



## CORNELL COOPERATIVE EXTENSION - SUFFOLK COUNTY

INSECT AND PLANT DISEASE DIAGNOSTIC LABORATORY

EDUCATION CENTER  
423 GRIFFING AVENUE  
RIVERHEAD, NY 11901  
HORT INFO LINE 631.727.4126



Cornell University  
Cooperative Extension  
of Suffolk County

BAYARD CUTTING ARBORETUM  
MONTAUK HWY. PO BOX 463  
OAKDALE, NY 11769  
HORT INFO LINE 631.581.4223



### Aphids

**Injury:** Aphids may damage many plants including fruits, vegetables, and ornamental trees and shrubs. The major damage is caused by the aphids sucking the juices from the stems and leaves causing a reduction in vigor, curling distortion, and reduction in yield. Some species inject saliva into the plant tissue as they feed and may transmit viral diseases from one plant to another.

In addition to the direct damage caused to the plant by the aphids feeding, a black fungus known as sooty mold grows on the honeydew secreted by aphids. Sooty mold is unsightly and in association with honeydew it is objectionable to the buyer of affected plant material, fruits or vegetables.

**Description:** Aphids or plant lice are small, soft bodied, slow moving insects that feed by sucking juice from plants. They can usually be recognized by the pear-shaped body and fairly long antennae. Aphids vary in color -- white, gray, green, brown, red, yellow or black. (**Fig. 1**) They are usually found in large numbers (colonies) on the undersides of leaves or on stems (**Fig. 2**). There are both winged and wingless aphids in most species. As the aphids feed they secrete honeydew – a sweet sticky shiny substance seen on leaves. Honeydew consists mainly of excess sap ingested by the insect and passed through the body.

**Life History:** Most species of aphids overwinter in the egg stage. The eggs hatch in the spring to produce a generation of females. These female aphids give birth to living young. Generally the first young aphids are wingless, and when a colony becomes too crowded winged forms may be produced. The winged forms migrate to new host plants and begin colonies. Enormous populations are built up from these overlapping generations all summer long.

Late in the season the aphids migrate back to the original host plant, and a generation consisting of both males and females is produced. These individuals mate and the females lay eggs, which overwinter.

**Monitoring:** Carefully inspect plants for the beginning of an aphid population buildup. Check for natural enemies such as mummies (gray-brown, bloated, parasitized aphids -- indicating wasp parasites at work) (**Fig. 3**), and the alligator-like larvae of lady beetles and lacewings.



**Fig. 1.** Potato aphids (*Note the different colors*) (G. Dively, H.G.I.C., University of Maryland)



**Fig. 2.** A large cluster of cabbage aphids on the under surface of a cabbage leaf (H.G.I.C., University of Maryland)

Yellow sticky boards are also used as a monitoring tool for aphid populations. Aphids are attracted to the yellow color and often are visible on the cards before they are detected on the plant.

**Management:** If there are high numbers of mummies, or large populations of ladybird beetles, or lacewings along with the aphids, additional treatments may not be necessary. Ladybird beetles and lacewings are beneficial because both the adults and larvae actively feed on aphids.

In general, controlling populations early in the season often eliminates the need for later spraying. In a few cases, however, treatment may need to be carried out all season long. Wash off aphids with a stream of water as needed, early in the day. A hard stream of water directed on aphids will remove many from plants, but be careful not to damage young plants with too much water pressure.

Insecticides: Either insecticidal soap, horticultural oil, pyrethrins or malathion may be used for control on most plants. Check the label restrictions of the use on plants. Be sure to check the number of days you have to wait to harvest (= Days to Harvest) before applying any pesticide to edible crops.

Prepared by: Carolyn Klass, Sr. Extension Associate; Department of Entomology, Cornell University  
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The Pesticide Management Education Program (PMEP), in cooperation with the New York State Department of Environmental Conservation (NYSDEC), maintains a web site with a searchable database for pesticide products currently registered in New York State. Homeowners who have Internet access can locate currently registered products at <http://pmep.cce.cornell.edu/pims/current>. Several different queries are available that will produce a summary for the product(s) that the system locates. If the system fails to locate the product in question, then that product is not currently registered in New York State. The database also provides a summary of important information related to every product currently registered. Two data fields “Status” and “Expiration Date” are provided in each summary. Products with a status of “Registered - Discontinued” are currently registered but will probably be discontinued for use, sale, and distribution in New York State after the date noted in the “Expiration Date” field.

**This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly and human errors are still possible. Some materials mentioned may no longer be available, and some uses may no longer be legal. All pesticides distributed, sold or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension Specialist or your regional DEC office. Read The Label Before Applying Any Pesticide.**

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