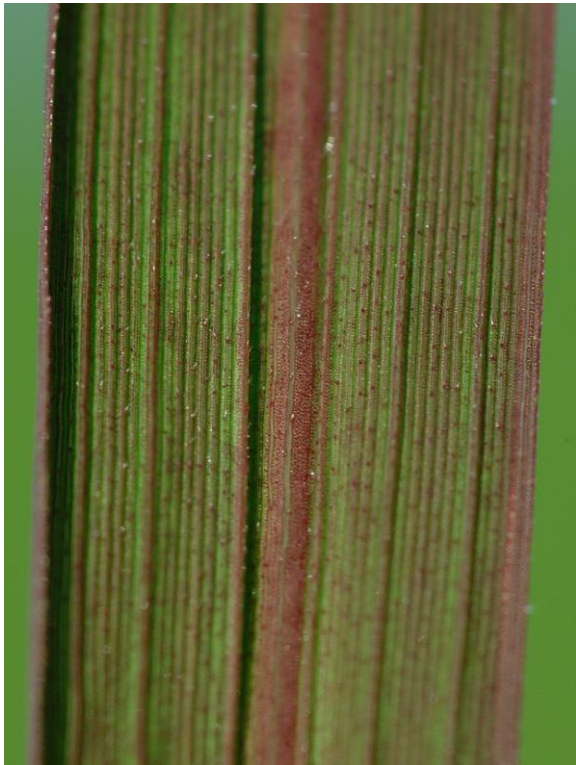
Every year we see the image shown at right in either drill seeded rice or where it has been broadcast and covered. There is nothing wrong. The picture is here to remind everyone that green ring, also known as internode elongation, is not always green. The internode is beginning to elongate (joint movement) indicating the plant is shifting from vegetative growth to reproductive development. The reason the internode is not green in this situation is because it is below the soil line, thus is not exposed to daylight. Without daylight exposure the green pigment, chlorophyll, responsible for the “green ring” we usually see has not accumulated. Actually, we felt “green ring” (or internode elongation but NOT panicle initiation) in this field was probably a day or two before. Panicle initiation (PI) is often confused with internode elongation. Sometimes they occur at the same time or nearly so, but they are not the same. It would take pretty good magnification to determine if this plant was at PI.



The most common call we received last week was about the disease at left. It is blast and this was a lesion on CL152 which is listed as Moderately Susceptible. I have had reports of blast on CL261, CL111 and Jupiter in commercial fields while Dr. Groth said it is in many varieties on the station. Lots of folks have asked why blast is so prevalent this year over the previous several. One possible explanation is the large amount of rice that survived in fields through the winter giving the fungi a place to get started early. Dr. Groth said he took a look at the crawfish rice on the South Farm and found a whole host of diseases including blast and Cercospora. If you are one of the farmers who is in the area where resistance to the strobilurins has been confirmed and you intend to use Sercadis, remember this fungicide has no effect on blast. Please refer to the Field Notes supplement sent out earlier this week for more information.



The assortment of photographs shown here illustrate a problem local growers have termed “John Deere Disease”. Don’t blame me, it was not my idea. The bright yellow areas of the field in contrast to the dark green account for the colloquialism. So what is causing it? We do not know. Tissue samples from last year showed the yellow plants were very high in sodium and low in **manganese**. **Magnesium** not manganese was higher in the yellow plants than the normal, but not excessive. Dr. Harrell is aware of and is working on the problem too. More tissue samples have been taken. Maybe they will provide another clue. The problem appears to be worse where water enters the field first.



Pubescent (hairy) Leaf



Glabrous (smooth) Leaf

On the preceding page are photographs of two purple pigmented plants. They were found in a field with a history of Newpath resistant red rice and/or outcrosses. There is no history of hybrids in this field. While superficially the plants look the same (top photo) closer examination reveals the plant on the left has a pubescent leaf while the one on the right is smooth. This just indicates the population of weedy rice in this field (planted to Cheniere) is segregating. There are various combinations of green, purple, hairy and smooth. I expect when it begins to head we will also see awned versus awnless forms too. We will keep you informed.

We continue to get a few calls regarding Localized Decline, perhaps more this year than the last couple. The field shown at right had about 7 to 8 pounds of actual zinc per acre applied to it when the problem showed up. Apparently, that is not enough in this field. Dr. Harrell's studies have shown that about 10 pounds of actual zinc as zinc sulfate or 2 pounds as zinc chelate are necessary to correct the problem. In severe cases more is needed.

What confused me when I visited the field were the conspicuous green drill rows in contrast to the affected plants. The farmer told me all of the green rows are where there was an excessive amount of seed as a consequence of a malfunction of the planter not detected until much of the field had been planted. This could provide another clue. Plants showing the symptoms almost always have very high levels of iron and aluminum in them. It could be a dilution effect of the toxic elements because each seedling is getting a lower dose of these elements.



Each of these plants is in the same family – Cyperaceae. This is the family of sedges and rushes. The 3rd one from the left is Spearhead. The other three I have not yet keyed out. I probably will not be able to get them beyond the genus name. Common names will be just as hard to determine. It just demonstrates the diversity in plants.



Both photographs above are of Creeping Rivergrass in flower. The orange structures in the photograph at left are the anthers, the pollen bearing structures. The purple structures in the photograph at right are the female structures, the stigmas, which are designed to collect pollen. The fact that panicles had either anthers or stigmas showing prominently, but not both indicates this species is probably cross fertilized. I did not pay close enough attention to determine which flower parts appeared first, the stamens or the stigmas. If it was self-fertilized like rice, both the anthers and stigmas would be clearly visible on the same panicle. The heavy flowering also means this is likely a heavy seed producer. This is a perennial grass and many perennials are poor seed producers. The combination of the dense rhizomes (underground stems) and prolific seed production accounts for the difficulty in controlling this grass weed.