ecoHEALTH™
INDUSTRIES

The Latest in
Environmental Probiotics
&
Green Chemistries

treeGROWTH™
SCIENCES

Get more out of what you put in

The Biological Method
the best of *both* worlds

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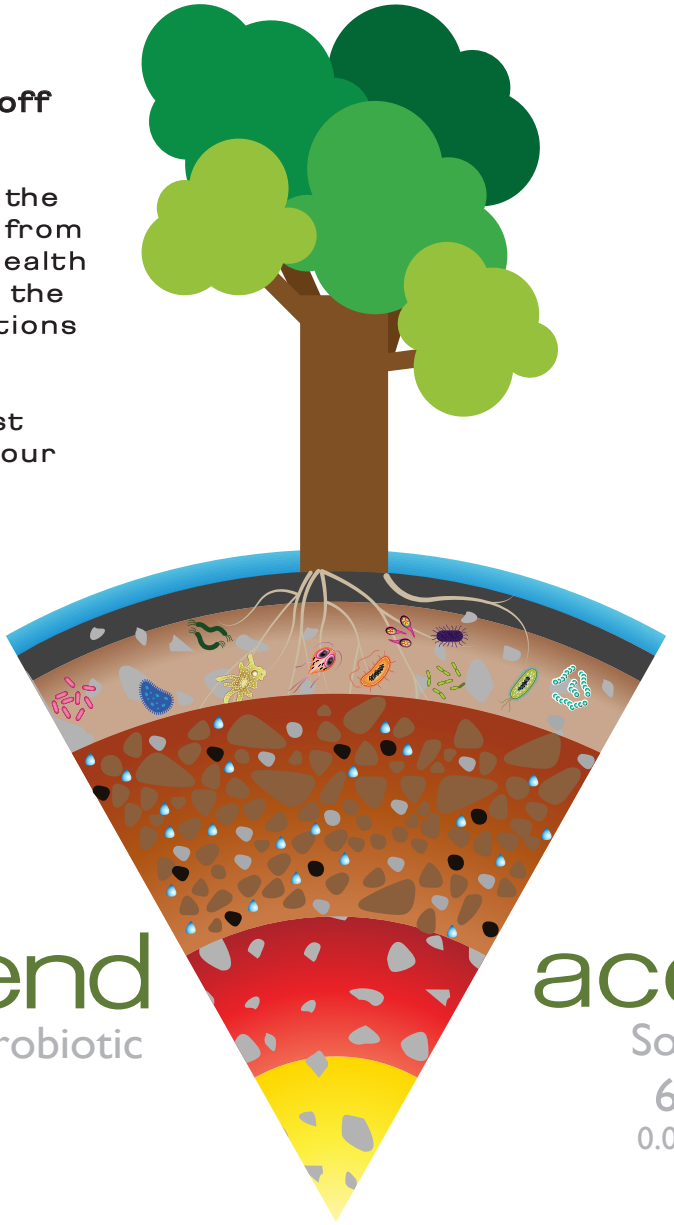
Our 3 Part Program

Fast-track your Hand-off back to Nature

Manage your trees with the needed essentials right from the start with the SilviHealth Program. By addressing the Bio-Geo-Mineral interactions in soils, the SilviHealth Program will mimic how trees function in a forest setting and fast-track your handoff back to nature.



What to Expect

- Peace of Mind
- Proven Financial & Productivity Gains
- Easily Integrates into Current Practices

