

PLANT PEST Newsletter

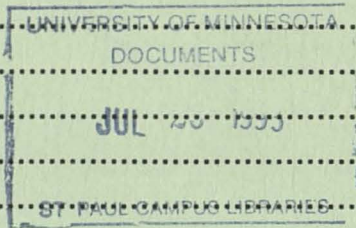
MINNESOTA EXTENSION SERVICE

UNIVERSITY OF MINNESOTA

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ALFALFA

Potato Leafhopper (PLH)—PLH infestations (adults and nymphs) have been increasing the past 2 weeks. Hopperburn (yellow V-shaped pattern on tips of leaves) is evident in older stands. **New seedings are particularly attractive to PLH and should be checked immediately for PLH.**

With regard to established stands, any alfalfa still at 8-12" in height should be scouted for PLH. If these fields are exceeding 1.0 PLH/sweep (adult counts) and/or nymphs are present, insecticide treatment is justified. For the past 2 years, this has also been the best time of year to treat spring-seeded alfalfa using the same adult thresholds (1-2/sweep)

plus the presence of nymphs. This single treatment has worked well as the most economical spray option. Remember that new seedings are more susceptible than established stands and they are susceptible to attack for a longer period of time before harvests. Thus, these stands should be checked more closely for any insect pest activity to protect the investment. Refer to BU-500, *Insecticide Suggestions for Field Crops*, for complete information on insecticide options.

*Bill Hutchison
Extension Entomologist*

**For more information regarding the Plant Pest Newsletter
contact Extension Plant Pathology at 612-625-6290**

CORN

BLACKLIGHT TRAP CAPTURES—Data collected by: University of Minnesota, Minnesota Department of Agriculture and Private Cooperators

Traps Reporting 07/14/93

EUROPEAN CORN BORER		+		
District	Location	Aver.	High	Date/Max
WC	FERGUS FALLS	9.00	17.00	930711
WC	MORRIS	20.00	36.00	930708
WC	GRANITE FALLS	101.50	141.00	930710
C	OLIVIA	1.86	5.00	930713
SC	BLUE EARTH A	0.29	1.00	930708
SC	BLUE EARTH B	0.00	0.00	
SC	LE SUEUR W	1.83	8.00	930707
SC	LE SUEUR E	2.86	12.00	930707
SC	SLEEPY EYE A	5.86	12.00	930712
SC	SLEEPY EYE B	4.14	10.00	930713
SC	WASECA SES	0.43	2.00	930708
SC	WASECA	2.43	4.00	930710
SC	ST. PETER	2.86	10.00	930707
SE	CALEDONIA	0.25	1.00	930710
SE	RANDOLPH	1.29	4.00	930707
SE	SIMPSON	2.40	5.00	930710
SW	LAMBERTON	4.20	7.00	930709

*-Number of nights...High derived by average over multiple nights.

+ More than 1 night with maximum value.

Observation dates: 930707 TO 930714

VEGETABLES

CABBAGE—An excellent, new publication on cabbage (and cole crop) insects, with an emphasis on beneficial insects, is now available from the MES Distribution Center. *Biological Control of Insect Pests of Cabbage and Other Crucifers* was prepared by University of Wisconsin entomologists, Jeff Wyman, Susan E. Rice Mahr and Dan Mahr. The book contains over 30 color photographs of several life stages of the key insect pests and most beneficial species. For all producers and consultants interested in using more biological control, this is an essential up-to-date reference

tailored to our midwestern conditions. To order, send a check for \$12.00, payable to "University of Minnesota", to:

Distribution Center
Minnesota Extension Service
20 Coffey Hall
University of Minnesota
1420 Eckles Ave.
St. Paul, MN 55108-6069
(Phone: 612-625-8173)

Bill Hutchison
Extension Entomologist

SWEET CORN—European corn borer (ECB)—The first-generation flight is winding down with a whimper for most of the southern half of the state. Very few “hot spots” of surviving larval infestations have been reported. A week ago today (Friday), 2nd-3rd instar larvae were observed in patches of a field east of Rochester. The infestation was as high as 20%, with up to 3 larvae/plant. Some may now be 4th instar. The ultra-low infestations, and cool weather, portend a low and late second-generation flight for 1993. This may be a year where one, well-timed insecticide application, or 2-3 *B.t.* applications, should be adequate for protecting the ears from first-silk to harvest. This, of course, assumes that corn is able to survive flooding, nitrogen deficiency, hail, el niño and la niña.

