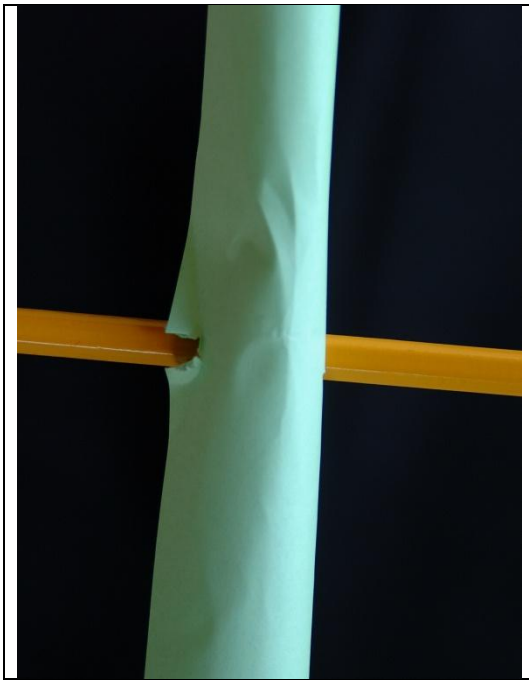
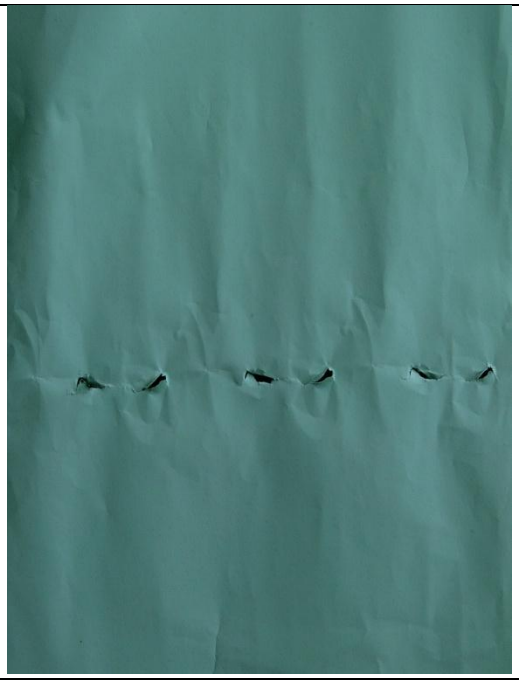
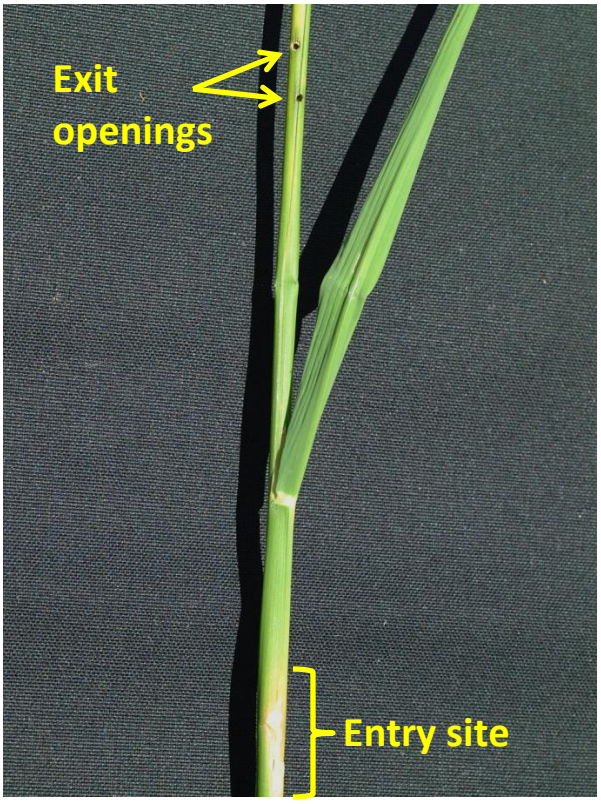
Field Notes
June 15, 2012
Johnny Saichuk

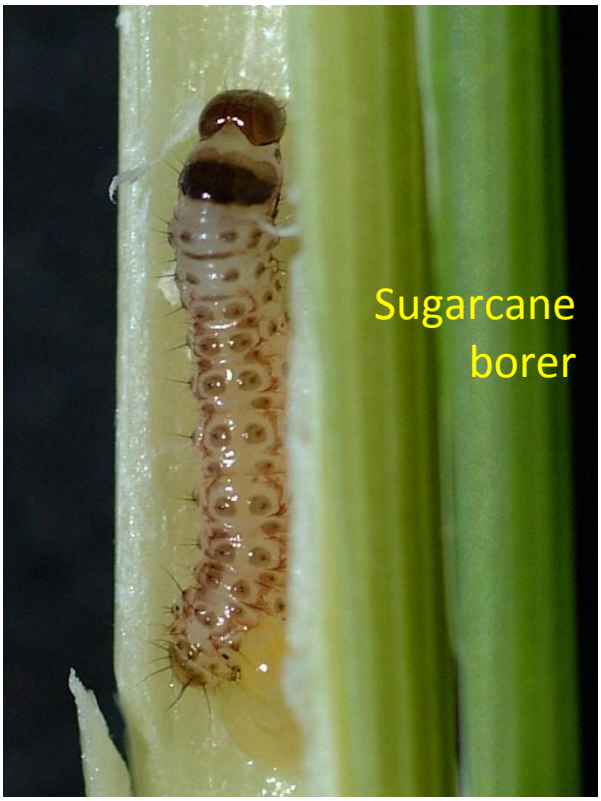
Earlier this week Barrett Courville and I visited a field where quite a few plants had this type of injury. It is late planted, water seeded rice. While we did not identify the specific culprit it is some sort of insect damage. Barrett visited some other fields later that showed much the same injury and found billbugs in the field. (See Fields Notes editions of April 30, 2011 and July 30, 2007). It is possible that billbugs could cause this type of injury although it is usually associated with an insect with piercing sucking mouthparts like stink bugs and leaf hoppers.