beneBlend
Soil Probiotic

acclim8
Soil Prebiotic
6-10-3 +1S
0.02% B, 0.3% Mn

hydr8
Soil Water Management

What to Expect

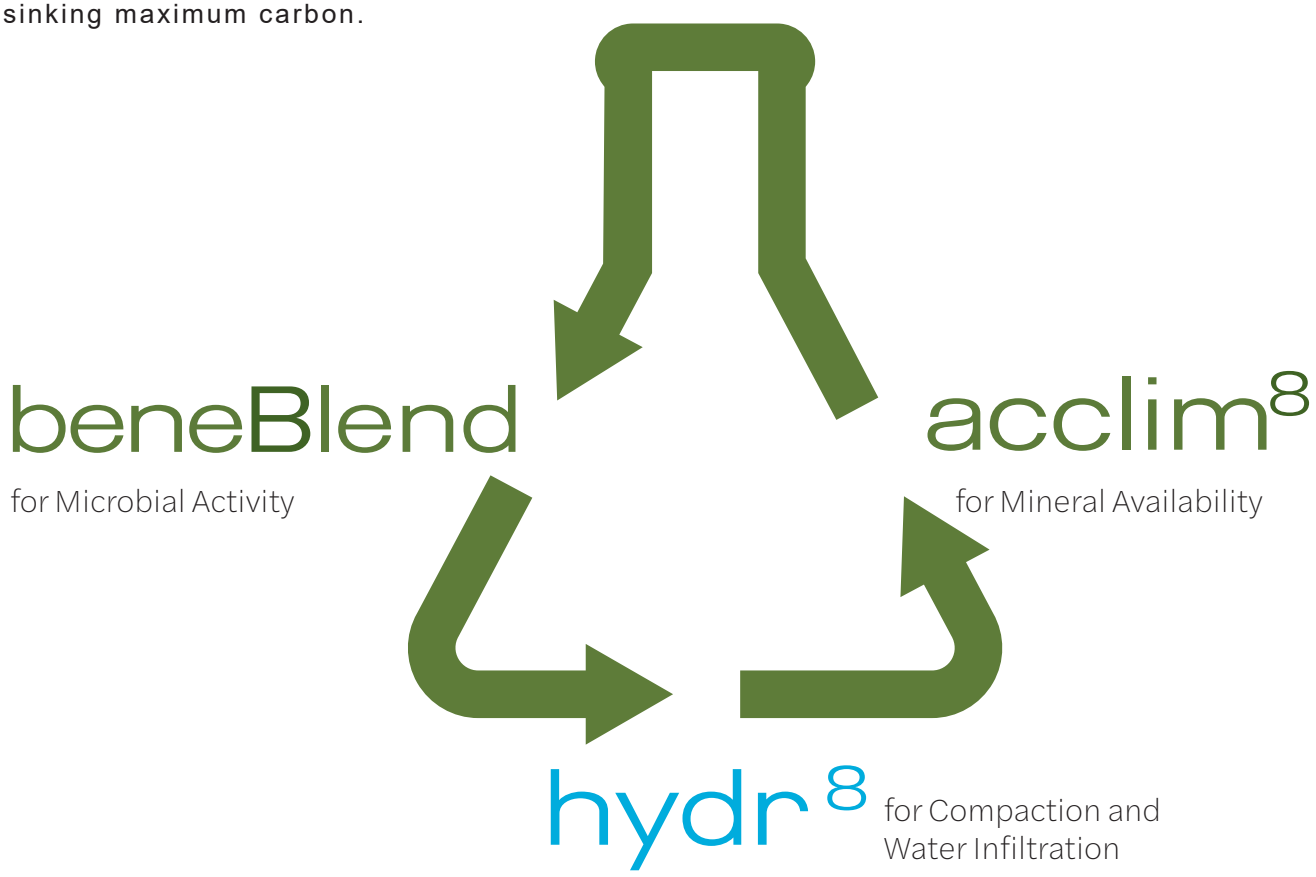
How we Fast-Track the Handoff Back to Nature

The Tree Growth Program is an easy and affordable approach to maintaining healthy green spaces. Anyone can plant a tree, but it takes special attention to 3 critical areas affecting tree reestablishment. These are known as the Bio-Geo-Mineral interactions in soils. In order to realize the benefits of increasing canopy cover and sinking carbon, the challenge of maturing a healthy tree in an urban setting is showing to be dependent on these 3 interdependent factors of a thriving ecosystem. Understanding natural forest settings and their ecological processes will inform proper management in the recreation of forests in urban green spaces.

There is a symbiotic relationship between trees and microbes with the exchange of carbon for nutrients, which is key to understanding long term forest sustainability. The Tree Growth Program, with its 3 part system, will fortify a strong foothold for your trees and fast track the handoff back to nature.

