ALABAMA COOPERATIVE Extension SYSTEM

ANR-189

ALABAMA A&M AND AUBURN UNIVERSITIES

Controlling Aphids
On Ornamentals

Aphids, or plant lice, belong to a large group of insects that suck sap from a wide variety of plants. Aphids may be found in large numbers, with winged and wingless forms often present at the same time. Although aphids are common prey for many parasites and predators, their tremendous reproductive potential allows their numbers to increase very quickly.

Description

Aphids are small, soft-bodied, pear-shaped insects that often possess a pair of hornlike structures known as cornicles at the posterior end of the abdomen. Winged forms have wings held vertically above the body when at rest. Aphids vary in color; some are green, others pink, yellow, or black. Some species are covered with white waxy fibers that give them a cottony appearance. Aphids excrete honeydew, which consists of excess sugars and water.

Life History

The life cycle of most aphids is complex. Most species overwinter as eggs. In the spring, these eggs hatch into females that produce living young without mating. Several generations of wingless aphids may be produced in this way. Later in the season, winged forms appear and migrate to different host plants. Late in the season, aphids move back to the original host, and a generation of males and females is produced. These aphids mate, and the eggs that are produced overwinter. These methods of reproduction enable aphid numbers to build rapidly over a short period of time.

Damage

Aphids damage a wide variety of plants, including row crops, fruit trees, and ornamentals. Damage occurs to plants as the aphids pierce the tissue with needlelike mouthparts and suck out the sap. Leaf-feeding aphids may cause leaves to become deformed when heavy infestation occurs. Plants are generally weakened by aphid feeding. Some aphid species spread diseases from one plant to others.

Honeydew produced by aphids is an ideal medium for the growth of sooty mold. This mold gives plants infested with aphids a dirty, sooty appearance and may further weaken the plant by reducing its photosynthetic processes.

Control

Since aphid numbers build rapidly, frequent and thorough inspection of plants is essential. This will help determine the proper treatment method.

Natural parasites and predators help reduce aphid populations when they first begin to build in the spring. To avoid destroying these natural controls, delay treating with an insecticide as long as possible. Instead, wash off aphids with a forceful stream of water; shake smaller plants after washing them. Use the water treatment early

Wooly alder aphids on maple leaf. Note cottony appearance.

Wingless aphids covering rose stem.

or late in the day to avoid sunscald on plants.

Use an insecticide as a last resort—when inspection reveals a large buildup of aphids. Retreatment may be necessary late in the season when winged aphids move from plant to plant. Late summer to early fall treatment destroys egg-laying females of some species and thus reduces the number of overwintering eggs.

Aphid problems have increased in Alabama nurseries and greenhouses. Primary pests are the green peach and melon aphids, which have developed pesticide resistance due to repeated heavy use of insecticides. Presently, cultural practices and rotation of insecticides are important in suppressing aphid problems.

Frequent inspection of plant material is essential to prevent rapid buildup of aphids in nurseries and greenhouses. In addition, new plant material should be inspected for aphids before it is established. Cleanup of plant dumping sites, escaped plants under benches, and weeds outside greenhouses or adjacent to nursery stock can help to reduce the likelihood of aphids in growing areas.

The insecticides listed in Table 1 are recommended for homeowner use for aphid control on outdoor ornamentals. Table 2 lists insecticides recommended for commercial use in nurseries and greenhouses.

Table 1. Homeowner Use.

Chemical	Amount To Use Per Gallon Of Water
acephate	
ORTHENE 15.6%EC	1 tablespoon
diazinon	
12.5% EC	4 teaspoons
SPECTRACIDE 25% EC	2 teaspoons
dimethoate	
CYGON 2E	2 teaspoons
insecticidal oil	See label.
insecticidal concentrate (“soap”)	See label.
malathion	
57% EC	2 teaspoons

Note: EC or E = emulsifiable concentrate

Table 2. Commercial Use.*

Chemical	Rate
acephate	
ORTHENE TT&O	1⅓-2⅔ oz./25 gal.
bifenthrin	
TALSTAR 10WP	1.5-4 oz./25 gal.
chlorpyrifos	
DURSBAN 50WP	2 oz./25 gal.
cyfluthrin	
TEMPO 2	1-1.5 fl. oz./100 gal.
diazinon PT 265	
KNOX-OUT	12-25 oz./25 gal.
kinoprene	
ENSTAR 5E	See label.
methoxychlor & diazinon	
DYMET 3EC	1-1½ pt./25 gal.
endosulfan	
THIODAN 50WP	¼ lb./25 gal.
fluvalinate	
MAVRIK 2F	½-1¼ fl. oz./25 gal.
insecticidal concentrate (“soap”)	See label.
insecticidal oil	See label.
imidacloprid	See label.
MARATHON 1% G	Greenhouse and nursery uses.
MERIT 75WSP	Landscape uses.
sulfotep**	
DITHIO DITHIONE PLANTFUME 103	See label.

*Always check the product label for phytotoxicity information. See label for site use.
**Restricted use.

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UPS, 12M09, Rep. 6:96, ANR-189