



TREE TOPICS

A Newsletter From Your Friends At Arborological Services, Inc.

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WINTER 2008

COMPANY NEWS

■■■ Organics versus Chemicals ■■■

IN CARING FOR PLANTS & ECOSYSTEMS

by Steve Houser - President/Owner

Are you pro organic or pro chemical? As an Arborist, Naturalist, and Gardener, my answer is, "I am pro common sense and pro research." The media often portray organics as good, and chemicals, or synthetic chemicals to be more accurate, as bad. The difference between the two is seldom noted, leaving the public without a clear understanding of the underlying facts. Touting one over the other as a panacea for all plant and ecosystem related problems ignores sound research behind both approaches. The answers lie in current research and a balanced, common sense approach to problem resolution. Just to be clear, the term "plant" does include trees.

Which method of care is better?

If the cultural issue is not a great threat to the plant's future health or value, do not

use either method. When current research shows that natural defenses exist to resolve the problem to an acceptable level, take the holistic approach and leave it to Mother Nature. However, Mother Nature and an organic approach cannot solve all plant or ecosystem problems.

The inner-urban environment of today does not represent the natural world of the past. Poor air and water quality, invasive and non-native plants, diseases, and pests can prevent Mother Nature from functioning normally in our urban areas. Examples of these harmful elements include Chinese Privet, which is invading many of our natural areas, and/or Oak Wilt, a deadly tree pathogen. No sound research provides organic answers to stop the spread of Chinese Privet or effectively treat Oak Wilt.

Mother Nature does not solve all urban environmental problems on her own. The choice, as in many cases such as Oak Wilt, is to stay organic and lose trees, or consider chemical options to retain the trees.

If your choice is organic methods, it is wise to use the products and techniques that are proven by scientific research regarding the full effects to the entire environment: air, water, soil, animals, and humans. Unfortunately, many people believe organic means it is safe for humans and the environment. This is not always the case. The misuse of material, organic or chemical, and a lack of research regarding their proper usage, specifically in mixing the materials, can lead to problems in the biological balance of nature. It is impractical to think that

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THE TREE CLIMBING CHAMPIONSHIP REPORT

by Kevin Bassett

2008 was a great year for the tree climbing Arborists on our staff. The Texas Tree Climbing Championship was held in May at Trinity Park in Fort Worth. Known for its massive Bur Oaks, the trees in Trinity Park provided an incredible challenge for the best climbers in Texas. The five preliminary events were scored with the top four contestants moving on to the final. A trip to the International Competition was at stake. Last year's Texas Champion, Vicente Navarro, made the finals and was joined by Miguel Pastenes, the 2004 and 2006 Texas Champion both are on the Arborological staff. In a very close competition, Miguel came out on top with Vicente close behind in Second Place. In addition to winning four of the five preliminary events, Miguel won his third

Texas Championship and earned the right to match his climbing skills against the world's best climbers.

The International Tree Climbing Championship was held the last week of July in St. Louis, Missouri. Miguel Pastenes represented Texas very well indeed, winning Second Place in the Foot Lock Event (lowering the Texas record to 14.86 seconds, just 1 second shy of the standing World Record of 13.8 seconds) and Third Place in the Belayed Speed Climb Event. Miguel narrowly missed out on making the final by a mere 16 points and finished sixth in the overall International championship!! Once again, Bernd Strasser of Germany won his eighth International Tree Climbing Championship, in spite of narrowly making it

into the final four. The young guns, like Miguel Pastenes of Texas, John Turnbull of Great Britain, Scott Forest of New Zealand, and Jared Abrojna of California, showed they have the ability to make the finals and served notice that the dominance of eight-time champion Bernd Strasser and two-time champion Mark Chisholm of New Jersey will come to an end sooner rather than later.

Next year's Texas Tree Climbing Championship will be in Austin, with the International Competition to be held in Providence, Rhode Island. With a little luck and a lot of skill, I believe Vicente Navarro or Miguel Pastenes will represent Texas and Arborological Services in the next International Tree Climbing Championship. Way to go Miguel and Vicente. Keep up the great work.

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MULTI-STEMMED TREES

by Chris Brewer

Many of our clients have one or more multi-stemmed trees on their property. These trees require more scrutiny than a single-stemmed tree.

There are three classifications of trees with more than one stem.

1. single trees planted in close groups
2. trees which have grown from rootstock or from a tree stump
3. trees whose multiple stems begin just above ground level

Trees in the first group compete with each other for all the things essential to healthy growth; water, sunlight, nutrients, and space to develop a root system. The competition to develop good structural roots causes problems when single trees are planted too close to one another.

When one tree in the group dominates the other stems, the subordinate trees develop abbreviated root systems and coexist. Trees with partial root systems are prone to failure, normally falling away from the other trees in the group.