The Latest Science at your Fingertips

The Tree Growth Program is composed of patented scientifically-based solutions designed to assist urban forestry managers in solving the most challenging infield conditions. The formulations have been proven to alleviate environmental stresses such as compaction, low organic matter, heat stress, low microbial activity, and poor water infiltration. Each product in the Tree Growth Program will ensure the best chances that your trees reach their fullest genetic potential. The result - healthy, mature specimens providing effective canopy cover and sinking maximum carbon.



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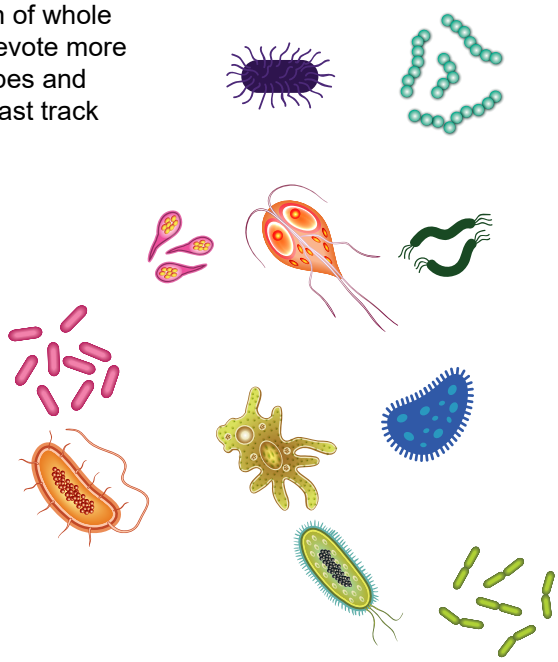
beneBlend

LIQUID SOIL PROBIOTIC

Powered by BROAD SPEC TECHNOLOGY

The Bio Challenge: Maintaining Microbial Diversity

Soil Microbes are constantly being called to action by trees. Trees devote 30-50% of their photosynthetic energy to the production of root exudates in the form of carbon compounds. The symbiotic relationship between trees and microbes with the exchange of carbon for nutrients is key for long term forest sustainability. With the application of whole biome extracts, we can reduce this energy burden on trees and allow them to devote more energy into root and vegetative development. With higher diversity of soil microbes and their metabolites, Beneblend SC will fortify a strong foothold for your trees and fast track the handoff back to nature.



Fortify your Soil Army- Properly

Beneblend Tree Probiotic is a highly diversified and stable liquid organic matter extract of the richest worm castings and freshwater regenerative peat bogs from the Rocky Mountains. These ancient isolated deposits contain many different species of free-living nitrogen-fixing and phosphorus solubilizing bacteria, oxalotrophic fungi, and several free-living amoeba and flagellates from the soil food web. Beneblend also contains many metabolites of microbial digestion such as volatile fatty acids (VFA's), organic acids, humic substances, enzymes, and trace elements found in ancient forest floors evolved on glacial moraine deposits not found in manufactured biologicals or GMO products.

Understanding Biological Products

Not all biological products are made equal. Most commercialized products are lab manufactured and contain either 1 species or a few "stacked" organisms, mostly without their metabolites. This is not how nature selects its inhabitants. Beneblend is extracted from naturally sourced materials, producing a highly diversified microbiome of 100's of species of beneficial fungi, protozoa, and bacteria. Each microbe plays a specific function at different humidities, temperatures, and plant life cycles. Mimic what mother nature has done for millennia and reduce dependence on fertilizers alone. Let Beneblend SC be your easy solution in creating a sustainable natural ecosystem.

