

Field Notes  
May 8, 2009  
Johnny Saichuk



Earlier this week we were called to a field that has had problems for several years. Knowing it has been a perennial issue and the tone of frustration from the farmer prompted me to call Dr. Webster and Dr. Harrell to get the expertise of a weed scientist and of a soil scientist.

Last year similar symptoms were blamed on Newpath drift and certainly the symptoms you can see in these two photographs would fit Newpath injury. This time Newpath has not been applied nearby. The same is true for glyphosate.

This brings us back to square one. We dug up both soil and plants and brought them back to the Rice Research Station where Dr. Harrell is going to experiment with various nutrients.



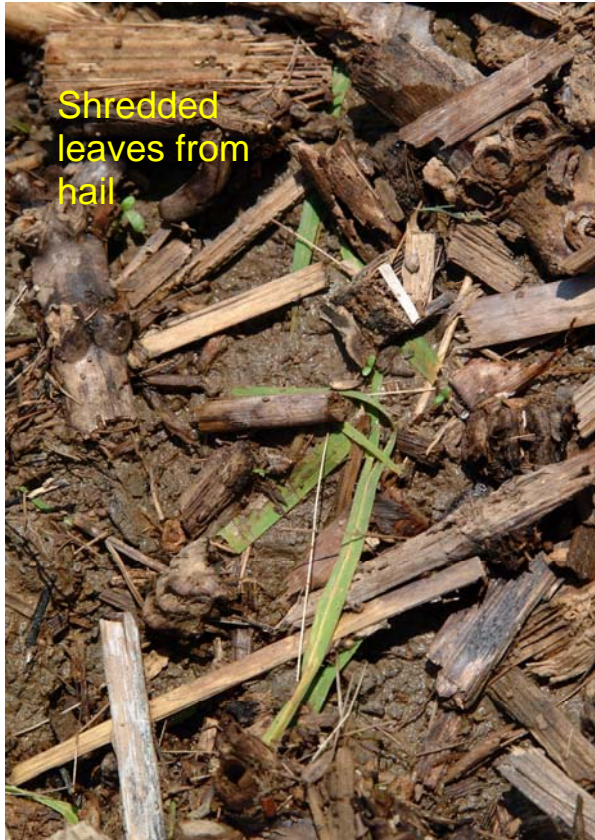


As we drove up to our verification field in Concordia parish we were greeted by the scene shown above and in the photograph at right. A tornado ripped through the area Sunday night taking down 15 telephone poles.

If the well was not powered by an electric motor this would only be an inconvenience. As it is we might be lucky because the field was saturated from the one inch of rain that accompanied the tornado. Crews were working at the time of our visit and with a little luck will be up and running by next week.

Also associated with this weather event was hail. The damage it caused to the seedlings can be seen on the first two photographs on the next page. In some places pieces of leaves littered the soil and in others the seedlings were bent over and sticking to the soil. We decided to let it recover a few days then apply herbicide.





Shredded  
leaves from  
hail



Hail battered  
seedlings

On the next page is a series of photographs showing salt damage in a field in lower Vermilion parish. Preliminary testing showed the soil level to be around 600 ppm, but this was with a conductivity meter designed for testing water. After hurricane Rita Dr. Gary Breitenbeck developed a field method using conductivity meters to help farmers. It works as an indicator of whether more testing is needed.

In this case there were a few good clues in addition to the likelihood that salt water had flooded the area. In the paddies that were most affected there were very few weeds. This immediately sent up a red flag with county agent Stuart Gauthier. The patterns of injury in the field also hint at salt injury. In nearly every case I have seen the injury is greatest on the point of highest elevation even if the difference between a high and low area is only a couple of inches. That is certainly true here because the photographs were taken in the top most paddy and within that paddy the low areas are well defined by the healthier rice seedlings. Note the dense population of rice in the wheel tracks.

The reasoning behind this pattern involves the movement of salt with water. As the soil becomes saturated with water salt goes into solution. Then when the water evaporates from the soil surface salt accumulates in these areas. In areas that remain wet or at least damp there is a dilution effect in addition to the lack of accumulation at the surface. This also explains why taking soil samples to measure salt in a field can produce widely different readings. Dr. Gauthier took additional soil samples and sent them in to our lab in Baton Rouge. I expect the numbers from this test to be higher than the 600 ppm he obtained in the field test.



Last week we started finding the little critter in the photograph at right. In our verification field in Vermilion parish we could not look down without seeing rice water weevil adults. This field was treated with Dermacor so we'll get a good evaluation of the product here.

Every flooded field we checked had adult weevils present. We are using pyrethroids, Dermacor and Trebon in different situations. Once the night time temperatures increased they were everywhere. Dr. Stout said he had already started noticing them in his plots at the station. Dr. Hummel has several field demonstrations testing various insecticides on the water weevil. It should be a researcher's ideal year and a farmer's nightmare.



I've had a call or two about green ring or internode elongation. Most of the folks checking rice in the southern part of the state are accustomed to seeing a distinct green ring caused by accumulation of chlorophyll at the first internode to begin the process of elongating. This is most common in water seeded rice because this part of the stem is above the soil surface and is exposed to sunlight.

The seedling at right is also at internode elongation. Note the similarity of the uppermost internodes. No green color is apparent because this part of the stem is below the soil line in drill seeded rice thus is not exposed to sunlight.

Rice seeded by broadcasting then covering may exhibit both forms.