

Guide to Integrated Pest Management Strategies

The following guide provides strategies to control harmful pests, protect beneficial insects and minimize chemical usage.

The keys to Integrated Pest Management are:

- 1. <u>Regular Inspections</u>: In trees, like humans, prevention and early diagnosis is essential to good health. To successfully implement an Integrated Pest Management program, an ISA Certified Arborist should inspect trees several times a year to scout for insects and diseases and other problems that impact health and safety. Roots, trunk, branches, leaves and buds must be evaluated. If insects or disease are detected, the Arborist needs to determine the severity of the problem and what action if any is needed. A slight or benign problem may require no action other than closely monitoring the plant. If treatment is required, then the Arborist can recommend the best strategy with the least environmental impact.
- 2. <u>Targeted Pesticide Treatment</u>: Never let anyone do a blanket spray of all plants on the property for insects. Treatments must be targeted only to the specific plants that have a problem. When an entire property is sprayed, several things happen. Beneficial insects that help the landscape are also killed. Trees not needing pesticides are also sprayed which means that more chemical than necessary is being utilized.
- 3. <u>Treatment Alternatives</u>: Great advances have been made in tree service science. In the process, treatments for certain insects have been discovered that are actually more effective than spraying.
 - <u>Injections</u>: There are two types of injections: trunk and soil. The choice depends upon the problem. The benefits of injections are numerous. The chemical stays in the tree much longer giving the tree more protection. It's better for the environment because the material doesn't have to be sprayed in the air. Injections also tend to be more effective because all parts of the plant are covered. Finally, the injection material is designed to stay in the root zone and leech down into the water table. Aphids, Soft Scales, most leaf eating caterpillars, Saw Flies, Lace Bugs and Leafminers are just a few of the pests being treated effectively through injections rather than spraying.
 - <u>Pesticide Alternatives</u>: Many traditional pesticides are being replaced with oils, soaps and natural pesticides that interfere with an insect's respiratory or digestive systems. Beneficial insects such as ladybug beetles or nematodes may also be introduced to feed on harmful pests.
 - <u>Mechanical Control</u>: Some problems can be solved through mechanical means such as removing diseased areas from trunks or branches. Sometimes, cocoons, egg masses or the insects themselves may be removed by hand. When

mechanical approaches won't work then injections or spraying may be the best alternative.

- 4. <u>Prevention</u>: Insects prey on vulnerable trees. The best way to prevent pest invasion is by keeping trees healthy:
 - <u>Fertilize</u>: Maintain proper_nutrient levels with annual fertilizer treatments that are time released.
 - <u>Enhance Growing Conditions</u>: Improve soil consistency and structure through soil amendments and aeration.
 - <u>Water</u>: Maintain proper soil moisture by watering during dry periods.

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