



Shown above are two different diseases that have caused some confusion when diagnosis is based only on field symptoms because of the similarity in symptoms. In a former lifetime when I taught in formal classroom settings I used to tell my students, “Look at the differences, not the similarities.”

At left is Bacterial Panicle Blight. One of the most distinctive characteristics of this disease are the kernels which are half straw colored and half a sort of chocolate brown. The second diagnostic feature is the green panicle branches. This combination of chocolate brown discoloration and green panicle branches is typical of Bacterial Panicle Blight.

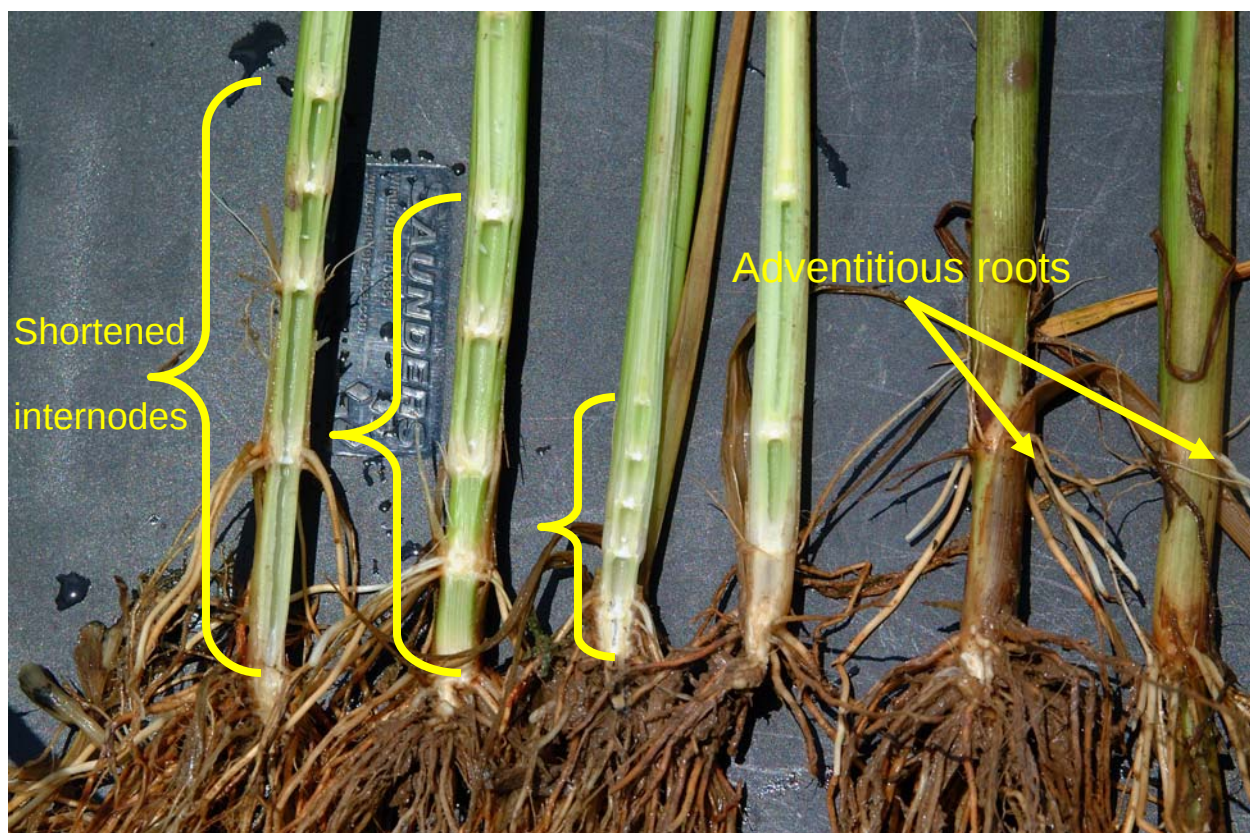
At right is Panicle Blast. Note the lack of any brownish discoloration of individual kernels and the presence of both green and brown or tan panicle branches. If kernels are discolored the panicle branches below them are also brown or tan.

In the case of Bacterial Panicle Blight the pathogen, a bacterium, attacks the kernel directly while in Panicle Blast the kernel is affected most often when the fungus attacks the panicle branch thereby cutting off flow of nutrients to the kernel. Fungicides have no impact on Bacterial Panicle Blight because fungicides do not control bacteria, they control fungi.



Above are another set of comparison photos. In this case we only know the cause of one of the sets of symptoms. Several people have brought in plants exhibiting the symptoms shown in the left hand photograph. Dr. Groth has looked at them and tried to get spore production from them and in each case has been unable to elicit any fungus growth. Symptoms are similar to, but not quite the same as those of bacterial leaf streak and/or leaf scald. In the absence of an identifiable plant pathogen we can only conclude it is something environmental. We just do not know the exact cause. It did occur during the excessive heat a few weeks ago. Maybe that had something to do with it.

The leaf tips shown in the right hand photograph are symptoms we have seen with some regularity over the past few years. The brownish spots that follow the leaf veins are diagnostic of potassium deficiency. In this case it is not what we think of as typical potassium deficiency. Usually potassium deficiency shows up around mid-season and appears in the lower leaves first. Here the symptoms show up after heading and are in the flag leaves. The only explanation I can offer is that the demand for potassium exceeds the ability of the root system to provide it so the plant translocates it from the flag leaf to the kernel resulting in deficiency symptoms when there really is not a true deficiency. It is almost always associated with fields where yield potential is very good.



The problem shown in these photographs was brought to my attention last week. I also got a call today from a field rep in northeast Louisiana who described identical symptoms. I have only seen this once before. In that case it was noticed at harvest time and was never diagnosed. In this case I suspect herbicide injury of some sort, but do not know with any certainty. The first photograph shows 4 plants sliced lengthwise and two not sliced. The second photograph compares an affected plant to a normal plant. The lines connect corresponding nodes of the affected plant versus a normal plant.

The two obvious symptoms are the shortened (stacked) internodes and the production of adventitious roots from the lower nodes.



At right are a couple of plants with very white leaves we have come to expect from Command herbicide. This usually wears off by the time plants reach mid-tillering. In this case the plants are in early boot and some leaves are still white. The variety is Jazzman. One of the early questions I was asked regarded the sensitivity of Jazzman to Command. I talked to researchers and to one of the main growers who said they had not seen any problems. The medium grain varieties are well known for their sensitivity to this herbicide. Apparently in some situations there is sensitivity. The farmers had Cheniere planted in the same field and both varieties were treated the same. The grower told me you could draw a line on the varieties with the herbicide. It might be good to remember this if you intend to grow Jazzman next year. I do not know if this indicates all aromatic varieties might be sensitive or just Jazzman.

