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When I was a kid, I remember hearing about the church that had lots of money and a lot of older people in the congregation. There weren’t many places coming from the nursery. There wasn’t a youth group getting together for ice skating or bowling nights; and no youth choir sang during services. So while they could fix any building maintenance problem, add an addition or order new hymn books, the question was, “Who could they do it for?” The long-term future didn’t look very promising without the next generations around. The lesson can be extrapolated to any area of life – whatever the scenario, we are custodians for the future, not the present.

I recently had a member comment to me that one of the best signs for TCIA was that there are new faces everywhere, and people are showing up in record numbers for TCI EXPO – the biggest arboriculture conference in the world. That has created a buzz about what we are doing and bodes very well for our profession’s future and our companies’ ability to attract people into our industry.

You wonder, when you set out on a new direction that you believe is going to be better, whether or not it will happen. I noticed at TCI EXPO in 2006 that there were new young owners coming up to me saying, “I want my company to be accredited. I want to be a CA and a CTSP. Where’s the stuff?!?” That blew me away at the time. I believe I mentioned to you then that what we have been trying to implement in very established companies was being perceived by the newcomers as the baseline for their professionalism. That was EXCITING!

However, when our own members start noticing that something is happening – and that it’s a good thing – THEN you know the industry as a whole is taking ownership of the changes and that we in fact ARE creating a future together that is bold and progressive. I am so delighted that we have another generation whose members are enthusiastic about being part of an industry that is evolving quickly and who are ready to be part of the leadership in continuing that into the future. We are beginning to believe in ourselves in a new way and to recognize that, while every dollar and every moment we personally invest in what we are doing may not bring a return right this second, it WILL bring a return for our industry in the long-term.

The strength of our community is not in just our ability to talk to each other now and convince each other to do the right things in arboriculture and our company’s operation. It must be compelling enough for those who come behind us to embrace the path we have started walking down, to make it their own, and to build upon the best practices we are creating. The strength of our community lies ultimately in whether or not every company and every professional decides that it’s more than just about the next job and the bottom line this year. It rests in a pride that was founded on the backs of our predecessors who have given us a profession that is contributing to the well-being and sustainability of communities around the world.

Arborists have a natural pride and love for what they do. Successfully passing that on to the next generation in a way that allows them to capitalize on the progress we are making will be the ultimate testament to the strength of our community.

Cynthia Mills, CAE, CMC
Publisher
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Why do urban trees need to be fertilized? Forest trees evolved without the apparent addition of fertilizer, which can give the erroneous impression that trees, in general, do not require fertilizer. In reality, forest trees are being fertilized through the natural process of recycling.

In addition, through the process of natural selection, trees have adapted over the millennia to the existing soil and environmental conditions. Conversely, shade and ornamental trees are often selected and planted for their aesthetic appeal without regard for their horticultural requirements in the urban environment. Thus, they are subjected to unfavorable soil and environmental conditions, which increases the need for nutrient management.

Forest soils are rich in humus, which is replenished by the decay of plant and animal residue. Leaves are relatively high in accumulated nutrients and their decomposition is an important source of returning nutrients to the soil. Forest research has demonstrated that trees obtain more than half of their annual requirements from these sources. Organic matter increases the retention and availability of most plant nutrients and improves the soil structure by “cementing” or aggregating soil particles. In contrast, domestic and street lawns are usually very low in humus and fertility. Leaves are removed, thus interrupting nature’s recycling program for nutrients and preventing the accumulation of organic matter. The soil elements, which are absorbed and utilized in the formation of plant tissues, are not returned to the soil and should be replaced with supplemental fertilization.

How do woody plants use the nutrients from the soil?

Woody plants make their own sugar during photosynthesis by combining carbon dioxide from the air with water from the soil, a process driven by energy from the sun. Plants cannot live on sugar alone, however. They must have chlorophyll, proteins, defensive chemicals, and many other compounds and structures in order to maintain their metabolism and react to changes in their environment. Plant cells make these chemicals by combining the sugar provided by leaf tissue with nitrogen and the mineral elements absorbed from the soil. Slightly more than a dozen mineral elements are essential for plant growth and development, although only the ones that are utilized in large amounts are often deficient.

