Field Notes
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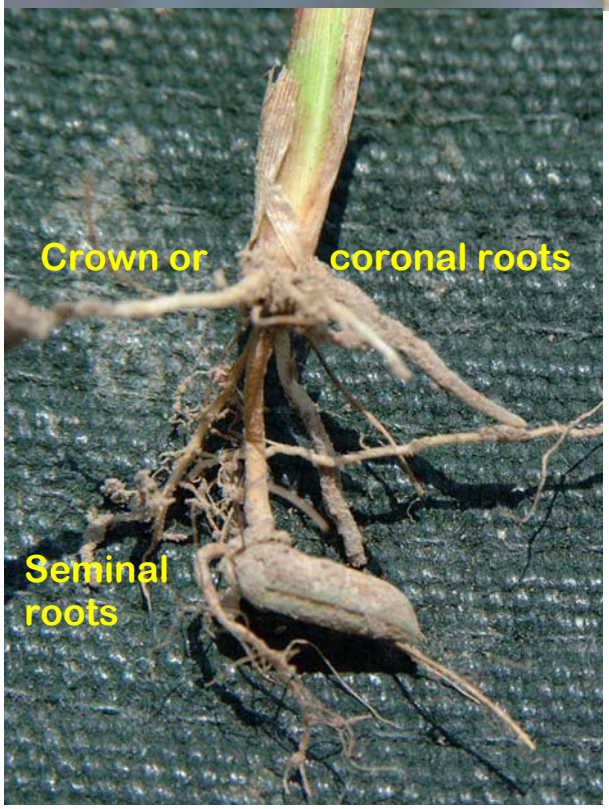
Johnny Saichuk



In the photograph above are classic symptoms of Prowl injury. The seed were placed well below the herbicide, but when the adventitious roots began to form they were in or near the zone where the herbicide was concentrated. As a result they are stunted. The tips are more normal in diameter indicating they are either growing past the herbicide zone or are recovering on their own.

At left is a normal seedling where the seminal roots (near the seed) and the crown roots can be seen. Both are relatively normal. The bulk of the rice root system is derived from the crown roots which are adventitious in nature, that is, they arise from tissue other than root tissue. In this case they arise from stem tissue. It is these roots that are damaged in the plants above.

If anyone can explain correctly the problems depicted below they deserve a prize. I did not say you would get one, only that you deserved one because several of us from the AgCenter and numerous others have all expressed their opinions. It could be localized decline in an unusual pattern or a nutrient deficiency. The spotting on the leaves appears to be potassium deficiency, however more than enough potassium had been applied to the field. Clearly equipment wheel tracks are visible. The question remains, "Why?"

This is one of those problems that have no simple answer. We did apply several nutrients in small plots as well as drain the field. If there is a visible response to any of them I will let you know. I'm betting there will not be. There are so many variables involved; it will be almost impossible to isolate the problem.

One person thought herbicides were involved. Maybe they are. What do the wheel tracks have to do with the problem? Is it compaction, fill, moisture at the time of herbicide application? Fertilizer was applied with a ground rig too. Lots of possibilities and no good explanation best describe the situation.

Last week was the week for herbicide injury calls. The seedlings shown in the photographs above are thought to have been hit with glyphosate drift. The source is unknown and it would have had to travel a long way, but nothing about herbicide drift surprises me anymore. The symptoms are all we have to go on at this point.

A burndown mixture of 2,4-D and glyphosate had been applied about 25 days prior to planting. The 2,4-D rate was a pint per acre. One person who flew over the area said he could see a pattern indicating a relationship between the 2,4-D and the injury, but he also said there were other fields where it had been applied that did not show the injury. There was also a nearby grain sorghum field exhibiting similar symptoms. No 2,4-D was applied there.

Because it had remained very dry following the 2,4-D application is remotely possible that the 2,4-D had not broken down (as I would have expected it to especially given the low rate) and leached downward. Thus the rice came up and did fine until the roots moved into the zone where it had accumulated. I saw this on corn a number of years ago, but the 2,4-D had been applied later on already emerged corn. Could this have set it up for glyphosate injury? I don't know. That is a real long shot.

The tightly rolled leaves are indicative of glyphosate injury. This is another tough one. Glyphosate is the most likely suspect. Tissue samples will be analyzed for both glyphosate and 2,4-D. Once we get those findings we'll let you know.

The burn pattern in the photograph below is much easier to explain. This is in one of our verification fields that started out looking like it was going to be one of our best this year. Two events changed that.

Just after we finished checking the field and made a recommendation of Duet plus Permit an airplane sprayed two sides with herbicide we did not recommend. By the time he saw us trying to wave him off it was done. One pass was along the corn in the left of the photograph the other was on the opposite side of the field.

Before the applicator returned to finish the job with the recommended mixture he sprayed rice elsewhere with another mixture. Either the propanil in the Duet separated and settled on the bottom of the hopper or something from the previous job was still in the airplane because his first three passes injured the rice. Most of it will recover; some will not.

So this is another example of how the verification program deals with "real world" situations just as most farmers have to each year. In fact I told one of the experiment station scientists he could get away with a certain practice because he could drain his plots and flood them in about 2 ½ hours while it took us 2 ½ days to do our fields. I realized then I sounded just like a lot of farmers I have dealt with over the years.