

Last week we ran into so many different problems it has been difficult to decide what to discuss in this issue. Most of the problems were not in verification fields which is a relief to us. So far the biggest problems in our verification fields are weed control decisions and flushing because we have not had any significant rainfall.

There are several reasons for flushing rice fields among which are: herbicide activation, providing moisture for germination and providing moisture to soften a surface crust. We have flushed fields for all three of the reasons listed this year. In all of our verification fields drill planted on heavy soil we have had to flush to provide moisture for germination and on some to soften the crust. I expect we will continue to have to flush until we establish permanent flood unless the weather pattern changes. Below are a couple of photographs of seedlings emerging through a thick surface crust. The seedlings depicted here are OK. Some had started to elongate then folded over. Once the seedling bends it is difficult to get it to come on up even if the crust is softened.

We discussed the use of a rotary hoe or cultipacker to break the crust physically at one location, but because we already had Command herbicide applied we did not want to disturb it so elected to flush instead. We'll see this week if we made the right decision.

Seedling emerging through crust.



Seedlings exposed after removing crust.



We got a call last week by a seed dealer who wanted us to take a look at a poor stand in a farmer's field. He knew the germination on that lot was excellent and had no problems with it on other farms, but wanted to know why this farmer had problems. It turned out to be seed midge which I had not seen in the past couple of years. Since then other seed dealers have told me they have seen quite a bit this year.

Typical of seed midge injury are two characteristics. Usually the germ (embryo) end of the kernel will have a greenish tint associated with algal growth. Closer examination of the germ will reveal the midge damage. As the seed begins to germinate the midge feeds on the tender tissue because it cannot penetrate the hulls. It will continue to feed until most if not all of the embryo has been consumed then moves to another seed. At least it appears that is what happens because the endosperm which makes up most of the seed is usually intact. The damage to the embryo is best seen with a hand lens, but if your eyes are still good enough to read the fine print of a legal document without glasses you can probably see it without magnification.



We also received more than one call about Newpath being applied to conventional rice either as a consequence of drift or direct application to the wrong field. In one case Localized Decline (formerly referred to as mystery malady) was suspected. The age of the plants in the field aroused suspicion that something else was the culprit rather than Localized Decline. As soon as Dr. Webster took one look at the field he knew it was Newpath injury. We were able to identify the source of the drift as well as characterize the injury based on symptomology. On the following page are photographs of the field, a rice seedling, a rice leaf and a leaf of a grass seedling. Visible on the grass and rice seedlings is interveinal chlorosis (yellow between the veins) which makes the leaves look striped. The other seedling shows the tightly wrapped leaf sheath and a more severely damaged leaf. The field as a whole exhibits a wind pattern typical of drift.





The leaves of the grass seedling above left and rice seedling above right show interveinal chlorosis causing the leaves to appear striped.



The above seedling exhibits the tightly wrapped



The field above exhibits a pattern typical of wind movement across the field from the foreground to the background. In this case the wind carried a light dose of Newpath across the conventional rice. Damage was light enough to expect recovery.

sheath typical of Newpath injury to conventional rice.

With all of the other problems we ran into last week one more was blackbird feeding on recently drilled rice. We encountered this in northeast Louisiana, an area of the state beginning to experience more and more blackbird problems. Most of the time the injury is to headed rice in the fall, but last year they had damage during the milk to soft dough stages too, which is much earlier than normal. Damage to seedling rice has long been a problem in south Louisiana though much less so in the northeastern part of the state. Now it looks like they have that too. So far damage has been light.

Usually the first indication of bird feeding on drilled rice is flipped over peds of soil. On occasion I have seen it bad enough to resemble the work of a rotary hoe. Careful examination of the soil exposed will usually reveal damaged seeds and seedlings. The birds appear to squeeze the seeds to get to the endosperm. In the process they damage any young roots or shoots and ultimately kill the seedling.



The photograph above left shows the flipped up soil and exposed seeds and seedlings associated with blackbird feeding. The seedling in the photograph to the right has a crushed seed from which the endosperm, which is mostly starch, has been extracted.