The most common deficiencies are of the three primary macronutrients: nitrogen, phosphorus and potassium. Some plants (called acid loving) require relatively large amounts of micronutrients and these may be deficient in alkaline soils, which “fix” or prevent their absorption by plants. The micronutrients are actually metals such as iron, manganese or zinc and may need to be supplemented when the so-called acid loving plants are growing in alkaline soils or in sandy soils that don’t retain minerals.

What is fertilizer?

Fertilizer is any material that supplies nutrients required for plant growth and development.

### Elements and Available Forms

#### 1. Macronutrients

<table>
<thead>
<tr>
<th>Element</th>
<th>Available Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen (N)</td>
<td>NO-, NH+, urea</td>
</tr>
<tr>
<td>Phosphorus (P)</td>
<td>HPO4-- , H2PO4-</td>
</tr>
<tr>
<td>Potassium (K)</td>
<td>K+</td>
</tr>
<tr>
<td>Calcium (Ca)</td>
<td>Ca++</td>
</tr>
<tr>
<td>Magnesium (Mg)</td>
<td>Mg++</td>
</tr>
<tr>
<td>Sulfur (S)</td>
<td>SO4--, SO3-</td>
</tr>
</tbody>
</table>

#### 2. Micronutrients or Trace Elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Available Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron (Fe)</td>
<td>Fe++, Fe+++</td>
</tr>
<tr>
<td>Manganese (Mn)</td>
<td>Mn++, Mn+++</td>
</tr>
<tr>
<td>Copper (Cu)</td>
<td>Cu+, Cu++</td>
</tr>
<tr>
<td>Zinc (Zn)</td>
<td>Zn++, Zn+++</td>
</tr>
<tr>
<td>Boron (B)</td>
<td>BO3---</td>
</tr>
<tr>
<td>Molybdenum (Mo)</td>
<td>MoO4---</td>
</tr>
<tr>
<td>Chlorine (Cl)</td>
<td>Cl-</td>
</tr>
<tr>
<td>Cobalt (Co)</td>
<td>Co++</td>
</tr>
</tbody>
</table>

Essential mineral elements and the forms available to green plants.

What is the difference between organic and chemical fertilizers?

Actually, all fertilizers are chemical, including those that are organic. Fertilizers can be grouped into four broad categories, based on whether or not they contain carbon and whether or not they are synthetic.

- **Organic** Inorganic
- **Natural** Synthetic
- **Synthetic** Synthetic

“Organic” is the chemistry of carbon, not the chemistry of natural. All organic fertilizers have a carbon structure, which can be synthesized by an organism or in a laboratory using the same elements and the same chemical processes. Whether natural or synthetic, the nutrient ions are attached to carbon and it is this structure that determines the characteristics of the organic chemical. Carbon forms covalent bonding that does not readily degrade; thus, the nutrient ions are released slowly. Although organic compounds are often thought of as energy sources for microorganisms (microbial breakdown), some are hydrolyzed by water.

Urea is a natural component of urine and bat guano, and is also commercially synthesized. Urea is an example of both a natural and synthetic organic fertilizer that is hydrolyzed. Two examples of fertilizer that require microbial breakdown are ureaform, a synthetic organic fertilizer, and alfalfa pellets, a natural organic fertilizer.

Organic fertilizers that require microbial decomposition also result in improved soil structure and other plant benefits. As these microorganisms decompose organic matter, they release nutrients and enzymes beneficial to living plants, and glue-like gums and waxes that form soil aggregates,
which improve air and water movement in the soil.

Inorganic or mineral fertilizers do not have a carbon structure and can occur naturally or be synthesized with simple ionic bonding. These bonds form nutrient salts that dissociate readily in water, releasing the nutrient ions. Potassium nitrate is an example of an inorganic fertilizer that occurs naturally and is also synthesized. Since they do not contain carbon, inorganic or mineral fertilizers are not used as an energy source by microorganisms and have no beneficial effect on the soil. They are said to “feed the plant, but not the soil”. The nutrients are typically more highly concentrated than in an organic fertilizer and are more readily available for plant absorption.

