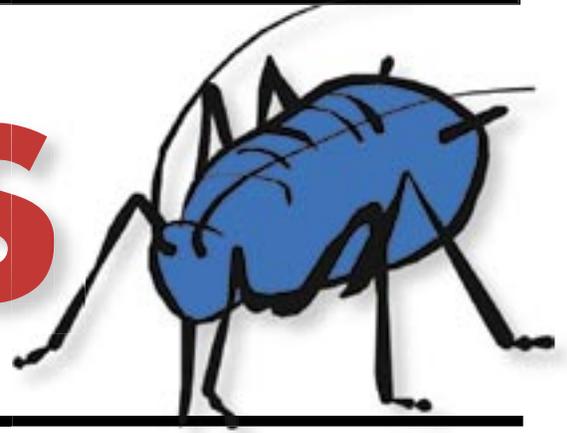


CONTROLLING APHIDS IN YOUR GARDEN



Most plants can tolerate low to moderate numbers of aphids without noticeable damage. On some plants, however, large numbers of aphids can distort foliage and flowers and stunt plant growth. Some species of aphids can also transmit plant diseases when they puncture plant tissues to feed, resulting in yellowing tissue and plant death.

Aphids excrete “honeydew,” a sweet substance that forms a sticky coating on leaves. The honeydew is soon colonized by a fungus called “sooty mold,” making leaves look black and dirty. Generally sooty mold is harmless except when it is extremely abundant and prevents light from reaching leaf surfaces, causing plants to become stressed. Sooty mold can easily be washed off with a forceful stream of water on sturdy plants.

Often times if there are high populations of aphids most likely there are also an abundance of ants present. Argentine ants love to feed on honeydew, and to ensure a continuing supply, they protect aphids from their natural enemies (beneficials). (see the Ant fact sheet in this series).

DETECTION

Aphids are very small insects with soft, pear-shaped bodies. They have long legs and antennae, and most

have two tube-like structures called cornicles on their hind end. Adults of some species have wings.

Aphids can be many colors (green, yellow, brown, red or black) and are usually on buds, plant tips, and on the undersides of leaves near the veins. A few species secrete a waxy substance onto their bodies, giving them a white or gray woolly appearance.

TOLERATE SOME APHIDS

- **Tolerate low to moderate numbers of aphids** as long as they aren't causing noticeable plant damage. There is a reason for this: aphids have many natural enemies such as spiders, ladybugs, lacewings, and tiny parasitic wasps (non-stinging) that often keep aphid numbers below damaging levels.

These beneficial insects rarely appear on the scene until after aphids have begun attacking plants. This “lag-time” can be a day or two or as long as several weeks. As the season progresses, aphid control by these natural enemies improves because more natural enemies are attracted to your garden and more stay to breed.

- **Aphid species commonly found on trees** will not infest your garden annuals, and these aphids can help attract natural enemies that will attack pests on other plants.

LESS-TOXIC CONTROLS

- **Learn to recognize beneficial insects.** Among the most important natural enemies of aphids are the tiny parasitic wasps that lay their eggs inside the bodies of aphids. These tiny wasps cannot sting people. A parasitized aphid (called a “mummy”) looks puffed-up, and its skin hardens and changes color, often to tan, light brown, or black.
- **Attract beneficials to your garden** by planting a wide variety of flowering plants or certain insectory plants (See fact sheet in this series “*Naturally Managing Pests... With a Healthy Garden*”) can provide beneficial insects with the habitat they need (food and shelter).
- **Use a forceful stream of plain water** on sturdy plants to wash off aphids and honeydew.
- **Wipe off colonies of aphids** from tender plant leaves and buds.
- **Prune away** severely infested portions of the plant. Dispose of properly and do not compost.
- **Use insecticidal soaps** to kill aphids on contact while causing less harm to beneficial insects. These products do not leave toxic residues, sparing injury to the natural enemies.
- **Use spray** (horticultural) oils to control aphids. This minimizes adverse effects on natural enemies.

- **Don't purchase beneficials before you have aphids.** You will be releasing them into your garden to starve. If you have an aphid emergency, first use soap or oil sprays (see Products and Resources below) to knock-down the population. Then, if necessary, release beneficial insects. Lacewings are more likely to stay in your garden than commercially available ladybugs.

