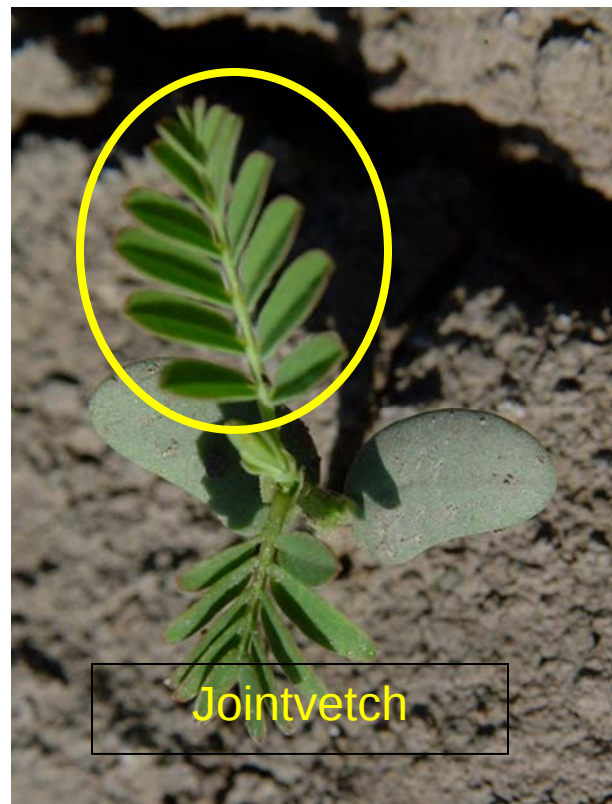
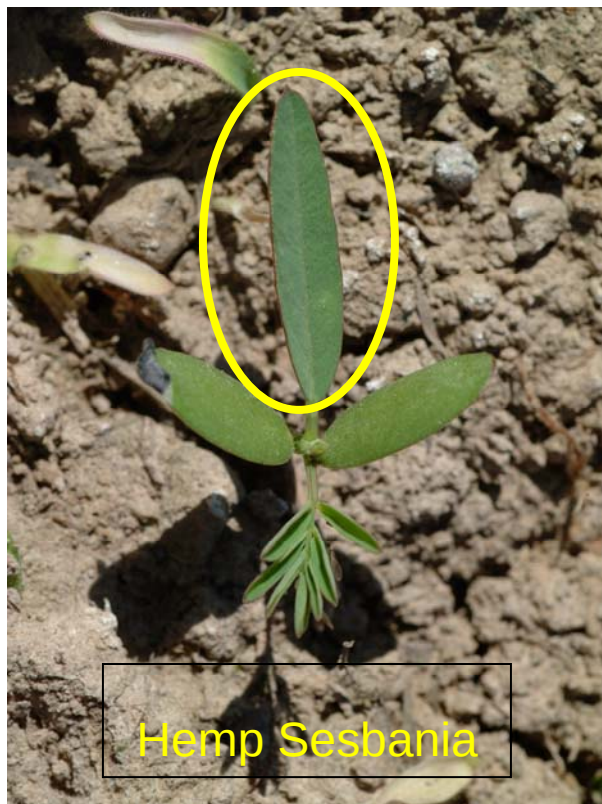


Field Notes
April 29, 2010
Johnny Saichuk



On the preceding page are four photographs of a grass seedling that should be easy to identify. I initially called it Fall Panicum because it has the appearances of Fall Panicum I have come to associate with it. The problem arose when I took photographs with the close-up lens. The membranous ligule in the first picture and the glabrous (hairless) lower leaf surface in the second picture are correct for Fall Panicum. In the lower left photograph it is plain there are hairs present as they are on the lower leaf sheath shown in the lower right photograph. According to all references I have Fall Panicum is supposed to be glabrous or to occasionally have pubescence on the upper leaf surface of more mature leaves. Last year a similar seedling was brought to me. I planted it. When it matured it was Fall Panicum. I followed this with a visit to the field where the plant was collected. It still looks like Fall Panicum to me. For now that is how we are handling the herbicide recommendation. I plan to follow up as the crop matures.



Last week I included the photograph of Jointvetch shown above right. Someone suggested I should have included one of Hemp Sesbania next to it rather than describe the differences. So here they are; Hemp Sesbania to the left with its simple first true leaf and Jointvetch to the right with its pinnately compound first true leaf. Both are two leaf seedlings, though Jointvetch is a little more advanced. Some folks call Hemp Sesbania “Coffeebean” and some call Jointvetch “Curly Indigo”. Those common names are incorrect and you might not find the weed listed on the herbicide label if you use the wrong name.

On the next page are photographs of a one-leaf Dayflower seedling (left) and cotyledon stage Texasweed (right) just for your information.



At right is a rice seedling exhibiting classic Facet injury symptoms. I was called to the field because Newpath drift was feared. When I noticed the spray pattern and the associated symptoms, most notably the “fish hooking” and I was told Facet had been applied I recognized it. When we used a lot of Facet several years ago we saw it pretty often. I have received two kinds of complaints about herbicides lately; injury to rice and poor weed control. Both may be the result of the same thing – cold weather and dry soil. Low temperatures and inadequate moisture reduce the ability of rice plants to metabolize herbicides and at the same time reduce efficacy in weeds because they cannot take up the herbicide. This is especially true of soil applied herbicides. Waiting for rain instead of flushing can often be more expensive than flushing.





The series of photographs on the preceding page warrant some discussion because they depict a situation that involved several scientists in at least two states without coming to a positive conclusion.

The first three photographs present what was seen when Keith Fontenot and I visited the field in Evangeline parish last week. Large areas of a previously acceptable stand of rice were gone. Along the borders of the field were piles of seedlings. Among healthy seedlings were more seedlings.

Usually when I see what appear to be clipped seedlings I expect it to be crawfish damage. I have seen rice seeded into crawfish ponds be completely destroyed if crawfish numbers are high and water remains on the field following seeding. In this case no crawfish were observed. Strike one.

Sometimes heavy black bird feeding will cause the same thing especially in water seeded rice. The birds pull up the seedling by the seed, shake the plant from the seed then eat the seed leaving up-rooted seedlings to float and accumulate on high spots and edges of the field. Seeds were still present and black birds were not. Strike two.

We started studying seedlings in the margins of the affected area where some standing water remained. On a few seedlings we found the critter shown in the last photograph. Thanks to the microscope camera set-up of Dr. Groth (which probably cost more than my pickup truck) and the assistance of Dr. Hummel and Dr. Pollet we were able to identify it. It is a midge; probably a seed midge. The damage is atypical.

From the field we spoke to Dr. Hummel about it. Then we called Dr. Cass Mutters in California where seed midge are more common. I described the symptoms and he said to look for Tadpole Shrimp because seed midge do not usually cause the type of damage we were describing to him, but Tadpole Shrimp would. We could not find Tadpole Shrimp which have not been reported in Louisiana. They have documented them in Missouri, but that is the only southern state so far.

Microscopic examination of some affected seedlings revealed an area at the junction of the shoot and seed that had been eaten away. We know seed midge will feed on germinating seeds hollowing out the embryo of the seed, but we have never seen this type of injury before. The only conclusion we could draw was that it was seed midge injury, albeit very unusual damage. Until Dr. Hummel is able to get a positive ID on the midge larvae we are just guessing. This is an example of using a process of elimination to come to some conclusion. Without absolute proof these situations always bother me.