Inorganic or soluble organic fertilizers such as urea can be coated with a plastic or wax resin to slow the nutrient release rate. Although considered a slow release form of nutrients, these fertilizers are hydrolyzed and do not result in soil improvement.

How is fertilizer absorbed?

All fertilizer nutrients, regardless of the source, are absorbed by plant roots as charged atoms or groups of atoms called ions – the nutrient salts. These ions exhibit either a positive or a negative charge, which is essential for root absorption. Fertilizer salts or ions are absorbed through the root membrane by electrical attraction to a carrier. The process primarily responsible for nutrient absorption is called ion exchange.

Inorganic fertilizers form ions readily when dissolved in water and, therefore, are quickly available for root absorption. Organic fertilizers – both natural and synthetic – must be decomposed by soil microorganisms from complex compounds to the same nutrient salts provided by inorganic fertilizers. The rate of decomposition is dependent upon many soil factors such as temperature, moisture and pH.

Absorption is one of the main functions of roots. Without their constant supply of water and nutrients, a tree could not survive. However, absorption is the part of the process that we don’t entirely understand.

Until minerals cross a cell membrane, absorption is passive and often on a diffusion gradient (from high nutrient concentrations to lower concentrations). However, the only way for minerals to get past a barrier in the root called the endodermis and into the xylem is through a cell membrane.

One of the jobs of cell membranes is to regulate what goes in and out of a cell. If the membrane was full of holes, the cell would die because its contents would leak out. Yet, there must be some way for materials to get through the cell to give it the ions it needs. Scientists believe there are several mechanisms for minerals to get across the membrane. One is a carrier that transports ions.

The carrier system can be an essentially passive process. Because the cell is constantly using the ions, nutrient concentrations can be higher on the outside than on the inside of the cell. The carrier system then facilitates and speeds uptake. However, when concentrations inside the cell are greater than those outside it, passive uptake is impossible. In some instances, ion concentrations may be 1,000 times greater within the cell. Then, the cell must expend energy to take up the ion. Working with carriers, a substance called ATP undergoes a chemical reaction within the cell to provide that energy.

It is important to understand that the plant expends energy to absorb nutrients. When a plant is in a weakened state, such as from drought, low temperatures or lack of oxygen, it does not accumulate nutrients because energy is not available to take them up.

It is not yet clear whether each specific ion has its own carrier, but it seems that this is likely – at least for nutrients absorbed in large amounts, like nitrate, phosphate and potassium. It is possible that there are dual absorption systems for many ions and that ions with similar properties must compete for the same absorption sites. If a soil is high in clay or organic matter, it can retain these ions rather than lose them from leaching. The structure of clay and organic matter creates charged sites that hold the ions on their surface. Both have negatively charged sites that attract positively charged ions (cations). These charged sites relate to a soil’s cation exchange capacity (CEC), a measure of the soil’s ability to hold cations. If a soil has a high CEC, it has the ability to hold large amounts of cations. Organic matter also has positively charged sites that hold negatively charged ions (anions).

When soil is moist, an active equilibrium develops in the soil solution so that its composition is constantly changing. Cations in the soil solution exchange places with cations at the charged sites. Plants absorb cations and anions from the soil solution. Some anions and cations leach away. Decomposition releases new ions to replace them.

Can fertilizer “burn” plants?

Yes, if there is an excess of soluble or quick-release fertilizer salts in the root zone.

Leaf “burn” is a visible symptom of insufficient water in a plant. Water moves through the root tissues in response to a concentration gradient on the outside of the root and from inside the root tissue. Water moves from a region of low salt concentration to a region of high salt concentration until the concentration on both sides of the root is equal. As water within a plant system is transpired, a higher salt concentration occurs within the root tissue than in the surrounding soil solution.
However, if excessive fertilizer salts are in the root zone, water movement into root cells is suppressed. Under extreme conditions, water actually moves from the root tissue into the surrounding soil solution. The movement of water through root tissue is called osmosis.