PREVENTION

- **Inspect new plants carefully.** Don't purchase infected plants.
- **Use slow-release fertilizers.** Maintain healthy plant growth, but do not over-fertilize with high nitrogen fertilizers. Too much nitrogen can over-stimulate succulent plant growth, prompting some aphids to reproduce more quickly. Organic fertil-

APHIDS: SO MANY, SO FAST

The remarkable life cycle of aphids helps to explain how they can quickly appear in large numbers. In the temperate climates of spring, female aphids called "stem mothers," emerge from "overwintering" eggs. These plump, distinctive-looking aphids do not need to mate to reproduce. Stem mothers give birth to live daughters, and these offspring give birth to more live daughters — all without the need of mating. The swiftly growing female aphid colonies cluster around the stem mother and continue to multiply long after her death. At the end of the season, aphids begin to produce both sons and daughters. When these males and females mature, they mate and the females lay eggs on bud scales or bark to "overwinter" and begin the cycle again.

izers are better because they slowly release moderate levels of nutrients.

- **Avoid excessive pruning** because it stimulates aphid-attracting growth.
- **Use a row cover** (FastStart®) on new plants and seedlings to exclude aphids and other pests but allow air, light, and irrigation water to reach plants.
- **Control ants by spraying or painting** a 4" wide sticky barrier (Tangle-foot®, Stickem®, Tree Pest Barrier) around woody shrubs or trees. (See the Ant fact sheet in this series.)

PRODUCTS & RESOURCES

Examples of trade names of products listed in this fact sheet:

(Note: Product labels should list plants to be treated.)

INSECTICIDAL SOAPS:

Safer® Insecticidal Soap
Insect Killer

INSECTICIDAL SOAP W/ PYRETHRIN:

Safer® Yard and Garden
Insect Killer

SPRAY (HORTICULTURAL) OILS:

SunSpray Ultrafine®
Volck®

STICKY BARRIER (FOR ANT CONTROL):

Tanglefoot®
Stickem Tree Pest Barrier

ORGANIC FERTILIZERS:

Whitney Farms or Dr. Earth

ROW COVERS:

Fast Start®

SOURCES FOR LACEWINGS:

Buena BioSystems
P.O. Box 4008,
Ventura, CA 93007•805/525-2525

Rincon-Vitova Insectaries
P.O. Box 1555,
Ventura, CA 93002•805/643-5407

Tip Top Bio-Control
P.O. Box 7614
Thousand Oaks, CA 91359
805/445-9001
www.tiptopbio.com

PESTICIDES & WATER POLLUTION

Pesticides can damage our health and kill beneficial insects necessary for a healthy garden. Common household pesticides show up in our waterways, sometimes at levels that can harm sensitive aquatic life.

The County of Ventura Environmental and Energy Resources Department is working with local nurseries and hardware stores to reduce the risks associated with pesticide use. This fact sheet is part of a series of informative publications and store displays designed to educate Ventura County residents about less-toxic pest management.



Look for the "Our Water Our World" logo next to products in participating nurseries and hardware stores throughout Ventura County. For a list of participating stores, call 805/289-3333 or visit <http://www.wasteless.org>

Pest control strategies and methods described in these publications are consistent with Integrated Pest Management (IPM) concepts, and are based on scientific studies and tests in actual home and garden settings. IPM is an environmentally sound approach to pest management combining various methods with good horticultural practices. Follow all label directions on any suggested products. NO endorsement of specific brand name product is intended, nor is criticism implied of similar products not mentioned. Different products with the same active ingredients are equally suitable.

HOUSEHOLD HAZARDOUS WASTE COLLECTION PROGRAMS

Most cities offer FREE monthly collection events that accept pesticides, fertilizers, latex and oil based paint, motor oil and filters, car and household batteries, pool chemicals, stains, solvents, fluorescent light tubes, automotive fluids, cleaning products, photographic chemicals and more. For more information and collection schedules call 805/289-3333 or visit www.wasteless.org.

FOR MORE INFORMATION

Participating stores have been provided books on Integrated Pest Management (IPM) you may use while in the store. The store staff has been extensively trained in IPM to assist you.

The Certified Master Gardener Program operated by the University of California Cooperative Extension provides a free assistance Helpline and offers a variety of workshops and school education programs. Call 805/645-1455.

Check these websites:

<http://www.watoxics.org>
<http://www.ipm.ucdavis.edu>
<http://www.pesticide.org/factsheets.html>

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