

TREE TIPS

TREE & SHRUB CARE FROM BARTLETT TREE EXPERTS

Developing alternatives to spray treatments

by Chris B. Riley, PhD, Entomologist

Integrated Pest Management (IPM) is an ecosystem-based approach to landscape plant health care. IPM is designed to sustain plant health and performance through strategically

Bartlett scientists continually evaluate new techniques and materials for tree health care.

implemented actions in order to minimize unintended human, ecological, and environmental effects.

A good IPM program starts with regular inspections of the landscape, with the goal of identifying underlying plant health issues, which pests and diseases are present and at what densities, and what damage they've caused or are likely to cause.

Using this information, a variety of management approaches (e.g., biological, cultural, chemical) can then be combined to maximize the likelihood of long-term pest control.

In recent years, the Bartlett Tree Research Laboratories staff has researched novel approaches to insect and disease management that aim to limit the use of conventional, broad-spectrum products that might adversely affect non-target plants or beneficial organisms. For example, we have begun examining ways in which

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Tree injections

by Drew Zwart, PhD

One of the basic facets of landscape Integrated Pest Management (IPM) is the 'integrated' part: having multiple tools to address any issue and choosing the best method or combination of methods



Applying a treatment via root flare injection.

for the problem at hand. One increasingly common method in the arboricultural industry is the use of root flare injections to introduce systemic materials into the tree.

New injection products are continually becoming registered for use against tree diseases, insect pests, and even micronutrient deficiencies. Although direct injections are not always the right choice, they are a great option for many situations, including those in which foliar applications aren't feasible because of drift or non-target application concerns; those in which one injection can replace multiple treatments applied with other techniques; or in the case of micronutrients, wherein the soil pH is limiting nutrient uptake and injections allow us to 'bypass' the soil. Direct injections occur

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Safety above all else

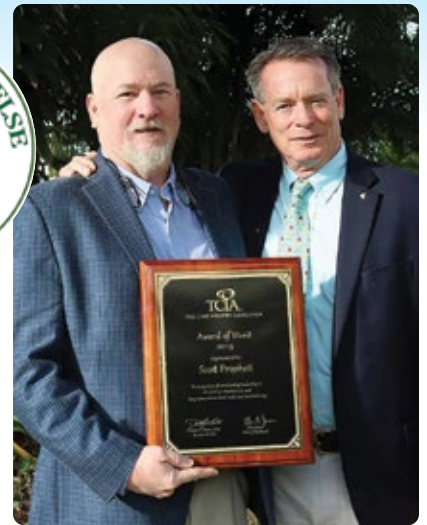
The words 'Safety First' and 'Safety Above All Else' are used frequently at Bartlett Tree Experts; some might call them slogans, but for us they represent a core principle. Tree care involves dangerous work: knowledge of—and adherence to—best safety practices is crucial.

Our focus on safety begins at the top with Director of Safety Scott Prohett, who oversees our international safety and training programs. He manages hands-on training as well as oversight of an extensive staff of regional and local employees focused on safe tree care operations. Every office has a Local Office Safety Coordinator who conducts a safety meeting every morning before the crews go out for the day. This attention to safety is part of the Bartlett culture. Our workers are equipped not only with proper gear but also with knowledge and training in current best practices and safety protocols.

This past February, Scott received the highest honor in our industry, the Award of Merit from the Tree Care Industry Association (TCIA). This honor recognizes his leadership and positive effect on the practice of arboriculture.



All Bartlett employees are familiar with this safety graphic; it appears many places, from posters to screen savers.



Scott Prohett, Director of Safety pictured here in February with his TCIA award and Bartlett Vice President, Alan Jones.

Lower your exposure to tick-borne disease

Controlling tick populations in your landscape is possible. Bartlett Tree Experts offers a highly successful treatment program to reduce the risk of encountering ticks on your property.



The first step is assessing your landscape for common tick habitats like wooded areas, leaf litter, and ornamental beds. Based on the assessment, we can provide effective tick treatments to specifically target at-risk areas. For a free tick inspection, contact your Bartlett Arborist Representative.

Developing alternatives *(Continued from page 1)*

growing degree-day calculations—which provide an indicator of when specific pest species are active in different geographic areas—could be made available to all offices across the company, and with regular updates. Additionally, we continue to explore the efficacy of various commercially available beneficial insects, such as natural predators of pests, and the potential of successfully incorporating them into our IPM programs.