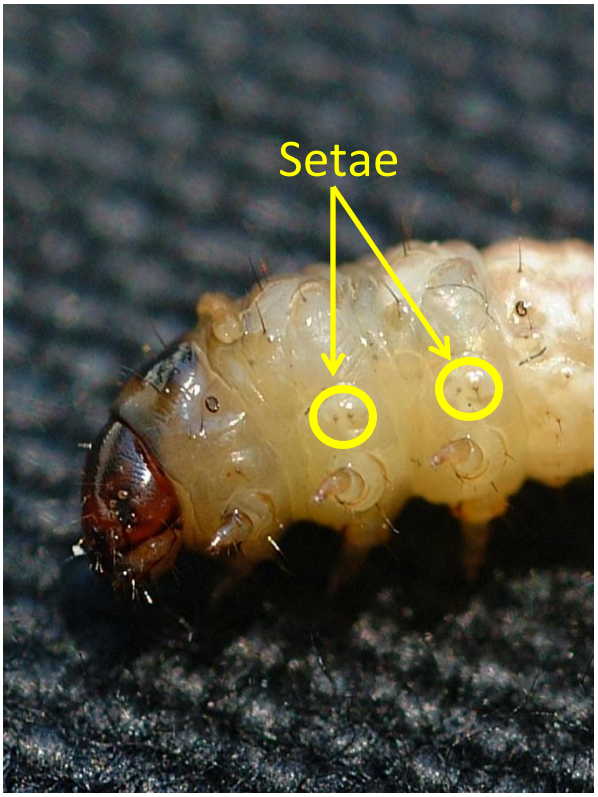
Below I used a piece of paper and a pencil to demonstrate how the injury occurs. The rolled up sheet of paper with a pencil stuck through it is to simulate the young rice leaf rolled up in the whorl. The pencil represents the piercing mouthpart of an insect. When the leaf later emerges from the whorl and unfurls the injury points form a dotted line across the blade width. This weakens the blade frequently causing it to break along that line.






Exit
openings
Entry site


Sugarcane
borer


Setae


Rice
stalk
borer

On the preceding page are a series of 4 photographs depicting various aspects of rice borers. The top left photograph shows a rice stalk with the typical orangish lesion on the leaf sheath where a borer entered the plant. The eggs hatch and very small (about 1/16th inch long) borers move behind the leaf sheath where they begin to feed and eventually bore into the stem. This is the only time foliar insecticides are effective on them. Once they have bored into the stem we cannot get to them. Dermacor seed treatment is labeled and effective against borers.

The top right photograph is of a mid-instar sugarcane borer, the borer that has become the most common borer in rice over the past several years. It is distinguished from the rice stalk borer and Mexican rice borer by the dark head capsule and dots on its back. This one was about an inch long.

The bottom left photograph is a closeup of the throacic region of a rice stalk borer. In each yellow circle there are two dots. They are the base of a hair (seta) like the others on the body, but because I shot the photograph head on you cannot see the hairs. This was taken with a camera so I know they are visible with a good hand lens. This is the definitive distinguishing characteristic to separate the rice stalk borer from the Mexican rice borer. The rice stalk borer has two setae above each leg while the Mexican rice borer will have only one above each leg.

The borer in the bottom right photograph is a very young rice stalk borer that could easily be mistaken for a Mexican rice borer. Normally the head capsule of the rice stalk borer is dark. This one may have recently molted and the head is still very light colored. The lines on its back are fairly continuous in contrast to the Mexican rice borer which has lines resembling a series of dashes.

Dr. Linscombe took the photograph at right in his plots on the Research Station. It looks like borer damage, but is severe rotten neck blast in the California variety M-206 which is very susceptible to blast. Dr. Groth said he now has rotten neck blast in M-202, CL162, and Rex. In the Field Notes supplement sent out May 21st, he reported he had leaf blast on CL151, CL152, CL162, CL182, CL261, Cypress, Jupiter, Rex, and Wells. So it is not totally surprising to see the rotten neck form on some of the same varieties.

It is clearly a year to use fungicides. As I said to Owen Taylor who writes Rice Fax, it is not a matter of whether to spray or not, but a matter of what to use, how much and when. If you need help with any of that give your local county agent a call and we will be glad to help.