

# Controlling Lecanium Scale



## Lecanium Scale

European fruit lecanium, *Parthenolecanium corni*, is a widespread scale pest throughout Michigan, although it seldom reaches economic levels. Scales are sucking pests that feed on a wide variety of hosts, which include fruit trees, small fruits, ash, dogwood, maple and roses. Nearly every broadleaf plant is a possible host, and even some evergreens have been infested.



Damage from this sucking pest is indicated by stunting and/or wilting. Such plant disorders are apparent only when the scale is extremely abundant on the plant. The most frequent problem is one of unsightliness, which results from the sticky, sweet honeydew that the scale excretes.

Accumulations of honeydew on underlying foliage provide an excellent site for the prolific growth of black sooty mold. This in turn can retard growth by blocking photosynthesis (the photochemical food-making process that takes place in leaf tissue). The

honeydew drippings from trees also leave an unsightly residue on cars parked beneath such trees.

## Description and Biology

Lecanium scale becomes noticeable when insect approaches maturity in the spring. At this time they appear on the twigs and branches as hemispheres about 1/8 to 1/4 inch in diameter. They are usually chestnut brown, but color can vary with the host of the scale. Some appear brown with white markings, while others are brown with black markings. A powdery, purplish white wax is often present on the scale.

Lecanium scale overwinters as an immature scale on the branches and twigs of the host plant and matures in early spring. In May, the female lays a large number of white to pale yellow eggs beneath her body. The eggs hatch into tiny tannish crawlers in June. Egg hatch can last several days in duration, depending on temperature fluctuations. The crawlers migrate to the undersides of the leaves and feed there until late summer (usually August). Then the tiny insects move back onto the twigs and complete their development the following spring. There is one

generation per year.

Scales move from host to host in a variety of ways. Dispersal is probably most often accomplished on wind currents or by crawlers hitchhiking on other insects, birds' feet or even on a coat sleeve.

### Biological Control

The list of predators and parasites that attack lecanium scale is extensive.

Ladybird beetles green lacewings and several other predaceous insects often decimate the crawler stage. There are often successions of seasons without economic levels of this scale pest, simply because this complex of biological agents keeps them under control. However, during some years this biological balance is tipped and outbreaks occur.

### Chemical Control

In general, scale control is accomplished with chemical treatments for the vulnerable crawler stage or soft-bodied immature scales. The shell-like cover of the mature scale operates as an effective barrier to contact pesticides.

To determine when the crawlers have hatched out, in May select a branch that has mature scales present and begin flipping the scales over at weekly intervals to determine when and if hatch has occurred. A small hand lens will be useful as the crawlers are extremely small (1mm) at this point.

The presence of eggs is not an indication that applications should commence, since the egg stage may last a week or more if temperatures suddenly cool for a time. Wait until all or at least most of the eggs have hatched and the crawlers have left the protection of the mother's scale covering, then make the application. Repeating the application 10 days later may be necessary depending on choice of pesticide or thoroughness of coverage.



For the crawler (mobile) stage, which is on leaves from mid- to late summer, several organophosphate, carbamate and pyrethroid insecticides can provide effective control. Examples include acephate (Orthene), carbaryl (Sevin) and cyfluthrin. With applications aimed at the crawler stage, timing is crucial. A good time to treat would be during the month of July when crawlers are sure to be on leaf surfaces.

These products may also kill any beneficial insects that are present. In early spring before leaves appear, dormant oil sprays can be applied to the overwintering scales to suffocate them. For systemic control, a pesticide that contains imidacloprid (eg., Bayer Advanced Protect and Feed) can be mixed with water and poured around the base of the tree. This pesticide is taken up by the roots and transported throughout the tree. Best timing is in spring when uptake is optimal and crawlers have not yet hatched. There

are no pesticides registered for use on maples tapped for syrup production that are effective against this insect.

Be sure that the plant you wish to treat is on the label, and that the product is intended for scales. If you intend to spray ornamentals and there is a chance of the spray drifting to nearby edible plants, it would be wise to select a product that can be used on the edible plants.

### **Bee Caution**

Do not apply any of the pesticides listed to blossoms on the host or on underlying flowering plants. Mow flowering weeds in lawns near target plant and cover underlying or nearby flowering ornamentals with plastic before applying pesticides to prevent contamination, which can kill bees. Sevin must be used with special care since it is carried back to the hive on pollen and will kill the entire hive.

### **Preserving Predators**

Outbreaks of scale insects are usually caused by indiscriminate use of pesticides. Most insecticides have a

broad spectrum of activity and are very toxic to the predators or parasites that keep scale insects under control. **Avoid** using pesticides as much as possible and use soap or oil to control scales. These are not very harmful to predators or parasites.

Use pesticides with care. Apply them only to plants, animals or sites listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. If pesticides are spilled on skin or clothing, remove clothing and wash skin thoroughly. Store pesticides in their original containers and keep them out of the reach of children, pets and livestock.

The law requires that pesticides be used as the label directs. Uses against pests not named on the label and low application rates are permissible exceptions. If there is any apparent conflict between label directions and the pesticide uses suggested in this publication, consult your county Extension agent.

## **Would you like additional information?**

**Additional information is available on-line. Please see [MSU Extension-Oakland County's publications](#) as well as [MSU Extension's Bulletin Office](#) on campus.**

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