UT Extension
SP 290-S
(Available online only)

Insects

Mealybugs on Ornamentals

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Mealybugs are worldwide pests of ornamental plants grown indoors and outdoors. Both greenhouse and field-grown ornamentals are commonly attacked.

Damage to ornamentals occurs when mealybugs insert their needlelike mouthparts into host plants and suck out the sap. Heavy infestations often result in the disfiguration of the plant. While feeding, the mealybug excretes honeydew, a sweet sticky liquid. Infested plant parts darken due to sooty mold growing on the honeydew. Ants may also feed on the honeydew. Some species of mealybugs inject a toxin into the plant while feeding. This toxin causes the plant to drop buds and leaves.

Description and Life Cycle

Adult female mealybugs are soft-bodied, oval and up to 1/8 inch long. A fluffy wax covers some species of this insect. The male mealybug is a small, gnat-like insect with two wings and long "tails" of wax. Females are wingless and move from one host to another by crawling. Some species have "tails" of wax as adult females.

Nymphs (immatures), when newly hatched, are yellow, flattened, oval and not covered by wax. As they mature, some species may become covered with white fluffy wax. Wind aids in moving nymphs to uninfested plants.

Mealybugs often wedge themselves into crevices of the plants. They may be found at the bases of stems or petioles of plants with long petioles (such as African violets). Light infestations may be overlooked because of their location on the plant. Each female lays from 200 to 600 eggs in fluffy white wax called an ovisac. Contact insecticides are somewhat ineffective against this stage because eggs are protectively intertwined with the waxy filaments. Some species of mealybugs do not lay eggs but give birth to living young. Several weeks are needed for nymphs to mature into adults. Infestations become very noticeable after the first

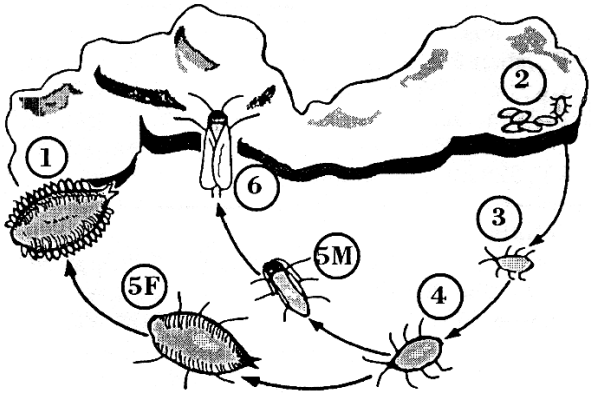

Figure 1-6: *Stages of mealybug development. 1. Adult female; 2. Eggs in the cotton mass; 3. First nymph; 4. Second nympth; 5F. Female third nympth; 5M. Male third nympth; 6. Adult male*

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batch of eggs hatch. Populations increase until mealybugs of all sizes may be seen crawling over the exposed portions of host plants.

Mealybugs are difficult to control. On houseplants, this pest can be removed by a cotton swab dipped in rubbing alcohol or insecticidal soap solution. Care should be taken when using rubbing alcohol since leaf burn may occur on sensitive plants. In situations where large numbers of plants are infested, treat plants using one of the listed insecticides. Treatments may have to be repeated two or more times at weekly intervals to kill newly hatched mealybugs.

These invasive scale insects, Citrophilus mealybugs (Pseudococcus calceolariae), when disturbed, secrete a red liquid as a means of defense. Note the two droplets on the large mealybug in the center.

Chemical Controls

Greenhouse Use:
https://utextension.tennessee.edu/publications/Documents/PB1594.pdf

Interior plantscapes such as in hotels, shopping malls, office buildings, etc.:
http://eppserver.ag.utk.edu/redbook/pdf/interiorscapeinsects.pdf

Home Use Indoors:
azadirachtin (Safer Bioneem), insecticidal soap (Safer Insecticidal Soap), horticultural oil (various brand names), or pyrethrins plus piperonyl butoxide (various brand names).

Commercial outdoors use:
https://tiny.utk.edu/ag/insectandmite

Do not use horticultural oil more than once per week.

Residential landscape use by general public:
cyfluthrin (Advanced Garden Lawn and Garden Multi-Insect killer), imidacloprid (Advanced Garden, Tree and Shrub Insect Control), imidacloprid plus cyfluthrin (Advanced Garden Rose and Flower Insect Killer), azadirachtin (Safer Bioneem), insecticidal soap (Safer Insecticidal Soap) or horticultural oil (various brand names).

Always refer to the insecticide label to make sure that the insecticide can be legally applied on your site, such as greenhouse use, interior plantscapes, home use indoors, commercial outdoor use, residential landscape use, or similar wording.

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