



Southwest MN IPM STUFF

All the pestilence that's fit to print

SW Minnesota IPM STUFF 2010-3

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If you receive these newsletters as forwards and would like to be on the mailing list send a request to Molly Werner at werne022@umn.edu. You get what you pay for. This is a free newsletter.

Crop Weather

To keep up to date on all the crop weather details during the growing season see:
<http://swroc.cfans.umn.edu/Weather/weather.htm>.

News of the weird - When millipedes attack



On Friday, a Redwood County soybean producer brought in some specimens of injured soybeans and the culprits. Plants were failing



to emerge and some of the emerged plants were wilting. Injury appeared to be occurring below ground. Strangely, millipedes appeared to be stand loss culprits.

Typically, millipedes are scavengers when associated with dead or dying plants. In this case, I am convinced that these arthropods were causing the injury. They were tunneled into hypocotyls and feeding on cotyledons in the container (see top photo).

Millipedes are not insects. They are arthropods in the class Diplopoda. The name milli-pede literally means thousand feet. See... Latin isn't really a dead language. Diplo-poda "double footed" is Greek and refers to the two sets of legs on each segment. There are several species in Minnesota of which I can identify none. Millipedes have chewing mouthparts. They can easily be distinguished from wireworms and caterpillars by their cylindrical bodies, numerous short legs and prominent antennae (middle and bottom photos). Millipedes require cool, moist conditions and heavy crop residue helps provide that environment. However, the field in question was fall plowed and did not have the large amounts of residue that one would expect to



favor these critters. The millipedes may have been able to move from plant to plant through a poorly closed seed furrow. Stand loss was not yet severe enough to warrant replanting. Jim Nesseth and others have reported numerous millipedes near frost-damaged corn this spring. Whether they were actively feeding on live corn tissue or were feeding on decaying plant tissue as they usually do, I do not know. I do not have any pesticide efficacy data for millipede control. I found one reference indicating seed-applied insecticides are not effective. Why should they be? These aren't insects.

I wonder what other invertebrate surprises the 2010 growing season will hold?

Soybean aphid

Soybean aphids are here. Steve Commerford observed soybean aphids in an early-planted Nicollet County field. Most of the plants were colonized with populations as high as 20 aphids/plant. This field typically has soybean aphids earlier than most.

You may want to start looking at soybeans in fields that usually have early season aphids. Fields or areas of larger fields with coarser textured soil are often colonized first. Early planted, small fields bordered with buckthorn are usually colonized early, particularly if rainfall has been limited.

I would wait until a trifoliolate or two is open. You won't have to wait long. The need to treat soybean aphid should be weeks away. To help plan your scouting efforts later, it is helpful to locate a few fields in various areas to see how aphid populations are developing.

Scouting soybean aphids is not as hard as many make it. Folks often have trouble counting (**estimating**) aphids/plant. I recommended printing this aphids/leaflet self-help pamphlet http://www.plantpath.wisc.edu/soyhealth/pdf/sba_scout.pdf.

Black cutworm

These insects have been observed in soybean and Mark Bernard's garden. I have not heard any reports of significant corn injury this spring. In many cases, corn is now too large for black cutworm to cut. Additionally, the larvae I am finding now are getting close to pupating. I would still watch small sweet corn. Soybeans can tolerate some stand loss well but occasionally suffer economic loss. Cutworm id is less important when cutting is observed on broadleaf crops. Cutting below the above-ground cotyledons will kill the plant. All cutworm species can do this.

Alfalfa

Small green "worms" were noticeable during the cutting of first crop alfalfa fields. These are the



larvae of **alfalfa weevils**. This insect seems to be having resurgence the past few years. The small larvae are yellow but the later stages are bright green with a white stripe as shown in the photo below. The grease spot in the center is an unfortunate larva that succumbed to rough handling.

Cutting often kills the larvae by direct mechanical injury or dessication. At Lamberton, it looks like timely cutting combined with hot, dry weather has provided good alfalfa weevil control.

Watch for slow alfalfa re-growth in fields that had high populations of

alfalfa weevil larvae before cutting. The larvae tend to congregate under windrows. Alfalfa weevil are often more problematic on early second cutting when dry conditions exist. Treatment may be justified if 50% or more of the crowns have weevil feeding and re-growth is delayed 3-6 days.

Potato leafhoppers showed up at Lamberton last week. This is a recent arrival because we have only been finding adults. Adult potato leafhoppers are shown in the bottom of the photo. Potato leafhoppers are about 1/8 inch long, wedge shaped, bright green, and are very active. Nymphs indicate a reproducing population. They are the same color as adults but do not have wings.

Economic thresholds for potato leafhopper are based on crop height and number of leafhoppers/sweep. Avoid field edges when sampling. Sweep net population estimates taken under wet or windy conditions are unreliable.

General Economic Threshold for Potato Leafhopper in Alfalfa.

Alfalfa stem height (inches)	Leafhoppers/ <u>pendulumvsweep</u>
Under 3	0.2
4 to 6	0.5
8 to 11	1.0
12 to 14	2.0

Cut early rather than spray if within 7 days of scheduled harvest.

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