

Mealybugs

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Mealybugs (family Pseudococcidae) are common pests of landscape plants, greenhouses, and nurseries. Some species are specialists on a limited number of hosts but many are generalists and are known to attack dozens to hundreds of woody and herbaceous plants. Mealybugs can be found on susceptible hosts throughout the world. Large infestations are common due to the rapid growth of populations and feeding can lead to a variety of stress responses in plants.

Description

Mealybugs are relatively small insects with some adult females reaching up to about 3 mm long. Most species exhibit white, waxy exudates, some of which resemble long thin tails. This fluffy material surrounds the body and provides protection from predators and environmental stressors. Given their conspicuous appearance, they may be easy to spot in the landscape (Figure 1); however, they are often confused with other small, wax-producing insects. Movement primarily occurs by wind, animals or direct contact with neighboring plants. Only adult males possess wings and fly to females for mating.

Life Cycle

Adult females can lay hundreds of eggs in protected waxy ovisacs. Mealybugs generally pass through several immature stages before reaching adulthood over the course of 1 to 2 months. Generations can overlap, resulting in immature and adult mealybugs being present throughout the growing season. Consequently, populations can proliferate rapidly on infested plants. Many species overwinter on their host plant in protected areas such as bark crevices (Figure 2).

Figure 1: Adult female (white) and nymph (pink) mealybugs on holly



Figure 2: Mealybugs overwintering under bark



Damage

Damage from mealybug infestations varies by host and plant parts affected. Mealybugs use piercing-sucking mouthparts to feed on leaves, stems, or roots. Their stylet mouthparts penetrate the phloem and draw out sugary sap. Consequently, they also secrete large amounts of sugary waste called honeydew. Honeydew accumulations on surfaces below an active infestation can host dusty, black fungal growth called sooty mold (Figure 3). Layers of sooty mold on top of leaves can drastically reduce photosynthesis. In addition to sooty mold accumulation, heavy infestations often result in chlorosis, distorted growth, and/or leaf drop.

During feeding, some mealybugs also secrete saliva that can cause further plant damage. Some plants exhibit hypersensitivity to these substances and severe distortion or dieback symptoms may occur.

Figure 3: Sooty mold on foliage



Management

Effective management of this pest requires consideration of the host plant, mealybug species and time of year. Attempting to manage large populations late in the season can have variable efficacy, so suppressing populations early in the season before they reach outbreak levels is recommended.

Therapeutic products are available and effective against mealybugs, but thorough coverage and proper timing are essential. Control often requires multiple interventions, and monitoring is recommended before and after management efforts. Mealybug populations may persist if individuals are protected by waxy exudates or in protected areas of the infested plant. Biological control can effectively suppress populations below outbreak levels but will be less effective during outbreaks of this pest.

Implementation of host-specific cultural practices such as mulching, pruning, and sufficient irrigation can reduce stress and increase effectiveness of control strategies. Excessive fertilization should be avoided as nitrogen-rich new growth serves as an ideal food for this pest. Please contact your Bartlett Arborist Representative to learn about management strategies.



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