



I expected to seed beat up fields this week after the strong winds and low temperatures of last week, but I was surprised by the amount of seedling disease I saw.

The top two photographs are of water mold caused by *Achlya* sp. According to Dr. Groth, if you can see the mycelium then it is *Achlya*. Our two most common seedling pathogens are *Achlya* and *Pythium* and both usually attack germinating seeds. Seedlings that make it past that point usually survive because these pathogens are fairly weak pathogens.

The seedling on the right was affected much later. The dark brown area at the base of the plant indicates seedling disease. We did not get the fungus identified, but it is most likely either *Rhizoctonia* or *Cercospora*. These two genera of fungi are better known as causes of Sheath Blight and Narrow Brown Leaf Spot. They are capable of killing well established seedlings under the right conditions. In this case the low temperatures and windy conditions of last week presented the opportunity.

The field affected by *Achlya* will have some holes, but will not be replanted. The field affected by the seedling at right did need to be replanted.





We got our first glyphosate drift complaint this week. If you look at the top photograph it looks like there is not much of a problem. That is the view you would get from the pickup truck. The second photograph reveals what appears to be a very uneven stand. Both assumptions would be wrong. The dark green relatively healthy plants are nutsedge—among the heaviest population of nutsedge I have seen since dry seeding became the norm and water seeding acres decreased. Glyphosate does not do a great job on nutsedge at a full rate and it definitely does not work at significantly reduced rates.

The rice seedling at right reveals the effect of drift rates of glyphosate on rice. Dr. Webster often has stated that one of the ways to distinguish glyphosate injury from Newpath injury is to examine the growing point. If the growing point is dead or injured while the older leaves are less affected it is likely that the culprit is glyphosate. If the leaves show the effects more than the growing point it is likely that it is Newpath.

In this cases the variety is a Clearfield variety which made it easy to eliminate that problem. It is evident that the newest leaf is affected more than the older leaves and that the growing point that is associated with the newest leaf is also affected. Most of the field will have to be replanted.



Seedling desiccation is the problem I expected to see most this week. We did see several cases, not all were directly related to the weather, but all were exacerbated by the weather, especially the wind. I think the wind did more damage than the low temperatures. The first photograph of desiccated seedlings occurred because the field was sprayed with Stealth plus a surfactant plus Command plus Newpath on Monday the 13th. That night the temperature dropped and the next day the wind blew strongly all day. Because Stealth is an EC (emulsifiable concentrate) formulation it has surfactant type properties which in combination with the included surfactant and the wind did an excellent job of breaking down the cuticle and causing desiccation. If you look carefully at the photograph you will notice the most severely affected seedlings are in the crack in the soil. This increases the effect of the wind because the roots do not have a cuticle at all and are not designed to be exposed to the air. The only thing we could recommend was flushing and evaluating it in a few days. I expect many of the plants to recover.



At left is another photograph of seedlings in a crack in the soil exhibiting signs of desiccation too. In these situations flushing is recommended not because the rest of the soil is dry, but to cause the soil to swell and the cracks to close.

The seedlings in the last photograph were dug up from the first field along one of the crack lines. Note the very uniform planting depth. Those seedlings with the most root exposure are most affected by the drying conditions.





I have addressed “potato chipping” in rice fields before, but the relationship of this phenomenon to seedling injury prompted me to visit it again when I saw it this week. If you look carefully at the center photo you can see the layers beginning with clay, then silt at the top edge. Sand crystals are visible on the bottom of the soil in the middle picture and the third photo is a close-up of the bottom side of the chip.

Below is a photograph of a seedling that is likely an F_2 from a previous hybrid crop or of an outcross of a hybrid. The distinct purplish coloring provides the first hint. The seed is not a distinctly medium grain we would expect of red rice. The distance between the scored lines in the soil is about 2 inches. This seed emerged from greater depth than the drilled seeds and outside the drill row

