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.

The SWROC location accumulated 579 Growing Degree Days (base 50°F) from May 1 through June 15 compared to 597 historic average for the period (about 1 day behind average). For those of you that planted earlier, 29 GDD were accumulated from April 15 to May 1. As we approach the longest day of the year, fields that have canopied can, and will, take full advantage of the light.

We have had 7.29 inches of precipitation since May 1st; this is over 2 inches above long-term average. We have had 9.56 inches of precipitation since January 1st.

The warmer soil temps, near or above 70°F will favor different fungal root pathogens than earlier in the season if wet conditions continue. For example, Rhizoctonia has now started to appear on some soybean roots. We currently have a small amount of this root disease at the SWROC. Our informant, "Deep Throat", sent a picture of some seriously diseased soybean roots taken on the eastern front.

Some crop stages and notes for earliest planted/emerged crops are:

Corn 8 collars
Corn growth is now rapid and many fields have started to close rows. In general, the crop is looking good.

I have visited with several folks on strange symptoms on corn. There were some issues with waterlogged soils and poor root development that have subsided. In some other cases, soils on the alkali rims are more effected but the common denominator seems to be very loose soil. Some detective work is still in progress but the answer might be as simple as poor soil to root contact and how it relates to moisture and oxygen contact and root function. This is why I get nervous when I hear "fluffy seed bed".
Corn borer moth captures have been very low in the light traps reporting in 2015. [2015 corn borer and corn earworm trap data for MN can be found here.](#) You may want to start scouting non Bt-corn for small "shot holes" caused by feeding of small larvae. Focus on largest fields in the area first.

**Soybean V4 for very early planted**
The 1st generation of SCN females (cysts) are begin to emerge from the roots of early planted SW Minnesota soybeans. There will be 2 or 3 more generations in SW Minnesota. Don't just assume the yellowing of your SCN resistant soybean field is from herbicide or IDC. Check root systems a few times this growing season.

**Green cloverworm**
Upon seeing some small round holes in soybean leaves, I thought I might have stumbled upon and old adversary, the bean leaf beetle.

![Green cloverworm on soybean leaf](image)

After a quick look, it was apparent that green cloverworm larvae were causing these holes and more significant damage to unfurling new leaves. The larvae are easily identified by four sets of prolegs (rear legs), longitudinal narrow white stripes and the habit of thrashing vigorously when disturbed. The larvae I observed were far from economically damaging levels.

On the other hand, the bean leaf beetles have been very, very scarce in soybeans at the SWROC for the past 5 or 6 years.

**Soybean aphid**
I am now finding a few soybean aphids in all the SWROC soybeans with two or more trifoliates and found aphids without too much effort in Brown County as well.

I have also had reports of soybean aphid sightings in Yellow Medicine, Cottonwood and Dakota Counties and suspect other areas have fields with early populations. Kelly Tillmon mentioned finding aphids in eastern South Dakota as well.

The early soybean planting this year probably helped colonization success as aphids moving from buckhorn found numerous emerged fields to colonize.

Once the first round of soybean post-emerge herbicides winds down, it might not hurt to start checking a few indicator fields (fields where aphids tend to become problems early). We will soon begin to see whether or not this early colonization success will lead to populations needing an insecticide intervention or just more well-fed ladybeetles.
I wonder if I can find a correlation with post-emerge herbicide products and aphid populations. The formosafen and lactofen could be giving aphids indigestion… or a rash.

**Spring wheat** *headed - flowering*
Aphid populations have declined. Aphid control after flowering is not recommended. Some headed spring wheat has lodged. *Pay close attention to field edges and any lodged areas for armyworm.*

**Oats** *headed - flowering*
Some very small infection centers of barley yellow dwarf virus (BYDV) can be found but incidence is much lower than the previous few years at this growth stage. The oats and BYDV infected plant in the photo are a later planted organic oats crop. While BYDV infections might still occur, symptoms and yield loss are usually less with late infections.

On SWROC oats, crown rust is currently hard to find.

**Alfalfa** *Re-growth of second crop*
Most re-growth is 8-10 inches or less depending on when it was cut and how long it lay under a windrow.

At the SWROC, small round cocoons can be found near the base alfalfa plant indicting that alfalfa weevil larvae have pupated.

Potato leafhoppers, plant bugs, pea aphids and even a few spotted alfalfa aphids are presented but at less than economic numbers and beneficial insect populations are good. Your fields may be similar… or not.

**What is it?**
Some of you may know what these are and some of you might have seen the following insect and plant and wondered what they are. I’ll give the answers in the next issue. There are no cash or other prizes for guessing these correctly but feel free to buy yourself something nice if you think that you know what these are!
#1 These small gray flies (about 1/4 inch long including wings) have been very common in some localized areas southern Minnesota over the past couple weeks. The flies are often infected with a species of fungus and climb to high points to die (I usually can find a few on asparagus fronds). The fungus infection creates a sort of insect zombie and, from the heights, fungal spores are better able to disperse to new victims. The larvae feed on organic material and members of this insect family can infest soft plant tissues including roots and germinated corn and soybean seeds.

#2 This vine forming perennial weed goes by several common names. It is easily transplanted or re-grows from small fragments of root systems, making control of established populations by tillage or herbicide difficult. The buds shown in the photo will develop into somewhat attractive funnel shaped white flowers. While the photo shows the weed in a grass pasture environment this plant also invades fields, gardens and lawns.

The incomplete answer to last week’s specimens

#1 This specimen is one of several Plusiine looper species. The larvae are hard to identify to species and the task is beyond my meager taxonomic skills. Possible candidates in this group of Noctuid moths are alfalfa, celery and cabbage and soybean loopers. Loopers occasionally can cause problems in some vegetable crops but are not generally of concern in SW Minnesota field crops or forage crops.

#2 The plant in the photo is Dame's rocket, Heperis matronelis. The four petalled flowers and long seed pods place it in the Brassicaceae (formerly known as Cruciferae) family along with mustards, cabbages and radishes. It is sometimes confused with the unrelated, native, woodland phlox, Phlox divaricata.
Happy trails,

Bruce Potter

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