Bill Hutchison
Extension Entomologist

CLINIC REPORTS

PLANT DISEASE CLINIC

Samples submitted to the clinic recently included:

Soybean	- Downy mildew bacterial leafspot SCN - white females on roots <i>Rhizoctonia</i> sp., <i>Phytophthora</i> sp. and <i>Pythium</i> sp. root rots
radish	- <i>Aphanomyces</i> sp.
alfalfa	- <i>Phytophthora</i> sp. root rot
turf	- <i>Rhizoctonia</i> sp. root rot <i>Colletotrichum</i> (anthracnose) <i>Drechslera</i> sp. leaf spot
oak	- oak wilt
ellm	- Dutch elm disease
strawberry	- <i>Botrytis</i> sp. fruit rot
rose	- <i>Coniothyrium</i> sp. canker
geranium	- <i>Xanthomonas</i> sp - bacterial wilt
petunia	- <i>Pythium</i> sp. stem rot
spirea	- <i>Cylindrosporium</i> sp. leaf spot
bleeding heart	- <i>Pythium</i> sp. root rot

DIAL U

COUNTY AGENTS: Please alert
master gardeners to the following:

Mosquito repellents—A common defense against mosquitoes is the use of repellents, especially DEET (N, N-diethyl-m-toluamide). The July issue of *Consumer Report* discusses test results between different concentrations of DEET and a few non-DEET products, including Avon Skin-So-Soft bath oil, a product containing citronella, and a product containing citronella, cajuput, sassafras, peppermint and myrrh.

The highest rated repellent was a product containing 40% DEET. Products containing between 30% and 40% DEET were rated as very good. Products containing between 23% and 30% DEET were rated as good. DEET products containing 23% or less DEET were rated as fair or poor. All non-DEET products were rated as poor. Although no products containing more than 40% DEET were tested, it would be expected they would rate highly.

Based on these results, you can minimize your exposure to DEET but still achieve very good results by using DEET concentrations around 40%. DEET concentrations between 20% to 40% work nearly as good. Although concentrations of DEET around 10% do not work as well, pediatricians suggest to use as low a concentration of DEET as possible on children.

Slugs—Damage to plants or fruits without any visible culprit is probably due to slugs. They feed at night or during dark, cloudy days and are usually not seen by gardeners. Slugs have been common this year because of the wet weather. Control slugs by picking up debris such as stones, bricks, boards, or old material that may give them harborage areas. Also stake up bushy plants, such as tomatoes, to minimize areas under plants that slugs may hide.

Trap slugs by placing pans or wide-mouthed cups or jars into the ground so the top is even with the soil; then fill with beer or another product with a similar fermenting smell. Slugs are lured to fermenting smells, then fall into the containers and drown. Clean out containers on a regular basis. Another method is to place a few boards or damp newspapers in the garden. Check under these traps in the morning; remove and destroy any slugs you find hiding.

If these nonchemical methods fail, try a slug bait such as, Mesurol (Slug-geta) or Metaldehyde (Bug-geta). Mesurol is most effective when the temperature is below 70° F and in damp conditions. It is **NOT** for use around food plants. Metaldehyde (Bug-geta) is cleared for fruits and vegetables. This bait is most effective when the temperature is above 70° F, and it's dry.

DIAL U/Continued

Ant swarms—Winged ants of several ant species have been sighted in and around homes recently. Winged ants are reproductive forms, i.e. new queens and males. When these reproductives are ready for mating, they fly out of nest together. Nearly all ants swarm, but different species swarm at different times of the year. Many samples have turned out to be field ants (*Formica* spp.). Although these ants are similar in size and color to carpenter ants, field ants do not infest homes; they nest in exposed soil sites or concealed soil sites, e.g. under concrete. Carpenter ant swarms are usually seen in May. Examination of wing venation is the best method to distinguish these two ants. We have also received samples of pavement ants and yellow ants which are also soil nesters. Swarms are short-lived and control is unnecessary.

