

Problem: Lecanium Scales



Hosts: Numerous shade trees and woody ornamentals

Description: Lecanium scale is a term used to refer to any of a dozen species of soft scales associated with shade trees and woody ornamentals. Due to similarities between the different lecanium species, even scale experts are unable to consistently provide precise identifications of submitted specimens. However, because most lecanium scales have similar life histories, accurate identifications may only be of academic importance.

Lecanium scales overwinter as 2nd instar nymphs on the twigs and branches of infested trees. During spring, nymphs resume feeding. By late spring and early summer, female scales produce (with or without the presence of males) and deposit their eggs. Females then die, but remain in place, with the eggs protected beneath their bodies.

During the summer, scale crawlers emerge from eggs and crawl to the leaves where they feed for the duration of the summer. In the fall, lecanium scales migrate back to adjacent twigs and branches where they overwinter. Lecanium scales produce a single generation per year.

Although female Lecanium scales can individually produce more than 3,000 eggs each, their populations generally are kept "in check" by populations of naturally occurring predators and parasites. However, any disruption of beneficial populations can result in rapid Lecanium scale population buildups over a several year period. The feeding of many developing scales during their rapid growth period in the spring results in heavy "raining" of honeydew onto whatever is parked/positioned beneath heavily infested trees. A black sooty mold growing on the honeydew-laden branches results in an unacceptable blackened appearance to the tree. Branch dieback is also a consequence of massive Lecanium scale populations.

Recommendations: As mentioned, populations of naturally occurring predators and parasites normally keep Lecanium scale populations "in check." Unfortunately, populations of beneficials are greatly reduced or eliminated in neighborhoods which receive massive annual insecticide applications. In these instances, previously non-problematic insects (such as Lecanium scales) may emerge as a primary pest with few natural enemies to control it.

If Lecanium scale populations require chemical control, it is essential to apply controls at the proper time. Dormant Oils applied at higher rates during early spring can kill overwintering females.

Crawlers can also be targeted but the CRAWLERS MUST HAVE EMERGED FROM UNDER THE PROTECTION OF THE "DEAD" MOTHER'S BODY! The timing of this event cannot be based on a calendar date. Rather, the presence of crawlers must be determined on visual observations of the presence of this life stage as they migrate to foliage during the summer. Double-sided tape or electrical tape smeared with petroleum jelly can be used to capture crawlers making them more easily seen. Use a magnifying lens to identify the very small crawlers. If nothing is moving, crawlers are not active yet.

Various insecticides are registered for use against scale crawlers including acephate (Orthene, Bonide Systemic Insect Control), cyfluthrin (Tempo) and permethrin (Hi-Yield 38 Plus Turf, Termite & Ornamental Insect Spray; Hi-Yield Garden & Farm Insect Control).

Homeowners have another option that gives a larger window for application involving the use of the systemic insecticide imidacloprid. Imidacloprid is the active ingredient in Merit 75WP (commercial) and Bonide Annual Tree and Shrub Insect Control, Hi-Yield Systemic Insect Granules and BioAdvanced 12 Month Tree & Shrub Insect Control (homeowner). Ohio State has verified the effectiveness of fall application treatments for soft scales including lecanium scale. They suggest applying imidacloprid from mid-October to late November to control insects the following spring to early summer. The imidacloprid is applied as a drench at the base of trees. Mulch and litter should be removed to allow good penetration of the product. Hard soils may need temporary dikes to allow the material to soak in rather than running off.

References:

1. [Lecanium Scales](#), University of Kentucky Entomology, Insect & Pest Info
2. Common Insect Pests of Trees in the Great Plains, Nebraska Cooperative Extension Service pub EC 86-1548, pg 35

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