

# Fertilization: Nutrition for Your Trees

## Why Urban Trees Need Fertilization

Trees in the urban environment often need supplemental nutrients to reach their full potential. Trees evolved in forests, where their needs are met perfectly. Trees in the forest are fertilized annually with nutrients provided by the decomposition of fallen leaf litter, twigs, branches, and logs. This process is disrupted in urban settings. The prominence of turf grass is also a major factor affecting tree health in urban settings as the roots of grass plants are aggressive competitors for water, nutrients and rooting space in the soil. These factors contribute to lowered levels of nutrients in the soil and can reduce a tree's ability to collect energy, grow, and defend itself against pest attack.



Typical forest floor showing decomposing organic matter.

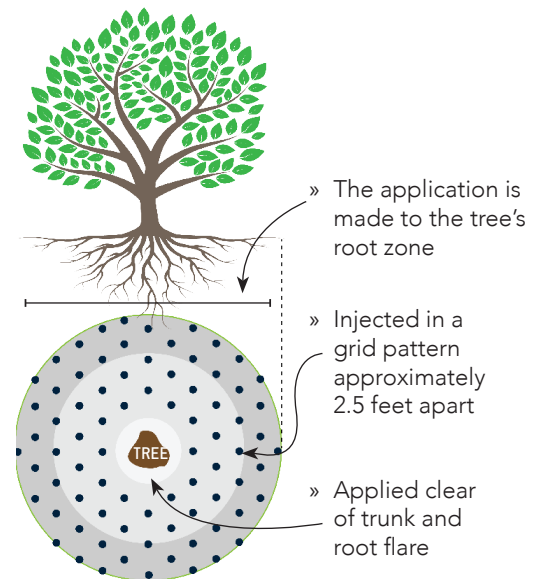
## Custom Fertilization for the Twin Cities

Rainbow Treecare evaluated hundreds of soil samples from our metropolitan area to determine the deficiencies and needs unique to our geography. We partnered with national tree fertilizer expert, Doggett Corporation, to develop a customized fertilizer blend for the Twin Cities' unique conditions. This customized blend factors in our weather patterns, general soil composition, and primary tree and shrub species.

Our professional-grade, suspension fertilizer is formulated with the finest ingredients to satisfy the nutritional needs of trees and shrubs within the Twin Cities. The slow-release delivery is made available by soil microbial activity and provides ongoing nutritional needs for two years after application. This reduces the loss of nutrients to leaching, and avoids over-stimulating growth, giving your trees and shrubs the nutrients it needs in a slow, absorbable manner.

## When Tree Fertilization is Applied

Trees can be fertilized any time during the growing season, as long as there is sufficient moisture and the soil is not frozen. Slow-release fertilizer applications deliver nutrients at a rate determined by soil temperatures. Nutrient availability increases as soil temperatures warm up, and decreases as the soil gets cooler.



Soil treatment by injecting the nutrients into the ground

## **How Tree Fertilization is Applied**

Our custom blended fertilizer is mixed with the proper ratio of water and injected into the root zone using a soil probe. The application is made to the tree's root zone on a grid pattern 6 – 8 inches into the soil, below the level of the turf roots. The solution is applied clear of the trunk and root flare, and each injection is done approximately 2.5 feet apart. This allows for even distribution to the entire tree, and with minimal impact to your surrounding landscape. In some soils the material may come to the surface, causing increased grass and plant growth and/or color at the injection sites.

## **Benefits of Rainbow's Custom Tree Fertilization**

Optimum nutrition improves tree health and resistance to common problems associated with insect pests, fungal diseases, or nutrient deficiency. For example, supplemental potassium from fertilizer can increase winter hardiness of needles on conifer trees. Two forms of organic matter, biochar and humates, increase the biological health of the soil. Biochar builds the capacity of the soil to hold water and nutrients, and provides living spaces for beneficial soil bacteria and fungi. Humates increase the ability of root tissue in the uptake of nutrients delivered in the fertilizer material.

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