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SP290-S Insects: Mealybugs on Ornamentals

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UT Extension
SP290-S

Insects

Mealybugs on Ornamentals

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Originally developed by Harry E. Williams, Professor Emeritus
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Entomology and Plant Pathology

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

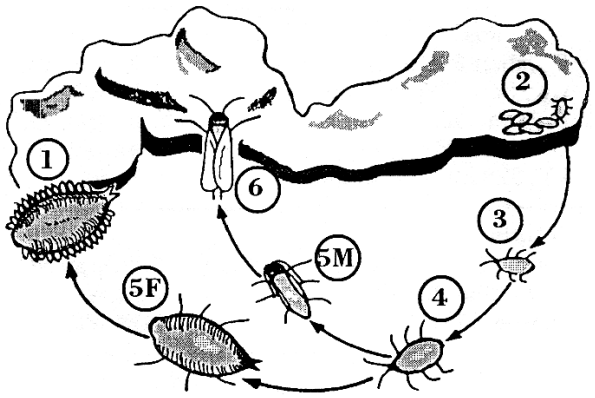

Figure 1-6: *Stages of mealybug development. 1. Adult female; 2. Eggs in the cotton mass; 3. First nymph; 4. Second nymph; 5F. Female third nymph; 5M. Male third nymph; 6. Adult male*

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.*

Photo courtesy USDA-ARS.

Chemical Controls

Greenhouse use: http://eppserver.ag.utk.edu/redbook/pdf/ghinsects.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 (Pyrenone, PT 1600 X-clude A).

Commercial outdoors use: http://eppserver.ag.utk.edu/redbook/pdf/ornamentalinsects.pdf

Residential outdoor use: 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), pyrethrins plus peperonyl butoxide (Pyrenone).

Do not use horticultural oil more than once per week.

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store, or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label. Persons who do not obey the law will be subject to penalties.

Disclaimer Statement

Pesticides recommended in this publication were registered for the prescribed uses when printed. Pesticides registrations are continuously reviewed. Should registration of a recommended pesticide be canceled, it would no longer be recommended by the University of Tennessee. Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others which may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product.

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