The tendency for a fertilizer to dissolve and release salts when in contact with water is known as the SALT INDEX. The amount of salt released by sodium nitrate is given the arbitrary salt index of 100, and all other fertilizer salt indices are relative to sodium nitrate. The greater the amount of salts released, the greater the salt index and the higher the burn potential. In general, inorganic fertilizers have higher salt indices than organic fertilizers.

How does soil pH affect nutrient absorption?

The term pH expresses the relative concentration of hydrogen (H+) and hydroxyl ions (OH-) in solution. A pH of 7 means the hydrogen and hydroxyl ions are equal and the solution is said to be neutral. A pH below 7 means the solution contains more hydrogen ions than hydroxyl ions and is said to be acid. Similarly, a pH above 7 means the solution contains more hydroxyl ions and is alkaline.

The soil pH may influence nutrient absorption and plant growth through the effect of the hydrogen ion and through the indirect influence on nutrient availability. In most soils, the latter effect is the most significant.

The presence of an element in the soil is no guarantee that it is in a soluble form available for absorption. The concentration of hydrogen and associated ions affects soil reaction and the formation of soluble and insoluble compounds. All nutrients must be soluble to be available for root absorption. Each nutrient has a pH range of maximum availability simply because within this range it forms a large proportion of soluble compounds.

Plant species differ in their response to the soil acidity because differences in nutrient requirements. For most plants, the conditions of nutrient availability, without toxic amounts are best near pH 6.5.

But certain plants – such as rhododendrons, azaleas, pines and camellias – require comparatively large amounts of nutrients that are soluble in acid solution.
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They are called “acid loving” plants and grow best in soils of about pH 5.5.

Soil acidity, as such, is seldom toxic to plants. But, in soils with pH values below 5.5, certain elements, such as aluminum or manganese, often become soluble to levels toxic to plant growth.

Sulfur and agricultural lime are the materials used most frequently to alter the soil reaction or pH. Lime increases the pH (decreases acidity); sulfur lowers the pH (increases acidity).

Ideally, the pH of soil within the root zone of a plant should be measured every three to five years and, if necessary, adjusted to the most favorable range for that particular species.

What is leaching?

Leaching, primarily, is the removal of materials in solution from the soil. Leaching is caused by percolation or the lateral and downward movement of water through soil. Loss of nutrients due to leaching is proportional to the amounts of water percolated through the soil. Water dissolves minute quantities of minerals and organic materials just as sugar dissolves in coffee. Dissolved substances commonly move with the water.

Since soil and weather conditions vary throughout the United States, leaching affects soils of humid regions more, on the whole, than it does those of dry regions.

All nutrients are subject to leaching, although not to the same degree. Calcium losses are the greatest of any nutrient known. Nitrate salts – the form of nitrogen primarily absorbed by plant roots – moves with ground water and rapidly leaches from the root zone. Magnesium, sulfur and potassium are moderately leached, whereas only a trace of phosphorus is lost.

Nitrate leaching is becoming a major concern, particularly as it relates to point source pollution. Several research studies with turfgrass have demonstrated minimal leaching risk from surface-applied nitrogen fertilizers. However, with urban tree fertilization, nitrogen injected below the soil surface would not be “trapped” by the turf. Davey researchers completed a two year study in 2003 to compare leaching of urea, ammonium, and nitrate from soluble and insoluble...
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sources injected into the soil.

In this subsurface fertilization study in which slow release and soluble fertilizer were applied at 38 N (3 pounds of nitrogen) per 1,000 square feet, there was no evidence of any inherent risk to ground water quality due to nitrate, ammonium or urea leaching from either fertilizer applied within the drip-line of sugar maple trees. However, both nitrate and ammonium were detected at the 27-inch depth from soluble nitrogen applied to the field area.

Nitrate levels in samples collected 27 inches below the fertilizer applications beneath the canopy of trees were not significantly different from nitrate levels found in unfertilized control plots. The nitrate readings ranged from 0.10ppm to 1.34ppm from slow release fertilizer and 0.067ppm to 13.1ppm from soluble fertilizer. Nitrate levels in samples collected 27 inches below the soluble fertilizer applications in the field area steadily increased throughout the collection period and were significantly higher at 52 DAT (days after treatment) when compared to the slow release and unfertilized treatments.

