



We often use some terms rather loosely when referring to stages of maturity of rice. Shown above are the milk stage at left and soft dough at right. The terminology is old and is based on the texture or consistency of the immature rice grains describing what you might observe in the field. If you squeeze the kernel and a milky liquid emerges, it is in the milk stage. When a pasty mixture of liquid and starch about the consistency of bread dough or a little firmer it has reached the soft dough stage. When the grain is so firm it will break rather than be compressed it has reached hard dough.

While this might seem elementary there, knowing what stage the crop has attained can impact management decisions. For example, the threshold values for determining when to spray to control stink bugs depends on relative maturity of the crop. From flowering through milk the threshold values are 30 per 100 sweeps and gradually increase to 100 per 100 sweeps at hard dough and beyond.

One common misconception is that the threshold values are absolute values meaning that at one point 30 per 100 warrants treatment and a few days later the value is 100 per 100 sweeps. In reality the values are a continuous scale without a distinct point at which the value changes. In one of our verification fields we found 14 stink bugs per 100 sweeps at flowering. Last week we collected 21 per 100 sweeps and the crop varied from milk to soft dough. We expect that even if the numbers increase next week the crop will be even more mature, so we did not treat. We would have needed 40 to 50 per 100 to treat this week.

In south Louisiana the stink bug numbers have declined for some unknown reason.



The plant above was among a bucket full of plants from a field of CL152 in Vermilion parish. The crop advisor noticed a number of plants like it in a field that the week before looked fine. The dead flag leaf in the center indicates the growing point was also killed which we confirmed by splitting the plant. I expected to find either stem borers or bill bugs, but neither was found.

Following the leaf damage down the stalk led to the symptoms shown in the second frame. When the leaf was pulled off it revealed the dead axillary bud and tissue behind it. We split the stem and could see the damage penetrating through to the interior of the node.

Dr. Groth and I will get together next week to visit the field. When I described the symptoms to him he asked if I could detect the odor of rotting tissue. Yesterday, the odor was masked by the sulfide odor associated with the root system. The dark black roots are indicative of hydrogen sulfide or possibly iron sulfide. In either case the sulfide odor masked any other. Today I had more time to wash the plants carefully and could detect the odor of bacterial rot.

We now suspect this may be bacterial crown rot caused by *Erwinia* sp. This genus of bacteria is usually associated with diseases called soft rots that characteristically produce foul odors. I remembered seeing this disease in a verification field in 2009 so I looked through my old Field Notes. If you still have them check out the June 12, 2009, issue. The variety affected in 2009 was Catahoula. By the way, all of the old issues are posted on the web at: www.lsuagcenter.com/en/crops_livestock/crops/rice . Click on Field Notes on the right side of the page. They are sorted by year.



On the edge of our verification field in West Carroll parish I noticed a few plants with dead growing points resembling the plant shown on the previous page. When I pulled up the plants and split open the crown I found what I expected. In the left photograph is the grub of one of the bill bug species we see in rice every year. This one is shown the way you would expect to find it; the head is embedded in the crown area and the rear of the insect is exposed.

At right is a better view of the insect photographed several years ago in the stalk of a rice plant.

Similar symptoms-dead flag leaf and growing point-can confuse diagnosis of problems. In this issue are two examples. Other causes might include herbicide injury, South American rice miner, and stem borers. Even the black stink bugs we call black rice bugs (unofficially) will cause similar symptoms. All of these are the result of injury near the growing point or crown of the plant, thus it makes sense the symptoms would be similar. This is also why I expected the plants brought to me yesterday would have either borers or bill bugs in them. Their absence provoked more study and the tentative diagnosis. I hope we can confirm it next week.