

Field Notes
July 7, 2005
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This week I have had a number of questions regarding two subjects. The first concerns leaf tip burn observed in a few varieties including, but not limited to Cheniere, Cocodrie and XP 723. Unfortunately, I did not get any pictures. I did collect specimens of the leaves and brought them to Dr. Groth at the Rice Research Station. He said he did not observe any bacterial streaming which was good news because the symptoms resembled bacterial blight. He reminded me that we saw something like this a few years ago and it turned out to be a fungus called *Curvularia* which he described as being opportunistic rather than a real problem.

It could result from a common phenomenon observed when weather conditions are as they are now and the plants are consuming a lot of water. Early in the morning little drops of water can be noticed at the tips of rice leaves (as well as other plants). This is not dew, but rather water of guttation. This droplet forms when water pressure inside the plants exceeds demand during the night and water is pushed out of tiny pores at the margins of the leaf called hydathodes. When the sun rises and water demand increases some of this water is drawn back into the plant. Fungal spores or bacteria in these drops of water are drawn in as well producing this "tip burn". So this is one possibility. If we identify the problem we will let you know.

A second question has been prompted by the afternoon thundershowers and flowering rice. Several growers have asked "How long does rice flowering and pollination last?" There are two ways to look at it. Flowering on a given panicle of rice will last from about three to seven days with the majority of it taking place in about three or four days. In a field it can last from seven to 14 days depending upon how even the field is, the variety, the plant population and other factors. For example, a very uniform field of a conventional variety may complete flowering in one week while a hybrid or conventional variety at low population accompanied by lots of tillering may require two weeks from the very first heads on main stems to heads on the last tillers to flower. Incidentally, the actual shedding of pollen is called anthesis. Anthesis lasts from roughly mid-morning to mid-afternoon. Each pollen sac or anther opens only once.

Last week at the field day I had the contents of a sweep sample labeled "chinch bugs". Only after several folks asked me if the little brown things in the plastic bag were the chinch bugs did I realize I had too much debris in the bag. The little brown things most thought were chinch bugs were actually anthers, the pollen bearing parts of the flower, picked up in the process of sweeping for stink bugs. The chinch bugs were mixed in with the anthers, thus the confusion. Below are photographs of chinch bugs, anthers from a similar sample and a panicle in anthesis. The anthers look yellow in the sweep sample because they still contain pollen while those on the panicle look white because the pollen has already fallen out of them.

Rice, like other grasses, does not have showy or aromatic flowers to attract insects to carry the pollen from the anthers to the stigmas (part of the pistil, the female part of the flower). To compensate for this absence these plants produce excessive amounts of pollen which is then carried by the wind.



Chinch bugs on rice leaf



Anthers from sweep sample



Rice flowering (in anthesis)



Whitehead or blanked panicle

Yesterday Howard Cormier and I found a few blanked panicles or whiteheads in our verification field in Vermilion parish. In one issue of Field Notes I showed pictures of whiteheads resulting from some sort of chewing damage and speculated it might be a rodent. While we have continued to find more of this problem in other fields without resolution to its cause, the whitehead shown here is the result of a sugarcane borer, more of the typical reason.



Sugarcane borer entry site.



Sugarcane borer found inside stalk.

We also found striped blister beetles in our verification field in Calcasieu parish. According to Dr. Boris Castro they may feed on the floral parts if they congregate in large numbers. We don't think they are causing a problem because we observed no signs of feeding or injury, but we will keep an eye on them. These beetles are also known as Spanish flies. If you contact them with bare skin and they defecate or get their saliva on you a blister may form at that spot, thus the common name blister beetles.



Striped blister beetles (Spanish flies) in rice.