IP-2 Aphids

Key Points

- Aphids attack almost all types of ornamental trees and shrubs.
- Aphids can produce a new generation every 7-10 days.
- Direct damage is usually slight except when populations are high and leaf curl can occur on peach, ash, plum, honeysuckle, and snowball viburnum. Aphids can also transmit disease and cause galls.
- Aphids can be found in a wide range of colors from orange, red, green, yellow, brown, and black.
- Controls can be effective using natural predators, systemic insecticides especially (when leaves are curled tightly) and contact materials such as oils, soaps, **Neem** and insecticides.

Identification

Aphids are soft-bodied insects with long slender mouth parts adapted for piercing stems, leaves and other soft plant tissues. Almost every plant has one or two species of aphid that will attack it. Proper identification is not necessary to control them. Aphids will be found in green, yellow, black, grey, or red tones depending on the plant species they attack. Some aphids produce a secretion of a waxy or wooly material over their bodies. All are pear shaped with long legs and antennae and a distinctive pair of tube-like structures projecting backward out of the abdomen. Most aphids will be wingless, though after a few generations, winged forms will be born that will fly off to other plants.

Most aphids will excrete large quantities of honeydew which is a sticky, sweet substance. (Ants are attracted to this sweet honeydew and will feed on it. Ants will also move aphids from plant to plant and protect them from natural enemies.) At times excessive honeydew can be a nuisance dripping from trees on the car, patio or walks. A sooty mold or fungus can grow from this honeydew which creates an unattractive gray to black covering on the foliage or trunk.

Life Cycle

Aphids have many generations in a single year. In milder climates they can reproduce asexually with adult females giving birth to live offspring, often as many as 10 -12 per day. The young aphids as nymphs look exactly like the adults and shed their skin about four times as they grow into adults. During warm weather aphids can develop from newborn nymphs to reproducing adults in 7 - 8 days; each adult can produce up to 80 offspring in a week, thus aphid populations can increase very quickly. Eggs are laid on a perennial host to overwinter.

Damage

When populations are low to moderate, the damage is usually slight, especially on larger plants and trees, although viral exposure may be a major concern. When populations reach a high level, curling, yellowing, leaf distortion and stunting often occur. Some species may inject a toxin into plants which can cause distortion or gall formations. Other concerns are honeydew formation and the resultant sooty mold.

Management

Aphids rarely cause plant death, but usually warrant some means of control. Several methods can be used. To avoid destroying beneficial insects non-chemical methods should be considered first.

The first step is to carefully monitor your plants at least twice a week for aphids and the presence of beneficial insects such as ladybugs. Catch infestations early; once populations are high and distortion and curling have begun, control is much more difficult. Check the underside of leaves. Ants are often associated with aphids and can be an indication of populations building up. Watch for signs of natural enemies such as lacewings, flower flies and ladybugs. Plant disease and dead aphids can be present as well. Look for aphids during the plant's flowering cycle which is when it is most susceptible to an invasion.

Biological control (introduction of insects that feed on aphids) may be necessary. Besides the natural buildup or our placement of beneficial insects, cultural controls can be used. Simple use of high pressure water from a hose, removal of aphid attracting weeds such as sow thistle and mustards, inspection of newly purchased plants, pruning of heavily infested branches and the use of **Tanglefoot®** to deter ants all aid in controlling aphids.

Several levels of chemical controls are available with some sprays considered biological. Insecticidal soaps, **Neem Oil** and horticultural oils like **All Seasons Horticultural & Dormant Oil** are temporary controls. It is critical that the underside of leaves be sprayed when applying any spray. These are contact sprays which mean aphids not physically exposed will repopulate the plant. Aphid problems originating from eggs that overwinter are best controlled with dormant oils. Do not use oils or soaps in temperatures over 90º F.

For most aphid problems, especially those associated with leaf curls, insecticides that move systemically within the plant provide the best control. These materials also won't affect the natural enemies. We recommend **Bonide Annual Tree & Shrub Insect Control** which can easily be applied to the soil and picked up by the roots. It is effective for all sucking insects except spider mites. This product is not intended for use on food crops. As with any chemical, read the label and then follow it. Contact insecticides are useful for aphid control when insects are exposed on the plants. A contact insecticide, such as **Malathion**, **Bonide Eight** and **Dr. Earth Home & Garden Insect Spray**, is good to use as a spray. **Sevin** does not control aphids very well except woolly aphid on evergreens.

Remember that moderate populations of any insect, not only aphids, don't necessarily cause long term damage to ornamental trees and shrubs. Monitor your plants and determine when you need to step in or let Mother Nature handle it. Also, keep in mind that applying high nitrogen fertilizers or fertilizing too often will both lead to aphid infestations on tender new growth. A few curled leaves can still be part of a beautiful landscape.

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