In the northeast and mid-Atlantic states, trunk injection applications are a common method for protecting native trees from serious pest threats such as Dutch elm disease and emerald

ash borer. As discussed in the Tree Injection article (on page 1), this type of product application can provide a high degree of efficacy and also reduces the risk of impacting non-target organisms in the landscape compared with foliar applications.

At Bartlett, we consider all available treatment methods and recommend the most appropriate course of action for each situation. Our laboratory staff continually evaluates new techniques and materials, and trains our Plant Health Care Specialists in an ongoing effort to provide responsible and sustainable management for the health of landscape trees.



Fun with trees **Observe and discover!**

To start, choose a 'subject' – a tree in your yard or a nearby park – look closely at the tree's bark, leaves, and any fruits or nuts. Identify what kind of tree it is and then visit your tree regularly. Keep a diary of your observations in a notebook. Binoculars or a magnifying glass add to the fun! Are there signs of growth? Are flowers, berries, seed pods, or nuts growing? How quickly? Do animals live in the tree? Do you see signs of stress, such as wilting leaves from lack of rain?

As a summer activity, kids can track seed growth, animal activity, etc. Or visit at least once a month and take a photo, and in a year's time you'll have a complete report of your special tree's life and growth.

TREE FOCUS:

Sycamore (*Platanus occidentalis*)

History

The American sycamore tree, also known as buttonwood, is easily identified from other trees by its mottled bark which flakes off in great irregular masses, leaving the surface mottled and gray, greenish-white and brown. The sycamore is widely used as a shade tree; it can grow to massive proportions, typically reaching up to 98 to 131 feet high and 4.9 to 6.6 feet in diameter when grown in deep soils. In 1770, in present day West Virginia, George Washington recorded a sycamore in his journal that measured 44 feet 10 inches in circumference.

Culture

- Large deciduous tree (100+ ft.) that tolerates urban growing conditions
- Grows in a wide range of soil and pH conditions; performs best in deep, wet and slightly acidic soils
- Commonly found along streams and rivers and in floodplains

Concerns

- Sycamore anthracnose, which causes defoliation and branch dieback, is the most common problem
- Sycamore scale, leaf beetles, and defoliating caterpillars are also of concern
- Can be killed by canker stain, a disease spread by insects and human activity, and bacterial leaf scorch
- Some people report respiratory and skin allergic reactions

Bartlett Management Practices

- Manage anthracnose with preventive foliar or injected treatments
- Treat for scale insects, defoliating beetles, and caterpillars as needed when populations are detected
- Utilize antibiotic treatments for bacterial leaf scorch

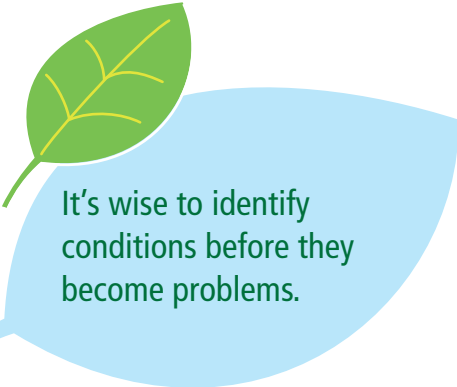


WONDERS OF NATURE

The manchineel tree

According to *Guinness World Records*, the manchineel is the most dangerous tree in the world. Every part of the tree has toxic sap: the bark, the leaves, the fruit. Not only is the fruit poisonous, standing under this tree during rain will cause skin blisters, and when the tree burns, the smoke can injure eyes. Its range is tropical southern North America to northern South America.

Manchineel trees are often marked with red paint or warning signs.



It's wise to identify
conditions before they
become problems.

Your Bartlett Arborist can visit your property and then your entire part of the process can be completed by phone or e-mail.



Tree injections *(Continued from page 1)*

predominantly within a closed system, meaning there is very little potential for exposure of the products to the environment or to the person making the application.

Despite many upsides, tree injections are not always a 'silver bullet' option. All injections necessitate some degree of injury to the tree, given that holes are drilled for injection sites. If, however, injection is the right choice and done correctly, that injury is minor compared with

the potential harm caused by the target pest. Also, not all disease and insect pests of trees have injectable management options. For those problems, foliar or soil-directed applications are the best or only options.

Overall, tree injections should be looked at as a valuable tool in an IPM program, but not as a cure-all or perfect treatment option. When used correctly, under the appropriate conditions, and against suitable problems, tree injections are a great tool for arborists caring for tree health.

