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.

As of September 5th, the SWROC was at 2156 degree days base 50 F and 16.34 inches of rain since May 1. This is ahead of the long-term average for rainfall and about 5 days behind long term average in degree day accumulations. Some of the fall and winter weather forecasts are not looking very pleasant. They can always be wrong.

**Corn rootworms**
Both northern and western corn rootworms continue to emerge.

Northern corn rootworm, in particular, are more abundant this fall at the SWROC than for many years. Northern corn rootworms seem to be increasing, even in fields that had nearly 100% western corn rootworm the past years. They are present in corn fields but the greatest...
aggregations seem to be on weeds and other pollinating flowers. Native and cultivated sunflowers seem to be favorites. Westerns, on the other hand, are for the most part seem to be sticking to corn fields and like northern become increasingly abundant in some fields over the past three weeks. Both species are occasionally seen in soybeans.

At this point we still believe that the northern corn rootworm beetles are returning to corn to lay eggs. Unfortunately, there is no reason to expect that the frequency of extended diapause trait in the northern corn rootworm population has declined and 2014 field observations reinforce the fact that the trait is still present.

Do not assume that you will not have a corn rootworm problem in 2015 unless you have been keeping track of beetles in your corn fields, including late in the season for the last couple years.

These late emerging beetles make scouting difficult and predicting problem fields difficult. It also makes assessing root damage a challenge. We need to re-rate at least one corn rootworm trial because of later than usual root damage.

**Fall armyworm**

Fall armyworm larvae are unusually numerous in some corn.

The larvae can be recognized by the inverted white Y marking on the front of the head.

This insect migrates into Minnesota, usually late enough in the season to cause few problems.

The fall armyworm has a wide host range. On corn, the larvae feed on corn leaves and ears.

Most dent corn is probably far enough along to have minimal damage and some Bt traits offer protection against this insect. Late planted dent corn and sweet corn could have some problems from this insect and from ear feeding corn earworms.

The SWROC pheromone trap has captured numerous corn earworm, also a migrant, the past few weeks.
Grasshoppers

Watch the edges of soybean fields near small grain stubble and alfalfa fields for grasshoppers. We are seeing moderately high numbers in some fields. Several species prefer to lay eggs in the firm soil of alfalfa fields and the edges of soybean fields. Keep these higher populations in mind next spring.

I have heard of one field where grasshoppers had moved into soybeans from small grain started to feed on pods. Make sure you have a problem beyond the first couple rows before reacting.

Corn diseases

Northern corn leaf blight lesions. The smaller lesions are common rust.

Northern corn leaf blight is highly visible on some susceptible hybrids. Some of the larger lesions can be confused with Goss's blight and wilt. Look for the dark fruiting structures in the cigar shaped lesions, particularly when humidity is high.

The extent of common rust infections if very unusual. The cool, wet weather has been favorable for rust infections and dent hybrids, normally considered safe from rust, have
been infested at unusually high levels. Is this merely a result of favorable weather or has the genetics of the common rust fungus or corn changed?

An early frost and wet fall can lead to some issues with ear molds. Keep an eye open.

**Soybean aphids** continue to persist in some untreated fields. You should have already made a decision.

**Uneven soybean maturity**

Uneven yellowing of soybeans within a field may not be normal maturation.

![Uneven soybean maturation caused in part by soybean cyst nematode (SCN).](image)

Is it moisture stress from earlier in the summer, root disease brought on from wet feet this spring, iron deficiency, soybean cyst nematode symptoms, soybean aphid injury, do you have a disease hastening leaf drop? There are plenty examples of all of these in SW Minnesota soybeans this September. Where you are unsure of the cause it may pay to investigate.

SCN should be considered if you see uneven soybean growth. Look at roots for the presence of female SCN. If they are not found but you still suspect their presence, take a soil sample for SCN analysis from the affected area. Avoid sampling only the worst soybeans.

Sometimes SCN interact with pathogens. Yellow and senescing leaves at the top of the plant before lower leaves have yellowed can be a symptom of top die back.

I looked at soybeans today that had unusual lesions on the surface of some pods combined with the premature death of top nodes.

In the most severe cases, seeds were diseased inside the pods.

I am not sure what caused these symptoms at this point and will get some samples to U of M Plant Pathologist for examination. One possibility is a very bad case of
Anthracnose (*Colletotrichum*) or *Phomopsis/ Diaporthae* spp. Anthracnose and some *Diaporthae* fungi produce distinctive fruiting structures on dead soybean stems.

I also do not know how widespread these pod symptoms are with respect to the yellowing areas of soybean fields in SW Minnesota. In this field, the symptoms were related to crop rotation. There was a definite difference in symptoms by variety. There was yield loss from this disease and I presume that seed quality would be affected as well.

Plants were stunted. Root health was poor but SCN were not abundant on the root systems.

Soybean aphids had been in the field previously but these symptoms are different than the stunting, leaf distortion and potassium deficiency symptoms on the upper part of the plant typically seen from that insect.

There are many yellow spots in soybeans that look similar from the road. They may be worth a look to determine the cause.

*This does not directly involve crop production but you may find the following interesting anyhow...*
Migrating monarchs and presumed migrating green darner dragonflies came through Lamberton today. In addition to the included photos, the monarchs can also be seen on video at http://youtu.be/32usE8vikxA. It is the largest congregation of these butterflies that I have seen for many years. Thousands were lounging in a grove at the SWROC readying themselves for the trip south.

The dragonflies are a bit harder to see but can be seen at http://youtu.be/yOpwqeNRQqc. The small red and yellow meadowhawk dragonflies are also abundant now.

Insects can be good at camouflage. Ambush bugs blend in with the flowers they hide in waiting for prey. Look at the mantis like forelegs. The tiny plant hopper looks like it may be trying to mimic a diseased leaf. Maybe it knows something.

Happy trails,

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Migrating Monarch butterflies - A stop at the SWROC 9/08/2104

Green Darner Dragonflies SWROC 9/08/2014  Photo: Emily Neperman
An ambush bug couple on a Jerusalem artichoke blossom

Plant hopper - detailed leaf mimicry