Field Notes

July 11, 2014

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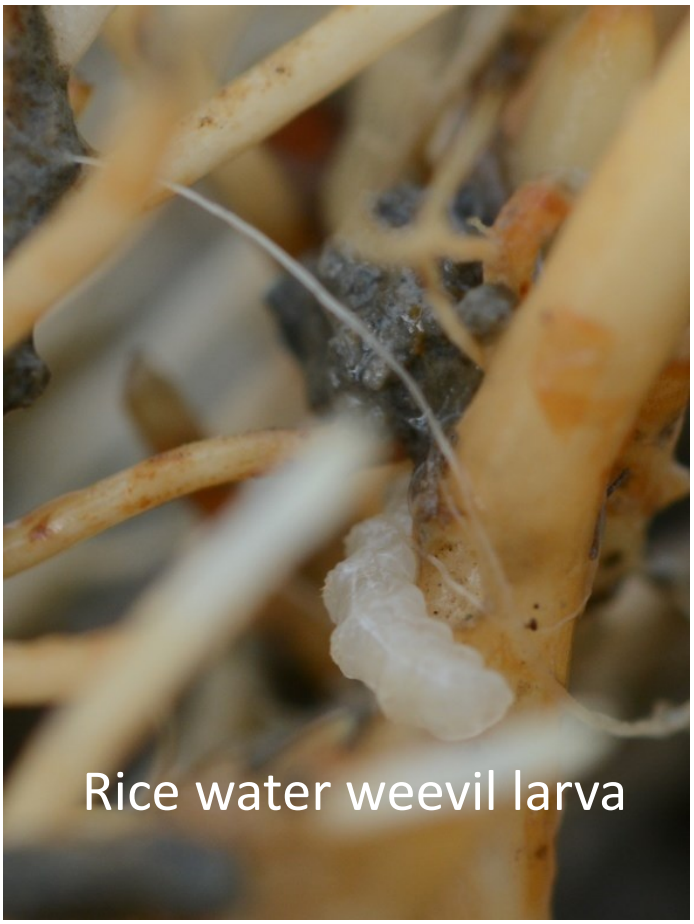
I am not trying to belabor the issue, but I think the issue illustrated below and in a couple of earlier issues of Field Notes is important enough to justify one more discussion of the problem.

When checking our verification field in West Carroll parish this week I took these pictures. When I pulled up a plant to split the stems with the intention of checking growth stage I immediately noticed how easy it was to pull up the plant. With very little effort rice water weevil larvae and puparia were observed and photographed. The point here is not to characterize the insect, it is to emphasize a situation that concerns me.

Both last year and this year the verification fields on this farm had the heaviest rice water weevil adult populations I have ever seen. In both years the fields were planted to a hybrid treated with Cruiser Maxx. Last year I was concerned about the heavy adult feeding pressure and recommended a pyrethroid insecticide about a week after flooding. Later we determined we had missed the egg lay and had lots of larvae on the roots. This year we included an insecticide with the last herbicide application just prior to establishing permanent flood. A week later heavy adult weevil population was noted, but we felt with the earlier spray and the seed treatment we should be okay.

The evidence speaks for itself. Under heavy rice water weevil pressure using the seed treatment insecticides that have rates based on a given amount per 100 pounds of seed in association with the lower seeding rates of hybrid rice just does not provide the control I would like to see. Dermacor is more expensive when used on hybrid seed because its rate is based on a per acre amount. It is too late this year, but I recommended to the farmer that he treat at least some of his hybrid rice with Dermacor next year to see if control is improved.



Last week we got a call from a farmer who also sent a photograph on his phone of what appeared to be Cercospora (Narrow Brown Leaf Spot). Because I could not be sure based on the image and it was on a hybrid I thought it warranted a field visit. The plant shown at left was typical as are the next two photographs first of a leaf and then a leaf sheath. The discoloration that appears to be on the stem is actually on the leaf sheath. When I pulled the sheath away from the stem the stem was clean. Without magnification I thought it was Cercospora, but as soon as I looked through the camera lens I knew something was wrong. I used a hand lens to confirm what I thought was absent. The netted pattern characteristic of the sheath blotch phase of narrow brown leaf spot caused by *Cercospora janseana* was not evident. The photo at right shows the pattern typical of narrow brown leaf spot. Dr. Groth confirmed it was not Cercospora. Nutrient deficiency or toxicity is suspected.

We have chronicled the off-types in this verification field for the last couple of weeks. We recommended spot spraying with glyphosate after two applications of Newpath and spot spraying with Beyond proved the plants were resistant to these herbicides.

In our field in Evangeline parish last year we recommended the same thing for a similar problem.

This is one recommendation that seems like a lot of work, but I can assure you in the long run it will pay off. Had this crop of off-types produced seed this field would have become useless for rice production for the next few years. The time and effort spent here will be realized next year or the next rice crop. Certainly it did not remove all of the weedy rice, but it sure beats what would have happened had it not been sprayed.

Something else might be worth trying when these forms of weedy rice show up. I am using the term Dr. Webster prefers, weedy rice, to differentiate these types from conventional red rice. On one farm an astute grower told me he had several fields infested with weedy rice known to be resistant to Newpath. He and his father decided to plant a conventional variety using water seeding and pinpoint flooding in some fields. He said the difference between those fields and others planted using delayed flood water management was dramatic. He might be on to something.

We have long known that the wild characteristics of red rice enable it to emerge through water more successfully than conventional rice. I personally have dug up red rice that had emerged from about 6 inches below the soil line. I have also followed fields that were flooded all winter, but were full of red rice when drained to plant the next crop.

The difference between some forms of weedy rice and red rice is the degree of “wildness”. By this I mean that red rice has been exposed to selection pressure that has resulted in very good seedling vigor, tolerance to flooding, stronger dormancy and other features that give it the ability to survive under adverse conditions.

The weedy forms of rice may or may not be out-crosses with red rice thus lack many of these wild characteristics. This is especially true when they are derived from hybrids or hybrid crosses with conventional varieties. Even when the out-cross is with red rice these plants do not have the full complement of red rice genes which could make them a little easier to control.

Until the new herbicide resistant system being developed now is ready to go water seeding and pinpoint flooding may be worth trying on at least some fields. If you have noticed a similar effect let me know. If enough observations are made we can draw conclusions with more confidence than a single incident.

While walking through our verification field in Vermilion parish someone noticed the area shown in the photograph at right and asked what had happened. I said I did not know and we walked over to investigate. The term “birds nest” has often been used to describe heavy infestation of sheath blight that causes plants in a roughly circular area to collapse and that is what I expected to find.

Instead we found a real birds nest or more precisely a ducks nest. We believe it belongs to a Fulvous Whistling Duck—a.k.a. Mexican Squealer. A group of these ducks is shown in the photo at bottom right.

Next week I will discuss determining when to drain rice fields in preparation for harvest. Keith Fontenot did a good job of explaining this in his more recent newsletter. In spite of years of experience many farmers have told me this is one of the most difficult decisions they must make and I agree.