What to Expect

- Fosters a Healthy Soil Ecology through Competitive Exclusion
- Releases Nitrogen via Natural Nutrient Cycling
- Strengthens Natural Plant Immunity Defence Mechanisms

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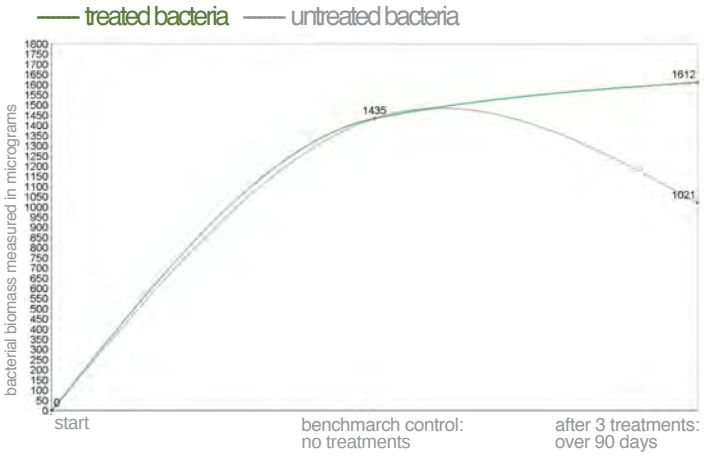
LIQUID SOIL PROBIOTIC

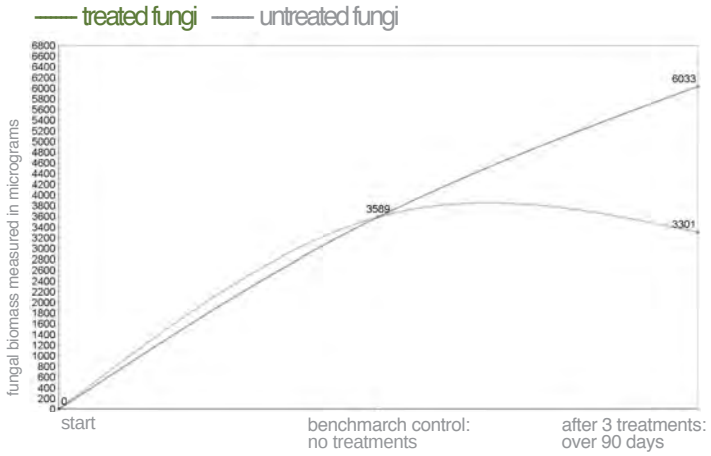
Eco Health Probiotic Effects on Soil Foodweb Microbes:

KWANTLEN POLYTECHNIC UNIVERSITY STUDY, 2014

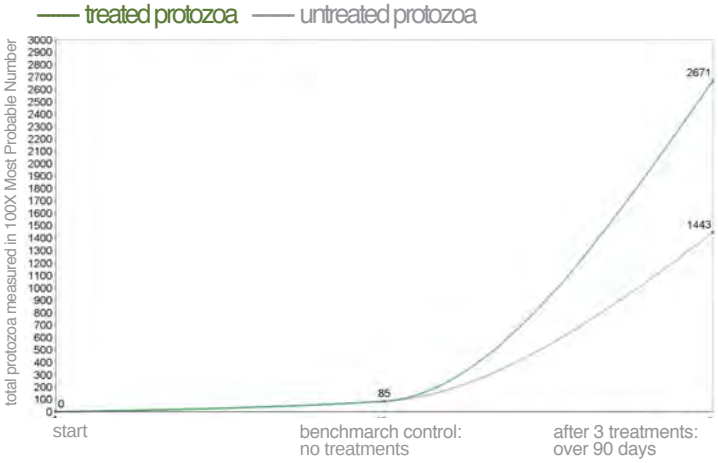
TOTAL BACTERIAL BIOMASS



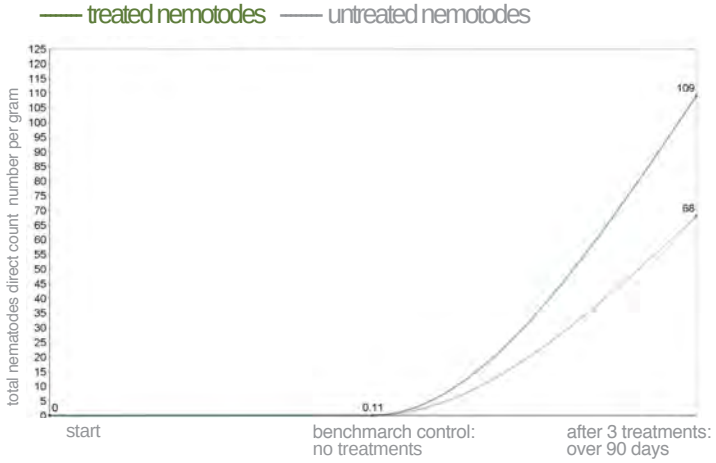
TOTAL FUNGAL BIOMASS



TOTAL PROTOZOA



TOTAL NEMOTODES



Increased microbial activity in the study, led to 144% greater shoot development and significant increases in height, spread, and root mass.