White mold—White mold is a serious disease of many plants which unfortunately is showing up again this year. So far we have seen it in geraniums, blazing star, and tomato. Many vegetables and flowers are susceptible including petunia, marigold, zinnia, periwinkle and sunflower. Attention is first drawn to plants where one or more shoots or portions of the plant suddenly show wilting and death. Examination of the stems reveals a white fluffy growth and rotting stem tissue. As the plant tissue dries it turns a characteristic white (most other rots cause the tissue to turn tan, brown or black). Black fungal structures, called sclerotia, are easily found embedded in the cottony growths on the inside and outside of the stem. They may range in size from pin head to larger than a nickel and are variable in shape. All plant parts are susceptible.

Control consists of careful removal and destruction of the infected plants, good air circulation (don't crowd plants at planting time), reduction in leaf moisture (water early in the day and only at the base of the plant), weed control and crop rotation.

Anthracnose—Anthracnose and other leaf spots continue to plague trees and shrubs. Ash anthracnose is no longer causing significant defoliation problems, but oak anthracnose continues to cause white and bur oaks to look pretty ragged. Reports to the clinic indicate some companies have encouraged homeowners to spray their trees several times this summer to keep them from dying. Application of a fungicide at this time is very unlikely to have any effect on the development of the disease. Any attempt to control anthracnose should begin with the application of a fungicide at bud break next year.

Our wet growing season has caused some bulbs to rot in the ground either before sending up shoots or even after an initial flush of growth. Onions and other members of the genus *Allium* may be particularly susceptible to weather-related stress especially if planted from sets. We've had one report of shallots rotting out in a raised bed in sandy soil well away from any flooding.

In the metro area, peas, lettuce and other cool season crops are doing well, but lettuce is poised to bolt. Tomatoes are setting fruit but only those extra early varieties that were started early have provided ripe fruit. Okra is a big disappointment and most melons are growing slowly. Cucumbers and pumpkins which don't need the heat that melons do, are setting fruit. Potatoes are blooming profusely so soon we'll be able to sneak a few new potatoes. Normal harvest occurs when the vines die back.

Bark splitting on maples that can't be attributed to frost crack (south or southwest side of tree) appears to be due to vigorous growth. The bark can't expand fast enough to keep up with the increase in girth caused by spring growth encouraged by abundant moisture.

Cutting back foliage of peonies and bleeding heart now that they're done blooming is a common question. The old fashioned bleeding hearts are just now starting to yellow in the Twin Cities. They can be cut back as soon as the foliage has yellowed, signaling an end to active growth. Seed heads of peonies can be snipped off but wait until late August-early September to lift and divide the plants. Foliage can be cut back at that time.

Poison ivy—Poison ivy is our most common weed call. Triclopyr, the active ingredient in some brush and poison ivy control products, is the treatment of choice.

Grey squirrels can cause damage to ornamental bushes and shade trees by stripping the bark and consuming the living tissue, or cambium, of the branches or trunk. Such activity usually peaks in spring and fall. In the past few weeks there has been a summer surge of bark stripping mainly occurring on sugar maples. Branches are usually girdled with little harm to the tree unless stripping is excessive. In some cases the trunk is also stripped and may result in death of the tree.

The occurrence of bark stripping tends to be local and relatively rare. Minnesota state laws permit landowners or occupants to control protected animals that cause damage. Thus, squirrels participating in stripping activity can be removed by live trapping, or by firearm if there are no local ordinances prohibiting such use. Check with local enforcement regarding such ordinances.

Squirrel usage of a specific tree can also be diminished or eliminated if the tree affected, or a small clump of trees, is isolated from other trees, power lines and houses. If appearance is of little concern, each trunk can be coated with a 12 inch wide band of pine tar gum, 6 feet above the ground, that discourages squirrels from climbing the treated tree.

Sheet metal, 24 inches wide, can also be wrapped around a tree at the same height to prevent damage in the canopy. In both cases, remove branches lower than the obstruction. In addition, apply hardware cloth to the tree trunk below the obstruction to prevent stripping in that region.

Other common calls include carpenter ants, insect and mite galls, hollyhock rust, apple scab, oak wilt, and root rots.

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