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 1270 Growing Degree Days (base 50°F) from May 1 through July compared to the 1324 historic average for the period (still about 3 days behind average). For those of you that planted earlier, 29 GDD were accumulated from April 15 to May 1 with many area corn fields able to take advantage of that.

We received 0.17 inches of rain over the week of July 7-13. There has been 12.04 total inches of rain since May 1, still well above the long-term average of 9.72. One of these heavy rainfall events came hard and fast with significant run off so the rainfall total is a bit misleading. It would be nice to receive a bit of rain and some cool weather for corn pollination. In some areas, coarse textured soils are showing moisture stress now. Many of you have already put in an order for an inch of rain of without any high winds. Still a good looking crop.

Some crop stages and notes for earliest planted/emerged crops in the SWROC area are:

Corn
R1 silk - R2 blister for late to early maturity hybrids. Pollination is in progress from the base of the corn ear to the tip.

In the fields I have been in, including corn on corn, northern corn leaf blight and other foliar fungal diseases are hard to find. The hot weather in the weekend forecast will not be favorable for northern corn leaf blight and common rust of corn development.

We are beginning to rate roots for damage in some corn rootworm studies. I have observed extended-diapause northern corn rootworm damage in hybrids without the Bt -RW trait in a few SW Minnesota rotated corn fields. Western corn rootworm
populations may be declining and northern corn rootworm may be increasing in SW MN but I still need to see a bit more of the emergence before jumping to any conclusions. You should be starting to scout fields for rootworm beetles.

As small grains mature, we are seeing some **Bird-cherry oat aphids** move to corn. If you find a field of corn with heavy aphid populations I would like to hear about it.

**When is a corn disease not a disease?**

In the rush to find corn leaf diseases, things can get confused.

There is some damage by **red-headed flea beetles** on corn leaves now. This damage is seldom, if ever economic. The flea beetles feed on soybean leaves and several other plants in addition to corn.

**Corn blotch leaf miner** also causes symptoms similar to a leaf disease on corn leaves. The damage by adults and the tunneling within the leaves most often remains on the lower leaves.

A relative of the corn blotch leafminer is the **alfalfa blotch leaf miner**. The later has been more abundant than usual this year. The adults of both look like a tiny housefly.

There a possibility injury from insect feeding can open the leaves up to some diseases, the bacterium which **causes Goss's blight and wilt** for example, but this has never been documented.
Small grains - Harvest is underway in SW MN. There should be a very good crop in SW MN as in most disease developed late. There will be some Fusarium head blight (scab).

Alfalfa
Potato leafhopper is the primary insect concern now.

Soybean - Up to R5 for very early-planted, early-season (mid group I) varieties
As plants grow larger, and weather becomes warmer, the increased moisture demands of the soybean requires a good root system.

Phytophthora root root has shown up in one study at the SWROC. The plants dying with leaves on, shepherds crook appearance at the top of the plant, and the brown to chocolate colored lesions extending above the soil are diagnostic. Just what I needed in an SCN experiment... more variability.

Green cloverworm are common in many fields. This insect is causing much of the minor leaf feeding in many SW Minnesota fields. I have not heard of any potentially yield limiting populations as of yet.

In most cases, the presence of green cloverworm larvae helps keep predators in the field. They are rarely numerous enough to hurt yield. The larvae are susceptible to fungal and viral pathogens. Disease can, and often does, kill most of a field’s green cloverworm in short order.

Rolled soybean leaves may contain painted lady butterfly larvae but the adults are rare this year and I don't expect large numbers of larvae this year. If the rolled leaf contains a small, green larva, it is likely the oblique-banded leafroller.

Two-spotted spider mites are still present in some fields with moisture stress, include them in your scouting program.
Soybean aphids
I had the pleasure of visiting with many of you by phone, email and text this week. More fields are reaching treatment levels (an average of 250 soybean aphids/plant with 80% or more of the plants having some level of aphids present). I appreciate the reports. This is going to be an interesting year.

Considerable acreages have been treated in some geographies of Minnesota and yet soybean aphid populations are at very low levels in others. The infestation levels and the percentage of fields treated, vary widely by geographic area and by field. While most insecticide treatment has been in those fields that typically have threshold populations (fields that are near buckthorn, smaller in size and where soil moisture is not excessive) early infestations are becoming more general and could continue to do so over the next few weeks.

Winged female aphids (alates) have begun moving from fields or areas of fields under moisture stress. Additionally, as early-planted, early-maturing varieties approach the R5 (beginning seed) stage, alates often begin leaving the field. Many of these aphids will on disperse long-range on the winds; looking for new soybean fields to colonize. In most of Minnesota, this migration typically peaks in late July, the week before the Sturgis, SD motorcycle spectacle (or Farmfest week for those of you from areas that do see much of the migrating motorcycle traffic).

In a soybean date of planting study at the SWROC, this mid-season emigration has begun on soybeans at the more advanced growth stages while populations on late-planted soybeans shot up the past week. Some 3 and 4 trifoliate plants having 10 or more alates producing nymphs.

Aphids can now be found well down into the canopy on R3 and later stage soybeans - don't just look at the tops of the plants for aphids.

I am beginning to find "white dwarves," low in the canopy of the most advanced stage soybeans now. Include these small white aphids in your counts.

Populations within a field can change quickly this time of year as winged aphids leave heavily populated fields and arrive in others. For example, the aphid suction trap at Crookston, Minnesota picked up a number of these long-distance migrants last week.

Populations in many fields in SW, SC and WC MN are fairly uniform indicating there were good sources of winged aphids to colonize these fields.

If you have problems seeing soybean aphids get help from someone who can. An average of 250 aphids/plant is not a heavily infested field. Fields with large areas of
stunted soybeans covered with black sooty mold are well past economic threshold and economic loss has been incurred. Fields that were treated with insecticide may need to be treated again if re-infested by winged aphids.

2015 is shaping up to be a year with significant soybean aphid pressure but this is not yet a certainty. Can the fact that 2015 is also the 75th anniversary of the Sturgis motorcycle rally be a coincidence?

Happy trails,

Bruce Potter

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