If you would like to be added to this mailing list, send a request to Molly Werner at wern022@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:  

Growing degree day accumulation are 394 since May 1. We had a welcome rain in many areas and current crop growth reflects the now adequate moisture and heat. The moisture will help with weed control by pre-emerge herbicides. Post-emerge herbicide timing could get a bit dicey if rain continues. Early planted soybeans are at two open trifoliates. Corn is 4 leaf and less, most 2-4.

**Light trap captures**
We have been picking up a few true armyworm moths over the past few weeks. Wheat head armyworm moths (not typically a pest in MN) have been unusually common this spring.

Today, we captured the season’s first European corn borer. It was a female so early emerging males should be present as well.

Evan Oberdieck sent a picture of the male Polyphemus moth he captured. These beautiful large moths are named after the one-eyed giant in Greek mythology. They are a great find in late spring. The Cercropia and Luna moths should be emerging soon and might be seen confused and attracted to lights at night.
Small grains
We are starting to see some small **true armyworm larvae** in grassy areas in alfalfa. Look for them in lodged grasses and small grains. A sweep net works well for detecting armyworm larvae. Areas in corn fields with heavy grass pressure are also attractive areas for the moths to lay eggs.

The sexual stage of **crown rust** (*Puccinia recondita*) of oats and barley and several other grasses is exceptionally severe on some buckthorn this spring. While present each spring, the current infection on buckthorn is a heavy as I have seen. Some branches are nearly defoliated by the rust. This disease could put a damper on the soybean aphids still trying to make a living on buckthorn leaves. Wouldn't that be just too bad.

Like those of aphids, the life cycles of crown and similar rust fungi are complex.

**Teliospores** overwinter on grass residue (oats, barley, and several others). These spores germinate to form basidia and basidiospores. In spring, buckthorn, the alternate host, is infected by basidiospores produced nearby. The orange aecia produced on buckthorn produce aeciospores that infect the primary host, a grass species. These infections produce uredinia and urediniospores. These asexual urediniospores create the rusty, orange cloud you observe swathing and combining “rusty” oats. Aeciospores and urediospores can move great distances on wind currents. The black, overwintering teliospores are produced on the primary host late in the season. Whew!

This *might* translate to unusually rusty oats with moderate temperatures and wet weather. In this case, high value oat crops may benefit from a labeled fungicide at flowering. However, before you rush to put in a fungicide order, some caution and scouting is advised. The form of crown rust causing the severe reaction on SWROC buckthorn may be one that affects a grass species other than oats (Brome for example).
Additionally, the SWROC buckthorn may not be representative of other buckthorn in SW Minnesota and elsewhere. Finally, conditions for infection and disease progress on oats need to be favorable.

**Alfalfa insects**

**ALERT!**

Alfalfa is beginning to bloom and 1st crop harvest has begun in SW MN. *Alfalfa weevil* larvae are at economic levels in some fields with most terminals showing feeding. Adults are the overwintering stage and adults through second instar larvae are present now.

Cutting now is recommended will kill some larvae but in heavy infestations the re-growth will often be delayed and need insecticide treatment. Watch alfalfa re-growth where windrows were placed. Variegated cutworm larvae also present and also feed heavily under windrows.

The most heavily infested field I have been in was allowed to re-grow extensively late last summer and fall and also had numerous plant bugs.

**Tarnished plant bug**

Overwintering adults are abundant and *alfalfa plant bug* nymphs are extremely numerous. Plant bugs can reduce alfalfa yield. Nymphs look a little like pea aphids but lack cornicles (tailpipes) and are much more active.

Symptoms of plant bug feeding on alfalfa include a distortion or puckering of leaflet tips.
A commonly used economic threshold is 3 plant bug adults or nymphs/sweep on alfalfa less than three inches and 5 adults or nymphs on alfalfa more than 3 inches. Cut if within 7-10 days of harvest - which is where our alfalfa is at.

Alfalfa fields vary greatly in populations of these pests. Be prudent with any insecticide applications. We have good populations of beneficials being produced in alfalfa. Try to not waste them. *Do not spray insecticides on blooming alfalfa!*

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<tr>
<th>Alfalfa plant bug nymph</th>
<th>Pea aphid - apterous adult</th>
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| Tarnished plant bug adult with alfalfa plant bug nymph |
Black cutworm ALERT!
The latest flight and projected dates for cutting in issue 8 of the black cutworm newsletter. [http://swroc.cfans.umn.edu/ResearchOutreach/PestManagement/CutwormNetwork/index.htm](http://swroc.cfans.umn.edu/ResearchOutreach/PestManagement/CutwormNetwork/index.htm).

This is not a widespread outbreak but fields should be scouted. Look for leaf feeding as well as cut plants. Feeding damage has been previously reported from the Renville/Sibley area on VT3 corn. This week, I have had one report of sugar beets being cut in the same area.

Meanwhile, on the eastern front, our informant, "Deep-throat", found black cutworms damaging corn somewhere in Freeborn County. The field was one that begged to be scouted for black cutworm. It was prevent plant in 2013, weedy with common lambsquarters and ridge-till planted to a hybrid without a trait (Herculex I or Viptera) that controls cutworm. Deep throat reported at least one cutworm was able to find and cut RIB refuge plants in a nearby SmartStax field. The Bt traits are effective but not foolproof on black cutworms, particularly large larvae moving from weeds to small corn!

Happy trails,

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