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/ under the tab for weather.

As of August 31, we are about average on degree day accumulations since May 1. The SWROC has accumulated 2064 GDDs compared to 2148 long-term average. For those of you that planted earlier, 29 GDD were accumulated from April 15 to May 1.

Over the same May through August period, the SWROC has received 18.77 compared to a 14.09 long-term average.

Warm nights are usually not conducive to corn and soybean grain fill. The recent hot, humid weather is pushing maturity. This will be an early harvest unless September rains keep folks out of the field.

There are pockets where dry or overly wet conditions have reduced yields but, in general, the 2015 crop has good potential.

Corn
The milk line is moving down. Early-planted, short season hybrids are physiological maturity (black layer).

Some premature death of corn is being observed in SW Minnesota. This may
have a genetic/physiological basis in the case of some hybrids, but root, crown, and stalk rots are at play in others. Corey Sinn sent a picture of the root system of a plant that had died prematurely. It shows a reddish coloration in the roots coloration very suggestive of *Fusarium*.

Stalk rots directly reduce yield by stopping grain fill. Indirectly, they reduce yield by poor harvestability of lodged corn.

As fields mature, a simple way to assess stalk quality is to grasp a stalk at waist to chest level and push it forward from vertical. Any stalks with poor quality will collapse. It is usually beneficial to harvest those fields with stalk rot issues first.

**Corn rootworm beetle** emergence continues but has slowed.

Scattered, dark-green to black spore filled kernels were spotted on corn ears near the SWROC. The culprit is likely *Cladosporium ear mold*. This fungus is not generally limiting to corn yields and is not known to produce mycotoxins harmful to humans or livestock.

This diagnosis is based on visual symptoms only; I have not yet sent samples to the [University of Minnesota Plant Disease Clinic](https://www.plantclinic.umn.edu) to be cultured and given a definitive ID.

**Soybeans**

It won't be long till harvest

Most soybean fields are R6 now, many at R6.5 with yellow pods and leaves beginning to turn. Early maturity soybeans are at R7 with pods starting to turn brown and with yellowing and dropping foliage.

As leaves senesce, symptoms of several soybean diseases become visible. One of these is **Pod and Stem blight** (*Diaporthae spp*). Look for the fruiting structures of the fungus arranged in linear rows on the stem. This disease seems more prevalent than usual this year.
I am also seeing scattered lesions developing on pods. These could also be caused by *Phomopsis* (asexual form) or *Diaporthae*.

Leaves in some soybean fields are showing symptoms of **Cercospora leaf blight**, caused by the fungus *Cercospora kikuchii*. A purple color and leathery appearance to leaves indicate this disease may be present. Warm, wet weather (sound familiar) favors infection which is often confined to upper leaves and usually occurs late in the season. This disease is unlikely to cause much, if any, yield loss with late reproductive stage onset. The surface of *C. kikuchii* infected seeds show a purple discoloration. Other than the undesirable coloration, seed quality is normal.

The foliar symptoms of this soybean disease can be confused with sun scald but can be easily differentiated by a plant pathology lab.

Other foliar diseases present at varying levels in soybean are **downy mildew**, **bacterial blight** and **Septoria brown spot**.

Sclerotinia stem rot, a.k.a. **white mold**, is present in many fields and significant in some.

**Soybean aphid**

Soybean aphid movement to buckthorn, fungal diseases and soybean maturity and leaf drop are causing rapid population collapses in some fields. Some of you have noticed numerous black aphids this year. These "mummies" are produced when soybean apids are parasitized by tiny parasitoid wasps.

While some aphids have moved to buckthorn, others have re-colonized late-maturing soybeans where significant populations can still exist. This includes some soybeans at the SWROC where numerous planting dates, soybean maturities, small plots with bare alleys and varied chemical and fertilizer treatments create a smorgasbord for soybean aphids.

It appears that two weeks ago, I should have been scouting late-season aphids at the SWROC rather than further west. Aphid populations in late R6 stage soybeans at the
SWROC declined and increased rapidly in some previously treated R5-R6 soybeans during the previous week, particularly in borders. Pre-harvest interval (PHI) restrictions will prevent treating these now declining populations.

Moths
As mentioned in a previous issue, the dark moths that are abundant now are green cloverworm. While any offspring of these moths will be harmless to the remaining 2015 soybean crop, they are now officially a serious problem. Seems they recently started to show up in the Twin Cities Metro area and...

On another Lepidoptera related note: This is shaping up to be a banner year for the Monarch butterfly in SW Minnesota. The adults will soon begin to gather as they begin their migration south.

SCN management plot tour
There will be an SCN plot tour at the SWROC, Lamberton, on Wednesday, September 9th from 1-4 PM. It will be a good opportunity to see SCN research on resistant varieties and chemical control of SCN. Dr. Seth Naeve, Dr. Senyu Chen, Dr. Dean Malvick, Ryan Miller and yours truly will be on hand to answer questions. Check the U of M SWROC website for weather(mud) related cancellations.
While I did not find any soybean aphids much further west than the Missouri River, there were many plants with aphid and other insect, some species that I had not seen before, and a blizzard of Baetid mayflies in an alpine lake. The trout seemed exceptionally gullible this year.

Happy trails,

Bruce Potter

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