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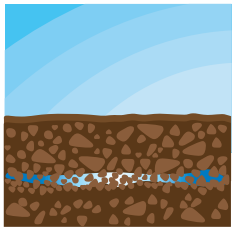
hydr8 SOIL AMENDMENT

Powered by nanolite

The Geo Challenge: Cracking Roots into Native Soils

In constructing hardscapes, roadways, and parks, compaction is essential to the stability and longevity of any permanent infrastructure foundation. However, this is the opposite of what is essential to the longevity of plant life often planted alongside and in between. Planting into compacted clay or rocky soils with low organic matter can impact water infiltration and create stratified layers where water cannot drain leading to saturation and anaerobic situations. Anaerobic soil conditions can ferment alcohol through naturally-occurring organic matter and bacteria, making it extremely difficult for trees to establish vertical roots. This can lead to trees growing horizontally under roads and sidewalks leading to costly repairs. Alleviating compaction is the most important determinant of successful, efficient green space projects.



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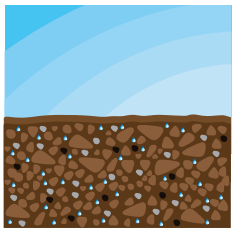

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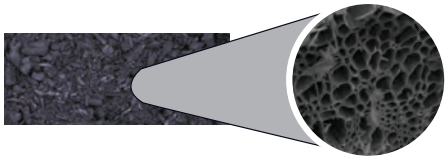
Nurturing Nature Naturally

Hydr8's natural ingredients have been proven to alleviate compaction allowing greater water and air infiltration. Hydr8 increases the soil's ability to absorb and release water and nutrients. Get Hydr8 working on your soil structure and planting conditions, right from the start.

3 Soil Amendments in One Easy Package

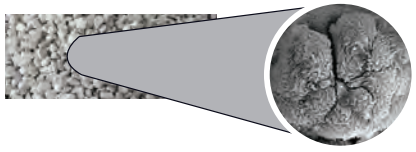
Hydr8 soil water management formula is a combination of 3 validated and proven soil amendments in one easy to apply blend. Each ingredient was chosen for its complementary action on soil water and nutrient characteristics in soils. The addition of Hydr8 into native soils will dramatically increase transplant viability and contribute to a strong foundation for years to come.

Biochar



Acts as a water and nutrient absorber and a microbial storehouse.

Zeolite



Supports water and nutrient holding and provide rare earth minerals to the soil.

Humic Substances

Supports microbial life, chelate minerals, and work to deflocculate compacted and clay soils.

What to Expect

- Valid and Proven 3 in 1 Complete Soil Amendment
- Alleviate Compaction by deflocculating clay soils
- Increase Water Infiltration Rates & Nutrient Holding Capacity

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SOIL PROBIOTIC

6-10-3 +1S

0.02% B, 0.3% Mn

The Mineral Challenge:

Replicating a Forest in an Urban Setting

When we think of turf fields or flower gardens, it's common practice to add nutrients every season. However, with trees, the majority are maintained simply by adding water; moreover, this after planting into manufactured soils that are often devoid of the proper microbial communities, pH, and nutrient profiles. The latest studies have shown that natural forests rely on a vast symbiotic nursery of mother trees working with soil microbes to nurture juvenile trees. Current planting practices orphan juvenile trees to develop without this evolutionary adaptation. Add to that, manufactured landscapes where we remove fallen leaves and debris for esthetic reasons, breaks the cycle trees have evolved to feed themselves. Therefore, without intervention, urban trees can be slow to mature, primarily due to hindered root development, and makes them susceptible to disease and prone to damage from weather factors such as wind, ice, and snow.

with

without

Mimic Nature's Biological Processes:

2 Mode Action

Acclim8's unique root exudation technologies allow you to fast-track the development of microbial processes. By adding this blend of unique carbon sources that mimic root exudates, Acclim8 will accelerate the production of microbial organic acids, enzymes, and other metabolites into the soil matrix. This, in turn, releases locked up minerals and boosts plant immunity to environmental stresses.