If an arborist or informed tree owner spots the potential risk, it can be lessened

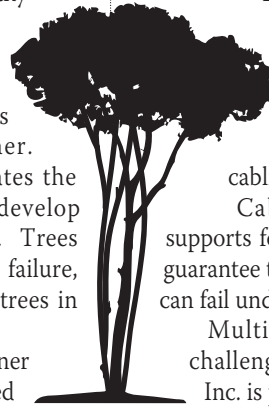
by installing support cables. If one or more stems fail, brace rods will be necessary to support the remaining stems.

The second group, rootstock growth or trees growing from a stump, is not suitable for suburban landscapes because of its inherent weakness. Rootstock growth are always weakly attached to each other at the ground and present a higher than average risk of failure. If an individual wishes to retain a mature rootstock tree, cabling and bracing may be used to deter failure.

Trees that fork above the ground may also be addressed with hardware. If the forks are in a tight "V" shape, they can more than likely benefit from cabling. If a tree has "U" shaped forks, cabling is probably unnecessary.

Cables and brace rods are great supports for weak stem junctions but do not guarantee that your tree will not fail. Any tree can fail under the right circumstances.

Multi-stemmed trees present special challenges which Arboriological Services, Inc. is prepared to meet.



IN CARING FOR PLANTS & ECOSYSTEMS *continued from page 1*

all problems can be resolved with either approach without any negative consequences. It is also unreasonable to promote any organic material, chemical, or "mixture" without solid research.

Using organic material to improve the soil or to resolve plant problems is not new science. Existing research quantifies the benefits of adding compost or humus to the soil as a way to stimulate biological activity and improve soil and plant health. However, the full effect of multiple applications containing many materials, organic and sometimes chemical, throughout the seasons, year after year, is not always well researched or clear. As a result, the answer is to have a balanced approach to problems that can adapt to current research, plus minimize the impact to our ecosystems as well as our health. In order, the best approaches are: let nature solve it, use organic products if sound research exists, use chemicals as a last resort and only for major problems. What constitutes a major problem requires a value judgment by individuals and may vary from person to person.

Do we fully understand urban ecosystems and how they should function in the future to reach our regional goals of sustainability? The answer is no! There are experts in wildlife, plants, soils, water, and many other fields. However, I do not recall hearing of any urban ecosystem expert that claims to fully understand how our inner-city ecosystems should function in relation to each other. As a result, how can the organic or chemical crowds claim that one or the other is the only answer to resolve all plant or ecosystem related problems? If one approach is better for a problem, prove it with sound research or be responsible and wait for the facts before using or recommending either one. Unfortunately, a pure organic or chemical approach will not provide all the answers to the existing problems we currently face in the urban environment. A balanced, common sense, and fact-based approach is required to reach ecological sustainability in the future.

Steve Houser

THE VALUE OF DEEP ROOT FERTILIZATION—THE COMPONENTS AND pH

by Russell Peters

We thought it would be helpful to discuss the value of some of the components in our formulated custom organic mixture which are the foundation of our deep root fertilizer programs.

Arborlogical Services injects our custom formulated, organic mixture as a liquid suspension into the top 8-12 inches of soil where the majority of a tree's fine feeder root system develops. The material is injected into the root zone at approximately 250 psi, or pounds of pressure per square inch. The fertilizer injection process also aerates, or adds oxygen, to the critical soil area around your tree where it is most beneficial. The high pressure also acts to open the pore spaces in the soil, allowing additional air to more easily enter the soil profile, especially in the top 8-12 inches of soil. The oxygen begins its journey into the tree's vascular system as if the root system was the tree's lungs. This oxygen is extremely beneficial in a multitude of chemical reactions and processes your tree carries out every second of every day.

Our fertilizer mixture is not a complex mystery of magical goodies of which we hold the secret formula. It is a fertilizer consisting of tried and true organic properties proven to be effective by top arborists around the world, as being the most important organic materials for healthy root growth for all plants and trees.

One of the most prevalent components of our fertilizer mix is humates. Humates provide a multitude of benefits to both the soil and the tree. Think of them as high-quality compost or organic matter. Humates, in a native forest, are the materials supplied by the decomposing leaves in a nutrient-rich forest floor. A few of the many benefits of humates are as follows:

- Humates increase the absorption efficiency of plant nutrients which reduces the need to continuously add synthetic nitrogen and phosphorous to your soil for root growth
- Humates increase soil aeration; i.e., increases the oxygen content of your soil
- Humates promote a greener leaf color and increase the density of foliage
- Humates promote root respiration and absorption of oxygen

- Humates promote better drainage in heavy clay soils
- Humates have additional growth promoting compounds
- Humates help make nutrients normally unavailable, in high pH soils such as ours in North Texas, available to your trees.

These are just the highlights of what humates offer to your plants and trees. They are not a quick-fix for soil and tree problems, but over time, offer the most benefit when they are used consistently. Humates become more and more beneficial the longer they are used.

In the six years of using this formula, our staff has monitored the health of all trees with consistent fertilization and recorded incredible improvements in all trees studied. We found improved health in those trees we commonly address that are damaged from construction or some other negative impact to the root systems or the environments in which trees are growing.

