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 [http://swroc.cfans.umn.edu/weather](http://swroc.cfans.umn.edu/weather).

Soils have started to warm and have been working well. Farm groves and other wooded areas are starting to show a green tinge as trees plants are starting to flower and leaf. In the Minnesota River wetlands near my home, the chorus frogs have been in full throat. Their constant creaking mating calls are accompanied by the occasional trill of American toads.

The bur oak outside my office window is just starting to break bud. Although the oak leaves won't be the size of a squirrel's ear for a little while, corn planting is underway and barring rain, will likely be in full swing this week. It's time.

The recent warm weather has caused a flurry of field activity. Soils have started to warm and some of these seedbeds are looking pretty good now. Check your planting depth early and often.

In general, soils have moisture in the seed zone and particularly deeper. I had a call from a consultant mentioning that some ground in his area was worked earlier this spring with anhydrous is now dry and may need rain for uniform corn germination. Looks like we could should catch some over the next week.
For those of you applying granular rootworm insecticides, read the label for placement and incorporation requirements. Wind is not your friend.

The high winds have helped dry soils also have started bringing summer visitors into MN. **Red admiral butterflies** appeared over the past few days. The nettle plants have leafed out so they have plenty of egg laying sites. The **alfalfa caterpillar** is believed to be able overwinter here as a pupae. The condition of the yellow butterflies flying now indicates these might have arrived on a southern wind. We also have detected a flight of immigrating **black cutworms** over the past few days.

Twenty to thirty mile per hour winds are not good for insect sampling with a sweep net. In spite of the uncooperative wind, we are finding **aster leafhoppers** in winter grains and alfalfa. The aster leafhoppers are at typical spring levels in the limited areas I have scouted. I have not found **potato leafhopper** in alfalfa yet but will try again when the wind calms down.

**Wheat**

Winds may have moved some pathogens into Minnesota along the "Puccinia pathway". I will be watching our winter wheat for the early development of wheat leaf rust and wheat stripe rust this season. You might want to as well.

**Cereal aphids in grains**

Bruce Potter IPM Specialist and Madeleine Smith, Extension pathologist and Ian MacRae, Extension entomologist.

As I mentioned in the recent pest alert, aphids are unusually numerous in some winter rye and wheat crops.

Last week, winged **English grain aphids** were predominant, but there are already a few nymphs. Also present were a few nymphs and adults of **bird cherry-oat aphids**. Another cereal infesting aphid species, which is less commonly observed in MN, is the **greenbug**.

Lady beetle, pirate bug and damsel bug predators, as well as some parasitic wasps, have found the aphids in these crops. It will be interesting to see if they can help keep these aphid populations from increasing.
In addition to heavy cereal aphid populations causing direct damage by feeding on plant sap, these species can transmit virus diseases, most notably, **Barley yellow dwarf virus (BYDV)**.

Dr. Madeleine Smith, U of MN Plant Pathology, will assay a sample of these to see if they are carrying BYDV. Fortunately, I am not seeing BYDV symptoms on local winter wheat and there may not be wide-spread overwintered BYDV infections for the aphids to spread disease from. Unfortunately, the aphids could have brought the virus with them from the south.

Symptoms of BYDV are yellowing of foliage (red in the case of oat, hence the other common name (oat red leaf). Severe stunting, increased tillering, sterile spikelets, and reduced heading can occur depending on when plants are infected. Symptoms and yield loss of this disease are more pronounced when plants are infected when young. Symptomatic plants are often found in circular areas (infection centers) disease starts in the field and where colonizing aphids carrying the virus further spread the disease.
Cereal aphid populations are very sensitive to environmental conditions and natural enemies.

Bird cherry-oat aphids tend to colonize plants low on the stem, often under leaf sheaths while English grain aphid and green bug colonies are usually higher on the plant. Examine all parts of the when you are scouting aphids in cereal crops.

Thresholds for individual aphid species have been developed but a general economic threshold for cereal aphids in wheat, oats and barley 85% of the stems with at least one aphid prior to heading.

Early, prophylactic insecticide treatments costs money and can make things worse by removing natural enemies. Populations after flowering have not been shown to reduce yields.

**Soybeans**

One way to reduce soybean production input costs is to use insecticide seed treatments only in fields with high risk of seed and early seedling attacking insects. These tend to be fairly predictable.

Some are nervous about skipping an insurance insecticide on their soybean seed. This is a growers decision to make. If you have not yet read this multi-state Extension document, it provides recommendations on neonicitinoid insecticide seed treatments for soybeans in our area and may help with your crop input decision: [http://www.extension.umn.edu/agriculture/soybean/pest/docs/effectiveness-of-neonicotinoid-seed-treatments-in-soybean.pdf](http://www.extension.umn.edu/agriculture/soybean/pest/docs/effectiveness-of-neonicotinoid-seed-treatments-in-soybean.pdf).

For what it's worth, I have not seen a bean leaf beetle on the SWROC for a few years. In the case of soybean aphids, biologically and economically, it is probably best to take a wait and see attitude, treating economically threatening populations when and where they appear.

Will **soybean aphids** be a problem in 2016? Time and weather will tell. Drier weather and early soybean emergence will favor soybean aphids.
In the SWROC area, late-season 2015 soybean aphid populations had high levels of predation, parasitism and disease. The populations on buckthorn were smaller than many years. I have been checking newly opened buckthorn leaves for aphids but at this point have not found any. Possibly because of the abundance of buckthorn, aphids on buckthorn in the spring are seldom found.

Unfortunately, the reproductive capabilities of the soybean aphid are more than capable of making up for a slow start. Not so sure about the Twins.

How could aphids in small grains (or other crops) affect soybean aphid? Can high populations of other aphid species recruit beneficial insects away from soybean fields? Would this lead to reduced predation on early season soybean aphids populations. On the other hand, will abundant prey and increased production of aphid predators in grain crops provide more biological control to move to soybeans? Insect biology and behavior keeps things interesting…and frustrating.

One thing we are concerned with is tracking the persistence and spread of insecticide resistant soybean aphid populations. Bob Koch and I would like to sample aphids out of some very early season soybean aphid colonies. We’d appreciate hearing about any you come across.

Happy trails,

Bruce Potter

University of Minnesota Southwest Research and Outreach Center
23669 130th Street
Lamberton, MN 56152
Phone: 507.752.5066
Cell: 507.276.1184
Fax: 507.752.5097
E-mail: bpotter@umn.edu
http://swroc.cfans.umn.edu/ag-programs/pest-management
Facebook: https://www.facebook.com/swroc
Twitter: https://twitter.com/SWMNpest