

Bartlett's ROOT-R^x Program



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TREE EXPERTS**

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WHAT Encourages ROOT GROWTH?

Soil Evaluation/Root Invigoration

A forest setting provides optimum growing conditions for roots. Debris, not cleared away in a natural setting, disintegrates – providing nutrients, mycorrhizae fungi and protection from the elements. Forest soil is aerated – it has pockets of space to absorb water and air.

Ideally, a suburban or urban landscape would simulate natural conditions as much as possible, but it doesn't. So, when a Bartlett Arborist Representative recommends mulching, soil aeration, fertilization, Soil-Rx,[®] and mycorrhizal inoculation, he/she is striving to return the soil on your property to a more "natural" state.

Healthy Root System: Healthy Trees & Shrubs

Root and soil disorders are the leading causes of premature decline of landscape plants, resulting in more than 80% of early failures.

Roots grow when soil conditions are favorable. Most urban and suburban soil conditions do not promote vigorous new root growth. Soil compaction, lack of organic matter, poor nutrition, drought, freezing and thawing and low levels of beneficial fungi create an environment that is unfavorable to root growth. Proactive care for declining trees and shrubs involves analyzing and correcting soil conditions to enhance root development.

What Root Enhancement Does

Stimulating root growth allows some declining trees and shrubs to revive and recover their health and beauty. Young trees and transplants benefit as well, because root growth drives all other tree functions – like trunk growth, leaf/fruit/seed production, branching and defense.



Bartlett's Root-Rx Program

The Bartlett Laboratories have taken root care a step further. Our scientists devote considerable time and effort evaluating and developing techniques to assess soil and root conditions. The goal is to enhance root growth and to protect roots from disease and damage. This research has evolved over time, with innovations coming in small increments to become the root invigoration program.

A supersonic air tool was developed by the U.S. military to uncover unexploded ordnance. Another application for "Safe Excavation Technology" became immediately apparent. The scientists at Bartlett adapted the air spade to improve the condition of roots.

This supersonic air spade exposes but does not damage roots. Combining use of the powerful new tool with traditional methods of treatment has yielded an extraordinary breakthrough in root care.

This breakthrough is a major advance in the science of arboriculture. The laboratory staff worked with Bartlett field arborists to develop this new equipment and test it where soil conditions are especially challenging. The result is the Root-Rx Program of root invigoration.

**It's a combination of analysis and treatment
unique to your landscape.**

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How The Root-Rx Program Works:

Site Evaluation, Plant Evaluation, Soil Sampling

Your landscape and the trees and shrubs are evaluated for viability. A soil analysis provides information about nutrients, pH, organic matter and soil penetrability/density.

Irrigation

The treatment area will be heavily irrigated two or three days before the scheduled treatment if rainfall in the previous week was less than one inch. No water should be applied on the day before the treatment as it cannot be implemented if there is standing water or if the ground is dry or frozen.

Fertilizer Application

Bartlett's unique Soil-Rx Prescription Fertilization Program corrects nutrient deficiencies to achieve optimum plant benefits while meeting your landscape goals in an environmentally responsible way.



Figure 1
Basic Root Invigoration

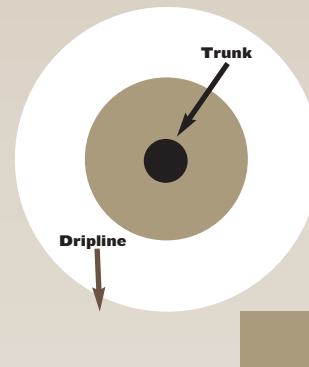
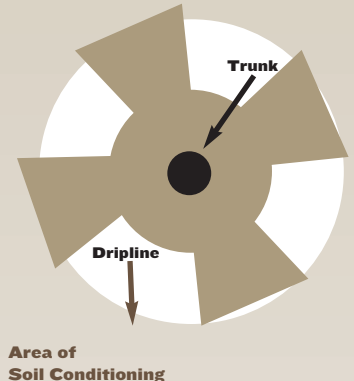


Figure 2
Complete Root Invigoration



Soil Conditioning

An air compressor and supersonic soil excavator cultivates the soil to a depth of 6-8 inches using a tool designed to excavate soil without disturbing roots. Following this preparation, organic matter, fertilizer and/or mycorrhizae fungi are introduced into the treatment zone based on soil analysis results.

Root Diseases

Diagnostic testing is recommended if root disease is observed or suspected. Root samples can be collected for analysis. Girdling roots will be removed. Treatment will be recommended, if required.

Mulching

A level of mulch is usually applied after the treatment. Mulch should be maintained at a depth of 2-4 inches, and not contact the stem.

Program Recommendations

When the results of our diagnostic tests are evaluated, a program of treatment will be recommended for your property and implemented by Bartlett technicians. It may be a basic or a complete invigoration program, based on individual landscape goals, the diagnostic tests and plant condition.

A basic invigoration program includes soil conditioning only around the trunk of the tree. A complete root invigoration conditions the soil around the trunk and in segments across the critical root zone. (see figures 1 and 2)

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What are The Results?

Each plant is unique, and so is every treatment result. Typically, the next growing season (or flush of growth) the plant will have a much denser and more vibrant crown. After root invigoration, water will absorb more rapidly into the treated soil due to increased porosity.

Your Bartlett Arborist Representative will offer recommendations and advice about the root system. Other recommendations such as dead branch clearance, borer treatments and tree risk assessment will vary with each situation as necessary.

Your Bartlett IPM Technician will also perform Integrated Pest Management (IPM) examinations on a regular basis to treat pests before they become a serious problem. IPM is always recommended after Root-Rx to monitor the health of plants and provide preventive treatment on a timely basis.

The Value of Maintenance

Preventive care is best, but reviving trees that are in decline is usually preferable to replanting. Regular maintenance avoids costs for removal and the additional costs of replacement. The loss of a plant should also be considered as a loss of shade, privacy, noise reduction, balance and beauty to your property. Trees and shrubs can be replaced, but it takes time to fill the empty space left behind. Transplants take time to achieve their full height and potential growth. Your Bartlett arborist recommends proactive tree and shrub care as the most cost-effective method of landscape management and it gives you the best results.

Contact Your Bartlett Arborist Representative

Your Arborist Representative can advise you about our new Bartlett Root-Rx Program and its use on your property. He/she can also inform you about other Bartlett services, programs and materials like Soil-Rx Fertilization, BOOST® Fertilizer, IPM and MoniTor.® Ask for a free consultation.



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