Acclim8's minerals inputs are treated with an organic-acid chelation technology that shields and protects the negative ion receptors allowing them to remain bioavailable in soils. This chelation technology has proven to be 3X more efficient over conventional fertilizer, reducing your carbon footprint. Let Acclim8 be your ecologically focused input for nutrient availability and give your trees a fighting chance with the latest scientific breakthrough in plant reestablishment.

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What to Expect

- Maximizes Transplant and Project Success
- Improves Root Development & Plant Health
- Easily Integrates into Current Practices

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SOIL PROBIOTIC

6-10-3 +IS

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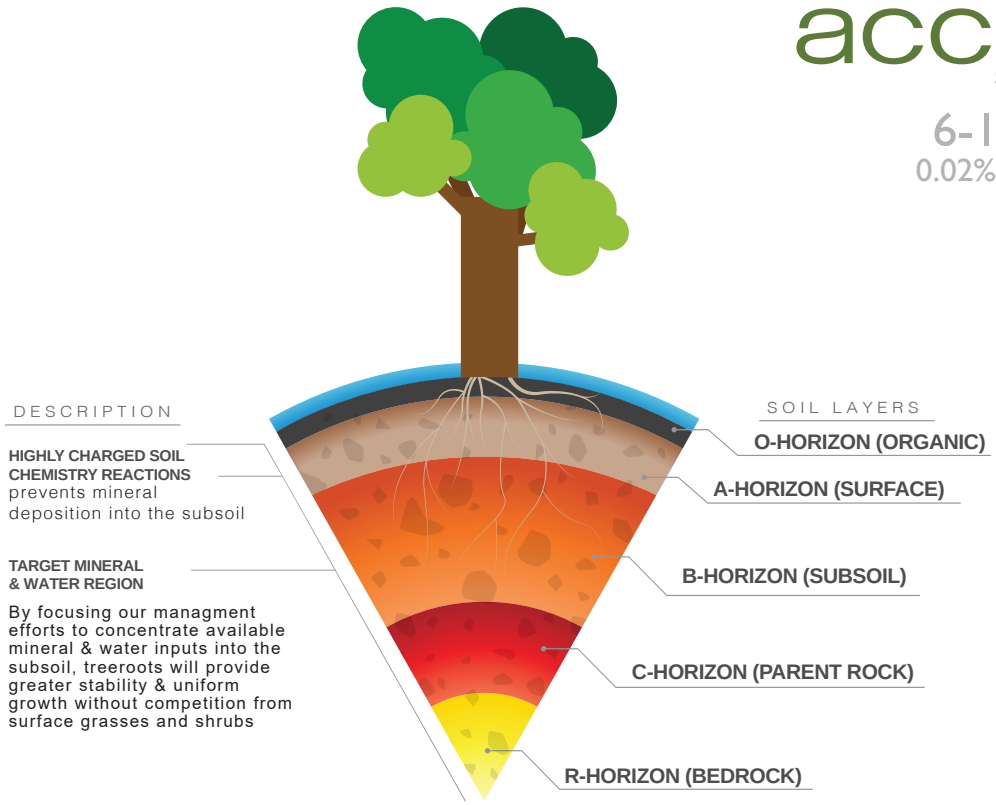

GREEN CHEMISTRY

STV-Phosphate contains chemistries that have been patented as the process called the Phosphate Steric Transport Vehicle (STV). The summary of this invention is that it provides an improved means of applying phosphates as a fertilizer through (1) phosphate ion shielding and (2) interfering ion inactivation. In this process we found that the different ionized forms of organic acids can be used as a vehicle to facilitate the transport of soluble orthophosphates through soils.

