The primary call starting last week and continuing throughout this week has concerned leaf miners. In several cases the fields were not flooded and had not been flooded. In the past we always considered this pest to be associated with flooded rice so this occurrence is contrary to normal expectations. As I have said many times in the past, Mother Nature does not always follow the rules.

The damage often showed up when farmers noticed areas like the one in the first photograph where the stand appeared to be thinning out. Upon close examination the leaves showed damage and the larva or pupa of the rice leaf miner could be felt when the leaf was drawn between fingertips.

When the leaf was torn open it exposed either the maggot or the pupa of the leaf miner. The leaf miner adult is a very small fly. Most growers were quick to treat with methyl parathion as soon as the problem was identified. I discouraged some when the primary stage we found was the pupa. This indicates the end of the cycle and by the time the adults would emerge, mate and lay eggs to produce more miners the plants would be large enough to tolerate the damage. If both leaf miners and rice water weevils were found we recommended a pyrethroid to control the water weevils and consider the miners as secondary pests. Control of the miner maggot is unlikely with pyrethroids, but the adult stage should be taken out. Older rice should recover.
Leaf Miner Maggot partially excised from rice leaf

Leaf miner maggot highly magnified

Leaf miner pupa excised from rice leaf

Leaf miner pupa partially excised and highly magnified
The next most common call regarded Localized Decline (aka mystery malady). In some cases from a distance the damage from leaf miners and this disorder looked similar. The diagnostic symptoms easiest to see are the brownish spots that appear like bronzing caused by zinc deficiency or as in the third panel of potassium deficiency.

Nutrient deficiencies are manifested because the roots are damaged and because chemical reactions in the soil interfere with normal nutrient uptake. The affected areas often increase in size with time. The only remedy at this point is to drain the field, even if nitrogen fertilizer has just been applied because the problem will not go away without oxidation of the soil.

Dr. Gary Breitenbeck is still investigating the problem. He is particularly interested in the role of silica in the soil. Even though this nutrient is abundant as a soil mineral for some reason he suspects we are experiencing a deficiency of it. The interaction of silica with iron in the soil may play a role. Iron toxicity is part of the problem; however it is the interaction of iron and silica that apparently leads to this problem.

Plots with different silica treatments have been established in a couple of parishes. This is a difficult problem to study because of the unpredictable nature of it. County agents are cooperating by collecting samples of water, soil and leaf tissue from normal fields and fields affected by the problem. It may be a few more years, but we are working on it. Until then, drain at first symptoms.
Apparent herbicide injury symptoms continue to show up in some fields without rhyme or reason. The plants in the left photograph were in a field that had been treated with Harmony, glyphosate and Command at planting. We could only speculate that the Harmony caused some injury. Lots of fields had been treated the same. Why this one shows injury requires speculation at best. The farmer had drained by the time we saw it and recovery was expected.

The plants shown in the photograph at right were in a field in northeast Louisiana. This field had been sprayed with Valor and Touchdown in early March. The rice emerged fine and looked good. Clincher was sprayed to control grasses. Shortly afterward the symptoms started showing up. We have had a couple of cases where injury showed up following a Clincher application, but it is extremely unlikely that Clincher caused the injury. Dr. Eric Webster has wondered if the Clincher actually cleans out spray booms better than any of the conventional materials used for that purpose with consequent injury from a previous chemical application. This is another one that makes us scratch our heads because we really don’t know what caused the injury. It would seem that Valor injury would have been noticed shortly after planting and the stand would have been reduced. So nothing really makes sense.
The two critters shown above are more familiar and their frequency of occurrence seems to be on the rise.

In the left hand photograph is the black rice bug. It has been called other names such as Turtle Bug and Negro bug, but the correct name is the black rice bug. It is a member of the stink bug family. If you check out some of the issues of Field Notes from last year and the year before or to the rice web page you can see the typical injury symptoms it causes. No treatment is required.

The insect in the right hand panel is the rice levee billbug. The bill refers to the long snout at the end of which are its mouth parts. It resembles any the snout beetles or weevils, but is about a half inch long. The adult does not cause damage. The grubs or larvae of this beetle feed on the crown area of the plant causing symptoms much like those of stem borers. Usually we find them on the edges of fields or along levees because it appears to favor the transition areas between the water and dry ground. This one happened to expand its hard protective wings exposing the flying wings just as the photograph was taken.