Another component, making up about a fifth of the material, is soluble potash. Potash is responsible for the following:

- Improving the disease resistance of your a tree
- Promoting winter hardiness
- Increasing root growth
- Improving your tree's drought resistance
- Helping to retard soil borne plants diseases
- Aiding in photosynthesis
- Building cellulose
- Activating over 60 other plant enzymes

The humates and potash make up nearly 50% of our custom organic mixture. Our fertilization blend also contains a yucca extract to promote a more even soil distribution of all of the materials in your soil. We also add Seaweed extract to supply a myriad of minor nutrients. A small percentage of sugars and other materials that promote microbiological activity are also included. We also add a small portion of growth-promoting bacteria. This component is difficult to quantify or measure; however, we do know that all of these bacteria help plant and tree roots to adhere to and absorb certain plant nutrients. Growth-

promoting bacteria cause no harm, as all of them are found to be is associated with healthy plant roots in the wild.

Two other important components of our mixture are sulfur and iron. Sulfur is a material that aids in moving salts that accumulate in our soils further down in the soil and out of reach of plant roots. These sodium salts have the potential to burn roots, or at the very least, discourage development and survival of the vital fine feeder roots. The sulfur is added as a liquid component that brings the total amount of sulfur to between 5-10% of our total mixture. Sulfur also has properties that help to reduce our high soil pH levels, making it slightly more acidic. Plants require about as much sulfur as they do phosphorous; and, phosphorous is considered a major nutrient for plants. Our soils contain adequate amounts of phosphorous without needing to add any with our mixture.

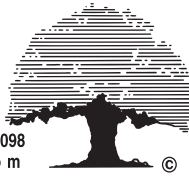
In addition, we add iron to our formula. This helps trees produce energy from the process known as photosynthesis. Iron is also partly responsible for the chlorophyll that gives leaves their green color and is a necessary component of photosynthesis. The majority of soil tests performed on North Texas soils will reveal adequate amounts of iron present in the soil. The problem with our soils is that the high pH or alkalinity ties up that iron so it is no longer available, making it unavailable to plant roots. When we add additional iron along with liquid sulfur, it creates an environment allowing the nutrients to be available to plant roots.

We are very pleased with our custom deep root fertilizer blend and with the positive results our client's trees experience when they are on any of our custom deep root fertilization programs. We hope that your trees are already on an on-going program. If your trees are not, please contact one of our Certified Arborists to provide a program designed specifically for your trees.

We are often asked when is the best time to have the deep root fertilization. The answer is simple. If you are not on a consistent program, now is the best time to get started. If you are on a regular program, then it is important to consistently have applications made annually, and as often as four times a year depending on the needs of your trees.

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WINTER – PRIME TIME FOR MISTLETOE MANAGEMENT

by Laura McLarry - I.S.A. Certified Arborist

Mistletoe is often associated with peace or romance during the holiday season, when in fact, this holiday symbol is actually a harmful parasite of trees. Mistletoe derives its nutrients and moisture from the tree it infects. Over time, it can weaken areas in large branches resulting in limb failure. In severe cases, mistletoe can cause a tree to die; this is especially true during periods of drought.

Winter is a great time to address mistletoe in your trees as it is more visible as trees lose their foliage. North Texans have several susceptible tree species growing in our landscapes. Cedar Elm, a highly valued tree, is the most commonly infected. Other

species include American Elm, Hackberry, Mulberry, Ash, and Bois d'Arc. All of these species lose their leaves in the winter, revealing the unsightly, evergreen mistletoe.

Winter is also when mistletoe berries mature and spread throughout the tree canopy. Birds love snacking on the mature berries. Our feathered friends transport the parasite's seed to other susceptible tree species in their droppings which creates new infection sites.

To control mistletoe, we remove entire branches or twigs with the parasite. When large limbs or limbs critical to the structure of the tree are infected we remove the mistletoe only, not the limb. However,

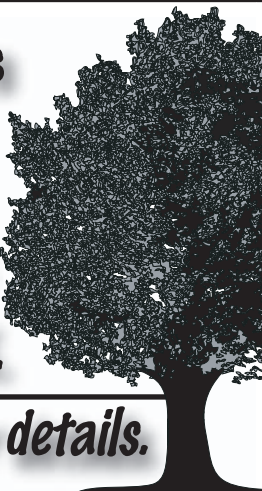
mistletoe regrowth will occur throughout the year. Mistletoe removal, on average, is necessary about every 2 - 3 years. This addresses the regrowth of old infections, as well as new infections that continually occur on susceptible species.

We can remove mistletoe at anytime of the year. However, it is much more visible and in most cases more easily removed during winter. Call one of our qualified ISA Certified Arborists today to help your trees with mistletoe management.



**Many of our clients
have their trees
inspected annually.
This service is FREE.**

Contact our office for details.



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