STV works in two ways. First, it shields the negative charges on the phosphate (PO4 -3) molecule so that the calcium and magnesium in the soil can not inactivate it. This STV-complexed phosphate molecule is more mobile in the soil solution than is the unprotected phosphate ion. Analysis of phosphate movement in soils has shown that the STV-Phosphate complex can move up to 12" into the soil profile when applied in the irrigation water whereas the naked phosphate ion rarely moved deeper than 2" into the profile.

Secondly, the STV chemistry can complex the metal ions in phosphate solutions as well in the soil that can inactivate the phosphate. STV-Phosphate itself is free of heavy metal ions that would inactivate the phosphate. But, research indicates that the STV chemistry in STV-Phosphate also makes the phosphate in 10-34-0 more available when applied to plants. The STV chemistry not only shields the phosphate ion but it also combines with metal ions in the soil solution that interfere with phosphate availability. By the proper use of STV, phosphorus availability is increased.

Research done by PNET Group and different cooperators over the last 16 years has shown that STV-Phosphate is three times more efficient than 10-34-0 or 0-52-0 in delivering phosphorus to the plant. This is true whether applied in planter bands or through irrigation. The effectiveness of the STV chemistry in STV-Phosphate has been proven many times in field conditions in a variety of soil types throughout the western United States and Canada on potato, corn, sugar beets, turfgrass, conifer & deciduous trees, perennials and annuals.

Alan S. Wicks, Ph.D
Director of R&D - Plant Nutrient Enhancing Technologies Group

Results From The Tree Growth Program

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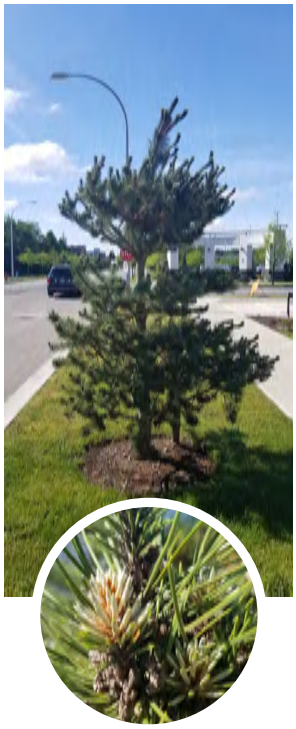

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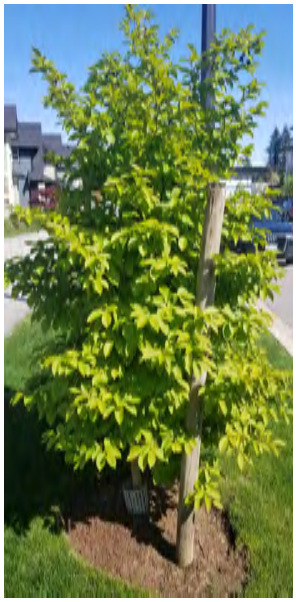

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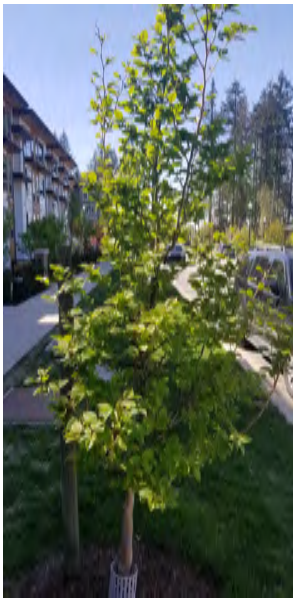

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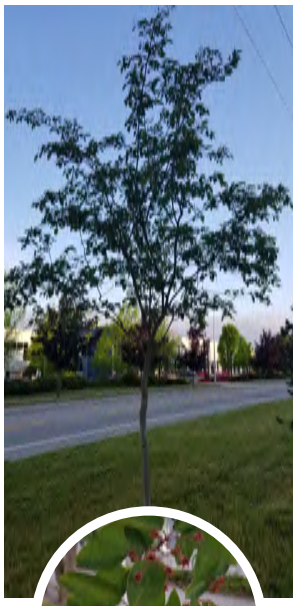

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for pricing information

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