

Field Notes

June 5, 2014

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The series of photographs on the preceding page and continuing to this page tell a common story this year. We have had a number of calls regarding armyworms in rice this year. The damage done to the field depicted in the first photograph was accomplished in the span of about three days. When I visited the field they were everywhere. These are yellow striped armyworms characterized by the yellow stripe running the length of the insect's body and the inverted "Y" on its head. A few were dark colored like the one shown at right. These are affected by a disease of armyworms and other caterpillars, but not enough to avoid spraying the field. Crabgrass on the levees had been heavily fed on too and chinch bugs were noted as well. When the farmer said his seed were Dermacor treated it caused some concern because Dermacor should have prevented this problem. Further investigation revealed the seed were likely treated with another insecticide not effective on armyworms. The farmer wanted to know if he should replant. Because there were intact growing points and adequate moisture I recommended spraying with a pyrethroid and treating it like rice just emerging. There have been a couple of old studies where rice seedlings were mowed with lawn mowers. In one there was no yield reduction and in the other where tillering rice was mowed there was a 20% yield reduction. We'll follow this one to see.



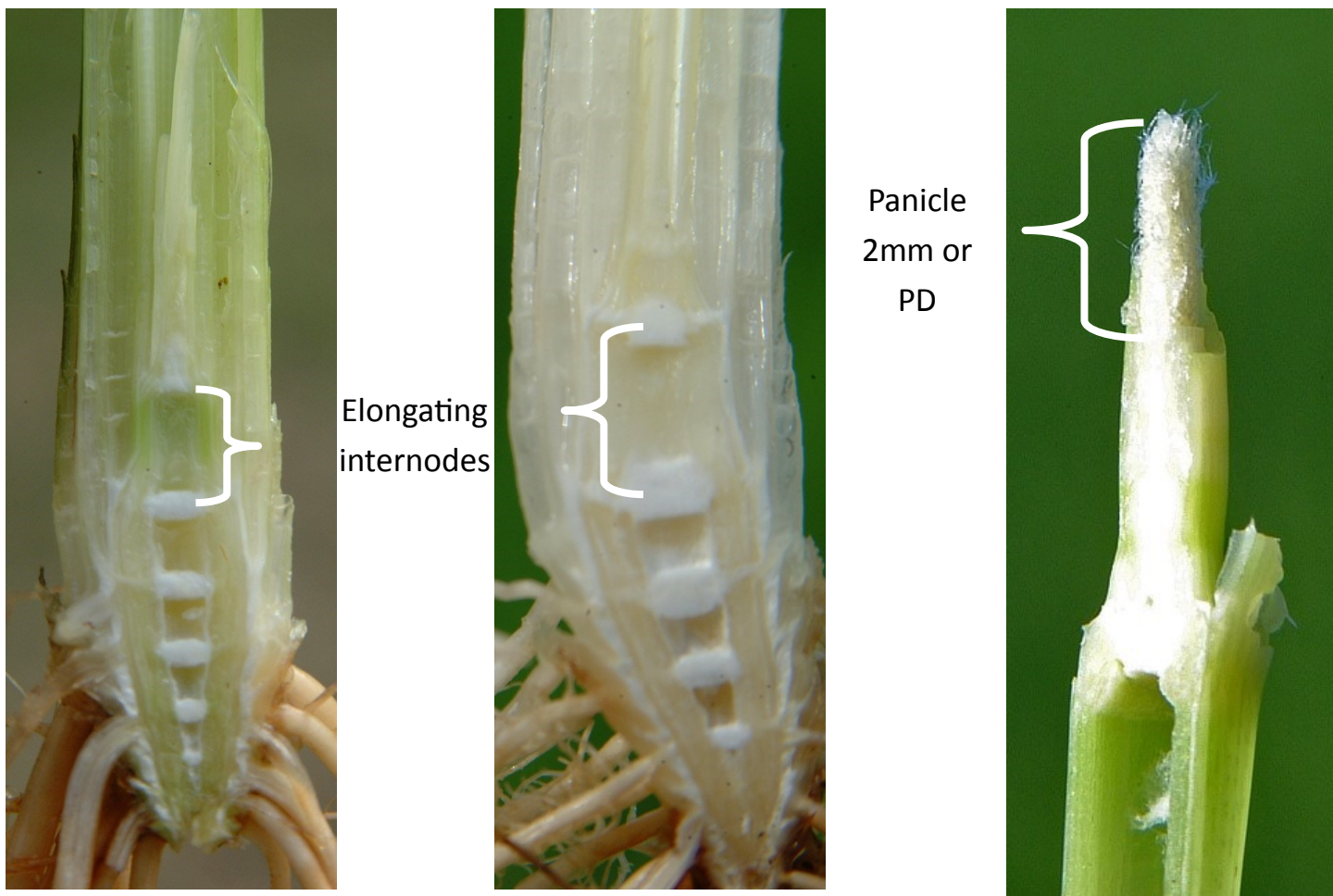
Sick
armyworm



Defoliated crabgrass



Immature chinch bugs



At the request of a couple of callers I will review the growth stages known as internode elongation (IE), green ring, panicle initiation (PI), and panicle differentiation (PD). Internode elongation and green ring are interchangeable terms referring to elongation of the uppermost visible internodes of a rice seedling. This signals the change from vegetative growth to reproductive growth and is a critical stage in rice management. In water-seeded rice and often on shallowly planted rice the internode accumulates chlorophyll producing the green band and hence the name “green ring” as shown in the first image. However, if the elongating internode is below the soil line and not exposed to sunlight there is no chlorophyll accumulation so this internode remains white as in the center photograph. The third photograph illustrates panicle differentiation, sometimes called panicle 2mm because the small panicle is about 2mm long when first visible.

There is no photograph of panicle initiation because you cannot see this stage. There seems to be some confusion over PI and IE. Often, but not always, panicle initiation coincides with internode elongation. To be certain panicle initiation is occurring one would have to examine the growing point under a microscope preferably after staining with specific stains that make the cellular changes visible. Dr. Dunand has an excellent discussion of this in our Rice Production Handbook which is being revised again and hopefully will be ready by the field day on June 25.

PD is the earliest stage of booting. Within a few days a panicle 1/2 inch long will be visible and later the sheath of the flag leaf (the boot) will begin to swell as the panicle grows larger within it. This is the more familiar stage and is important when timing fungicides. See Dr. Groth’s disease newsletters for a longer discussion of fungicide timing in relation to growth stages. I hope this clears up the terminology some.