

Healthy Landscapes
Pest Free Homes



Systemic Insect Management

A systemic treatment is preferred over topical treatments for the management of specific insects on a variety of trees and shrubs. An injection tool is used to apply product directly into the soil at the crown flare of the tree or shrub, where it is taken up by the roots and translocated through the plant's vascular system. For best results, the injection is performed during the dormant season, before insect activity begins. By Springtime, the plant will be equipped with defenses against harmful insect pests like aphids, leaf miner, adelgids, and scale. Protection remains in place for the duration of the growing season. Products are carefully selected not to interfere with beneficial organisms, like ladybugs.

This treatment requires water in order to activate. The area should remain moist for 7- 10 days to maximize product efficiency. If the area is protected from rainfall, we recommend using a soaker hose or a slow-running sprinkler on the soil around the base of the tree. Your technician will have noted if you should soak this application or if current soil moisture/rainfall is sufficient.

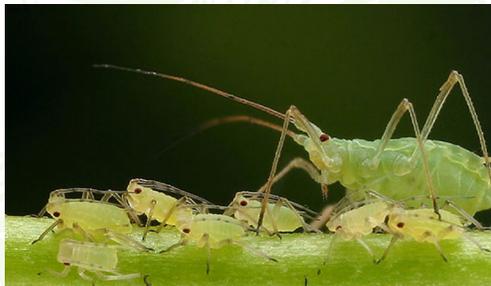
Hemlock woolly adelgid



Adelgids are aphid-like insects in the genus *Adelges* (family *adelgidae*) that feed mainly on conifers. Conifers are trees and shrubs that bear cones such as Pine, Spruce, Hemlock, Douglas Fir, True Fir, and many other valuable landscape and forest species. Like aphids, adelgids feed by tapping into their host plants and withdrawing plant sap. Infestations can cause branch dieback, growth deformation and in severe outbreaks even death of the host plant. Entire forests can be killed by certain adelgids such as the hemlock woolly adelgid.

Vulnerable plants will benefit from yearly maintenance treatments.

Aphids



An aphid is a small, soft-bodied insect that survives by sucking the sap from plants and consuming it. They can cluster thickly, depriving garden plants of the sap needed to carry nutrients through tissues, causing wilting, poor fruiting, and even plant death. Aphids also excrete honeydew, which can attract yellow jackets.

Scale



Common on backyard trees, ornamental shrubs, greenhouse plants and houseplants, over 1,000 species of scale insects exist in North America. They are such oddly shaped and immobile pests that they often resemble shell-like bumps rather than insects. In many cases, heavy infestations build up unnoticed before plants begin to show damage. Large populations may result in poor growth, reduced vigor and chlorotic (yellowed) leaves. If left unchecked, an infested host may become so weak that it dies.

Leaf miner



Leaf miner damage

A leaf miner is the larva of an insect that lives in and eats the leaf tissue of plants. The vast majority of leaf-mining insects are moths (Lepidoptera), sawflies (Symphyta, a type of wasp) and flies (Diptera), though some beetles also exhibit this behavior. Birch, Elm, Madrona and Holly are all common targets for leaf miner.

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Leaf miner

Leaf miners are insect larvae, usually of certain butterflies and beetles, but also of leafminers, the leaves or needles between their upper and lower skins (cuticle) eat. This typically shaped feeding tunnels arise (mines). The leaf or needle dies from around the galls around and turns brown. In extreme cases, they dry up completely and fall to the ground.

In some areas where certain leaf miners lack of enemies appear very strong, whole stands of trees may lose their foliage especially in deciduous trees.

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Aphids come in all colors, although pale white or light green are the most common. They can also be black, or yellow. In fact, there are more than 4,000 different aphid species in the world today. They are also sometimes called plant lice, greenflies, blackflies, and whiteflies.

When present in small numbers, aphids do little damage to plants. However, they can quickly multiply, and heavy infestations can do significant damage. Note that aphids reproduce multiple times during the growing season, giving birth to live young. In the fall, male and female aphids develop, mating and laying eggs that will overwinter, only to hatch a new colony in the spring.

Scale insects vary dramatically in appearance; from very small organisms (1–2 mm) that grow beneath wax covers (some shaped like oyster shells, others like mussel shells), to shiny pearl-like objects (about 5 mm), to creatures covered with mealy wax. Adult female scales are almost always immobile (aside from mealybugs) and permanently attached to the plant they have parasitized. They secrete a waxy coating for defense; this coating causes them to resemble reptilian scales or fish scales, hence their common name.

The first instars of most species of scale insects emerge from the egg with functional legs and are informally called “crawlers”. They immediately crawl around in search of a favorable spot to settle down and feed. In some species they delay settling down either until they are starving, or until they have been blown away by wind onto what presumably is another plant, where they may establish a colony separate from the parent. There are many variations on such themes, such as scale insects that are associated with species of ants that act as herders and carry the young ones to favorable protected sites to feed. In either case, many such species of crawlers, when they change their skins, lose the use of their legs if they are female, and stay put for life. Only the males retain their legs and use them in seeking females for mating.[3]