Cornell Cooperative Extension

Northwest NY Dairy, Livestock and Field Crops Program

CROP ALERT

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Sudden Death Syndrome and Soybean Cyst Nematode in Soybeans

In the past week I have confirmed SDS in soybean fields in Seneca, Wayne and Genesee Counties. See below for more on SDS and SCN from Jaime Cummings, NYS IPM program.

It has been an optimal year for sudden death syndrome (SDS) in some parts of the state. Reports and diagnoses have been received in western and northern NY fields. This disease favors cool, wet spring conditions, followed by hot and dry weather. The infection occurs very early, at germination and emergence, but symptoms rarely appear before reproductive stages and pod filling. Symptoms are most obvious as interveinal chlorosis on the leaves, and can be confused with other diseases that have similar foliar symptoms, including brown stem rot and northern stem canker. Splitting the stems of an SDS infected plant will reveal a white pith with discoloration of the vascular tissue of lower stems (see photo).

Photo courtesy of Jaime Cummings

Few varieties adapted to our region are available with moderate resistance to this disease, and rotation is not very effective since the pathogen can survive for many years in the soil and on other crop debris. The ILeVO seed treatment has shown good results in trials from other states, and may be your best bet for managing SDS in fields with a history of the disease. Improving drainage and compaction, and delaying planting until soils have warmed up, in addition to planting moderately resistant varieties (where available) with seed treatments, are good IPM practices for fields affected by this disease.

It's also important to note that there is a synergistic effect of SDS and the soybean cyst nematode (SCN). If you have a field with a history of SDS and lower yields, this would be a good candidate for SCN testing. We are approaching the optimal time to take soil samples for SCN testing. There are many public and private labs available for SCN testing. The Cornell University Plant Diagnostic Clinic offers this service, and there are a number of labs and clinics that specialize in this service and accept out of state samples. The most highly recommended testing facilities include the University of Missouri SCN Diagnostics lab, the University of Illinois Plant Clinic, and Midwest Laboratories. Please see a complete list of testing labs and other information on SCN provided by the SCN Coalition:

https://www.thescncoalition.com/application/files/7915/2581/0504/Public_labs.pdf

https://www.thescncoalition.com/application/files/1015/2581/0504/Private_labs.pdf

https://www.thescncoalition.com/

Cover Crops Following Corn Silage

It's September and the first corn silage fields are being chopped. What a difference a month can make when it comes to planting cover crops. Following winter wheat harvest, we had lots of options, particularly in the first half of August. As we go past Labor Day, many of those crops, such as clovers, peas, radishes, and oats, will not gain the biomass needed to be an effective fall cover. What's left? Planting winter cereal grains are our best option after corn silage in NWNY.

Cereal rye is always the safest cover crop when it comes to establishment and biomass accumulation in the fall and spring. However, it can also be a nightmare in the spring if weather conditions do not allow for it to be sprayed, rolled or plowed under in a timely manner. Rye seed does germinate at the lowest soil temperatures and would be the best bet on those later harvested fields.

Winter wheat also establishes well in the fall and makes good cover. It does not grow as fast in the spring and therefore provides a wider window for management. If you can find some bin-run wheat seed, it can also be a cheaper option. Seeding rates for these cereals should be about 120 lbs. per acre (2 bushels). I would go a little heavier if it is bin-run wheat.

Winter triticale is a hybrid between rye and wheat. It is the best option if you plan on harvesting the cover for forage in the spring. This has become a very popular option to increase forage inventories and has shown to be a good quality feed. Planting depth should be 1.25 to 1.5 inches deep at 100-120 pounds per acre.

Getting Ready to Plant Wheat

Weather permitting, the first early group soybeans could be harvested this week. That means winter wheat is not far behind, so here are a few quick reminders. Start off around 1.3 million seeds per acre in September and increase as we get later.

	Seeding Rate (million seeds/acre)				
Soil Condition	Sept. 15	Sept. 25	Oct. 5	Oct. 15	Oct. 25
Good	1.33	1.45	1.57	1.69	1.8
Average	1.45	1.57	1.69	1.8	1.93
Poor	1.57	1.69	1.8	1.93	2.06

Live seed % = Recommended rate / Percentage of live seed = Rate/acre
Example: 1,350,000 seeds / .90 live seeds = 1.5 million seeds/acre

To figure out how many pounds per acre, use the following formula.
Seeds per acre / # seeds/lb. = lb./acre *Example: 1,450,000 / 13,000 = 111.5 lb./acre*

I have seen an increase in the number wheat growers putting down a starter with great end results! Phosphorus is very important and winter grains need 15 pounds for strong seedling establishment. Research out of Ontario has shown an average of 7.5 bu./acre increase from using phosphorus in the starter, http://fieldcropnews.com/2018/09/winter-wheat-establishment-its-all-in-the-details/. This helps with fall tillering and winter survivorship.

CROP ALERT

Gibberella Ear Rot

Giberella Ear Rot has been identified in the area and is caused by a fungus known as *Fusarium graminearum.* The pathogen overwinters on corn and wheat debris. Similar to other types of molds, spores produced on the debris cause infection during silking. This fungus is more prevalent when cool, wet weather occurs during the first 21 days after silking, which is what we have been experiencing in NWNY.

Prior to harvest you will want to inspect 10 ears in several places of the field by peeling back the husks and looking for pink to reddish mold as pictured. Infection begins at the ear tip and develops downward towards the base. Fields with significant amounts of Gibberella Ear Rot should be harvested as soon as possible and handled separately. Immediately after harvest, if you are storing for grain, it should be dried to 15 percent moisture to help prevent further fungal growth and mycotoxin production.

Photo Credit: Pioneer

Livestock Danger

The pathogen that causes Gibberella Ear Rot can produce two mycotoxins within an infected kernel: deoxynivalenol (causes animals to reject feed and regurgitate) and zearalenone (has estrogenic properties that can cause infertility, abortion, and other breeding problems). These mycotoxins can affect the health of many animals. If Gibberella Ear Rot is present, assume that the mycotoxins are present as well. A test will be needed to determine the level of contamination.