If you would like to be added to this mailing list, send a request to Molly Werner at werne022@umn.edu. This newsletter and the advice herein are free. You usually get what you pay for.

**Crop weather**

Rainfall, air and soil temperatures, degree-days, soil moistures, and other current and historical weather data for a little spot about two miles west of Lamberton, MN can be found at the University of Minnesota *Southwest Research and Outreach Center (SWROC)* website: [http://swroc.cfans.umn.edu/WeatherInformation/index.htm](http://swroc.cfans.umn.edu/WeatherInformation/index.htm).

At the SWROC, 800 degree days (Base 50F) have been accumulated from May 1 through May 27, just a little behind normal. The SWROC is fortunate to have only received 9.19" of rain.

Larger corn is at 8 collars. Some soybeans have started to flower.

The toll that wet soils are taking on corn and soybeans is becoming more, rather than less visible.

PRE herbicides have been working well but wet fields are starting to affect weed control programs. Some volunteer in soybeans corn is now 6 leaf and large enough for corn rootworms to complete development. It isn't helping with diseases like Goss’ blight and wilt either.

SCN are present on early planted soybean roots now. Where wet, severe root rots may starve a few nematodes. Non encysted SCN are good swimmers tho and feeding can open up root systems to pathogens, especially where wet.

One of the benefits of the spring's surplus rainfall are the mosquito and black fly species that are making crop scouting and other outdoor activities uncomfortable through much of the day. The deerflies and horseflies should start showing up any day now.
There have been some reports of millipedes in soybeans and corn to the east in minimum till fields.

**Corn rootworm**
Egg hatch is started and Ken Ostlie has reported seeing some larvae at the Research and Outreach Center at Rosemount, MN. Egg hatch should not yet be 50% completed. One degree day model indicates we are close to normal in hatch progression. Rootworm larvae are susceptible to drowning until they can enter a root.

**Potato leafhoppers**
Moved into second cutting SWROC alfalfa in a big way last weekend. Reinforcements may have arrived with storm systems.

**Sick aphids**
This will bring a tear to the eye of some. I have been seeing a large proportion of grain aphids killed by entomopathogenic (insect disease causing) fungi in small grains. Populations are low in the limited wheat stands I have scouted and primarily composed of bird-cherry oat aphids.

The small founding colonies of soybean aphids on SWROC soybeans have suffered from heavy rains and high winds. Not many left where colonies were flagged. Another tear-jerker.

**Things that go bump in the night**
A look at a portion of the insects in the morning's black light trap. One of the piles of moths is armyworm. **Large yellow underwings**, *Noctua pronuba*, (left pile o' moths) started to show up this week.

The larvae of this introduced western European moth, sometimes known as winter cutworm, has been known to cause damage to winter grains and alfalfa during late fall through spring in some northern states (Michigan has had a large outbreak). While moths are commonly found in the SWROC light trap, larvae have been rarely seen here. The insect pins in the background indicate that some specimens have donated their bodies to science - or whatever it is that the IPM crew is involved in.
Bare ground.
Consider long-term issues like **soybean aphids** and **SDS** when filling in drowned out spots in corn. Planting soybeans will eliminate the rotation out of soybeans and can propagate soybean pest problems. Bin run oats or wheat is relatively inexpensive and will help prevent future crop nutrient problems and provide some competition for late emerging weeds. The best plant to plant will vary by nematode, pathogen, weed and economic pressures. What to plant, of course, is a mute argument if waters do not recede.

**Alfalfa weevils**

Source: http://agwx.soils.wisc.edu/uwex_agwx/thermal_models/alfalfa

Pupation begins at 595 degree days and should be well underway in much of Minnesota. Larger alfalfa weevil larvae may still be present, and are still present based on reports, in some central MN fields. Their prolonged presence may partially be explained with Alfalfa weevil egg laying spread out over a period of time and parts of the alfalfa field and canopy differ in temperature. The degree day model can come close but cannot replace field scouting in determining insect stages.
Tiny flies in soybeans
There are numerous small black flies that are very abundant in soybeans now. They are members of the family Chloropidae, A.K.A. grass flies, A.K.A. frit flies.

Patrick Beauzay at NDSU provided a probable species ID of *Malloewia abdominalis* (Becker) and graciously provide a taxonomic description. This is only a tentative species ID. Identifying flies, or most insects, from a photo is usually risky.

I am not sure if the food source of the larvae of this species has been documented. Many members of the family feed on decaying vegetation or other organic material. Other Chloropids are predatory, some bore into stems of grasses and other plants, and still others feed on skin and eye secretions (eye gnats) as adults. I would bet on choice number one for these flies.

I see nothing to suggest that these flies pose any sort of imminent threat to Minnesota soybean production.

Drones

One of my student interns father is a seed dealer. He agreed to let us his drone and Aaron's younger brother to get an aerial view of some of our experiments.

It was a handy tool for seeing injury symptoms and an aphid eye view of soybean aphid experiments.

The upper photo shows some of the weed management trials. In the recently harvested alfalfa to the left, you might be able to see the lingering benefits of intensive management in a corn and soybean high yield trial that concluded in 2010.
The photo on the left shows how the blades of these small, battery powered helicopters can be useful in thinning out the populations of mosquitoes and other flies.

A skyful of drones could provide serendipitous mosquito control that could be more environmentally friendly than mass insecticide sprayings of real or imagined soybean aphid problems.

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