



GARDEN APHID

PREVENTION & CONTROL

MEET THE PEST

Aphids are common pests of vegetables, annual and perennial flowers, ornamental trees and shrubs. They can often be found on cabbage, peas, potato, tomato, beans, annual flowers (e.g., snapdragons) perennials (e.g., lupines) flowering shrubs (e.g., roses, viburnum, snowball bush) and trees including apple, pear, plum, crab apple, birch, elm, ash, maple, oak and pine.

Most aphids only feed on one or two species of plants. Therefore the aphids on a potato plant probably won't move onto a crab apple. However, some species of aphids can attack a wide range of garden plants.

Aphids are small, (less than 1/10 inch or 2 3/5 mm long) pear-shaped insects with long antennae extending from the head. Aphids can be any one of a number of colors including green, white, yellow, red, grey, black or brown. A short pair of tubes, located on the abdomen, are used to produce a spray warning when the aphid is threatened.

Most aphids are wingless. However, when the temperature is not suitable or over-crowding takes place, some species can form wings and move to new areas.

Healthy plants can tolerate a small number of aphids, however, damage results when large numbers are present. The aphid uses its needle-like mouth piece to suck sugar-rich sap from the plant. When a plant is attacked by a large population of aphids, damage such as reduced growth, wilted leaves, and stunted needles occurs. Some species of aphids also transmit viruses to the host plants that they feed on.

During feeding, many aphids secrete a clear, sticky, sweet substance, called honeydew. It is often found on or below

the host plant and may act as an attractant for other insect pests, such as ants, who use it as a food source.

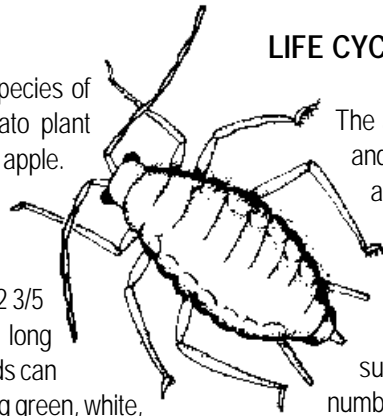
Large numbers of ants, marching up and down the trunks of trees are usually a good indication that aphids are present. Honeydew also acts as a host for a harmless black fungus called sooty mould which often grows in the secretion.

LIFE CYCLE

The aphid life cycle has three stages: egg, nymph and adult. Eggs overwinter on the host plant and a generation of females hatch in the spring. Within ten days of being born, the female aphid can give birth asexually (without mating) to a second generation of females. This process can continue throughout the summer allowing aphid populations to reach high numbers very quickly. In the fall, winged males are produced to mate with remaining females. The eggs which are produced from this union overwinter. The following spring, the cycle continues.

MONITORING

Look for aphids on susceptible plants in the late spring. If they are present they can often be found clustered around buds or on the under side of leaves. Puckering, cupping or yellowing of leaves can also be a sign that aphids are present.



CONTROL

Biological Control

There are several natural enemies which feed on aphids. Included in this list are lady beetle larvae, lacewings, assassin bugs, syrphid fly larvae, various wasps and spiders. Of this list, lady beetle larvae consume the largest number of aphids. Parasitic wasps are also very effective in aphid control. The parasitic wasp deposits an egg inside the body of the aphid. The egg hatches into a larva that consumes the aphid, leaving only an empty shell. These naturally occurring biological controls are only effective when they are present in the garden. Avoiding the use of pesticides and spot treating if pesticides are used in the garden will help conserve populations of these natural enemies.

Physical/Cultural Control

There are several physical control methods that can be used to control aphids. One such method is to spray a steady stream of water at the host plant to knock aphids off. Once on the ground, the fallen aphids will be available to ground dwelling predators and this will also make their return to the host difficult. This treatment may have to be repeated several times.

Rubbing or hand picking aphids from affected plants will also reduce populations. If only a few small colonies of aphids are present, prune affected areas of trees and shrubs to remove aphids and overwintering aphid eggs.

Aphids are attracted to the colour yellow. Try controlling aphids by using yellow sticky traps which can be bought or made. To make a sticky trap, spread petroleum jelly over a yellow index card and place in the area where aphids have been observed. Another physical control measure involves using aluminum foil sheets as mulch. Place the aluminum at the base of low plants. The reflection confuses the winged aphids, making landing difficult.

In the vegetable garden, another option is to place fine mesh row covers over plants. These covers serve as a barrier to aphids while allowing light, water and air to reach the plant. Consider removing and destroying heavily infested annual plants. This will cut down on overwintering sites and reduce future populations.

Many species of aphids prefer the soft plant growth that results when plants are over fertilized with nitrogen. In

addition, some aphids prefer plants that are drought stressed. Ensuring that garden plants have adequate but not excessive fertilizer and water may help reduce aphid problems.

Chemical Control

If biological and physical control measures are not effective, use a pesticide which will have a minimal impact on both you and the environment. Insecticidal soap can be sprayed on infested areas of plants to control aphid populations. Insecticidal soap only works on contact so it is important to apply it directly to the aphids. Some sensitive plants may be harmed by insecticidal soap. Always follow the label directions when using it. Pyrethrum (pyrethrins) can also be sprayed on aphid infested plants.

During the early spring, applying dormant oil to trees and shrubs that have had aphid damage in the past season may help to kill overwintering eggs. Dormant oil can damage plants if not used correctly. Ensure label directions are followed closely.

If the above measures are not effective, consult with an expert at a garden centre to learn what other pesticides are available.

Always use a registered domestic class pest control product labelled for aphid control and carefully follow the label directions.

Fact sheet adapted from the Backyard Bug Brigade, Aphids - published Atlantic Provincial Environment Departments, PEI Department of Agriculture, Fisheries and Forestry, Agriculture and Agri-Food Canada and Environment Canada. Revised April, 2001 by Nova Scotia Department of Environment and Labour.