Both ammonium and urea levels measured in samples collected 27 inches below slow release and soluble applications in the tree area were not significantly different from the untreated control at either 3 or 7 DAT. However at 3 DAT in the field area, ammonium was significantly higher and remained higher at 7 DAT, although not significant.

Although neither slow-release nor soluble nitrogen fertilizer applications resulted in leaching at the 27-inch depth when applied within the root zone of sugar maple trees, soluble fertilizer applied in the field area where no tree roots existed did result in leaching of nitrate and ammonium. Slow release nitrogen provided added assurance that fertilizer injected at a depth of 4 to 12 inches in the soil will not leach, particularly if it is not utilized efficiently.

Further research is planned comparing slow release and soluble fertilizer applied in sandy soils, which have a greater potential for nitrogen leaching than typical landscape soils containing clay.

How can a root/shoot imbalance occur?

Nitrogen is always absorbed by root cells in the charged or ionic state, usually as Nitrate (NO3-) or Ammonium (NH4+). However, nitrogen normally does not translocate in the vascular system to other parts of the plant in these forms. Rather, an enzyme in the root cells converts nitrate or ammonium to amines or amides, low-molecular weight organic compounds that are precursors to proteins and other complex organic compounds. Some of the amines or amides remain in the root system and some translocate to the shoot system. Thus, all parts of the plants have the base materials to build proteins and other complex chemicals that contain nitrogen. Potassium is essential in the production and activation of this enzyme.

However, when excess nitrate and ammonium are in the root area, as could occur when soluble nitrogen is over-applied in relation to available potassium, the enzyme system in the roots is overwhelmed and nitrogen translocates as nitrate. This initiates a series of physiological changes in the plant that can lead to a root/shoot imbalance and an increase in sucking insects and certain leaf diseases.

When nitrate translocates to the shoot system in the xylem, nitrate reductase
enzyme (a large and complex enzyme) forms in the leaf cells, resulting in the conversion to amines and amides in the leaves. Potassium in the leaf cells that is used in conjunction with the enzyme is not available for “phloem loading,” a process that moves sugar into the phloem against a concentration gradient. Thus, the first step in the translocation of sugar to other parts of the plant is affected and sugar accumulates in the leaf cells. Also, there is no evidence that the amines or amides formed in the leaf translocate downward in the phloem to the root system to serve as building blocks for cellular growth and activity in root tissue. The accumulation of soluble sugar and organic nitrogen compounds in the leaf cells results in succulent tissue and more favorable food quality for sucking insects and leaf diseases. In addition, the resulting sugar and organic nitrogen deficiency in root cells suppresses the growth and development of the root system.

In summary, woody plants evolved a mechanism to absorb, translocate and utilize soil nitrogen and the mineral elements based on conditions found in a forest. Landscape soils are often devoid of organic matter and attempts to replace the nitrogen lost through plant absorption and leaching should mimic the natural, slow release of organic matter in order to maintain the proper plant physiology. Research and experience demonstrating root/shoot imbalance or pest problems of woody plants following fertilization can be attributed to excess soluble nitrogen, particularly in relation to the available potassium.

What is the best method to fertilize woody plants?

The roots of woody plants do not go dormant and do not harden-off more than a few degrees to adverse temperatures as does the shoot system. In general, non-woody roots of trees in the temperate zone will withstand temperatures as low as about 28 degrees F and as high as 94 degrees F. For trees growing in the forest, the roots are protected from excessive fluctuations in temperature and moisture by leaf litter and other debris that accumulates on the soil surface.

In the urban environment, however, leaves are typically removed and replaced with turfgrass, which does not buffer adverse environmental conditions and actually competes with trees for the growth factors in the soil. In addition, heavy clay or compacted soil impedes oxygen and water penetration and movement, resulting in surface rooting. The surface of the soil becomes the hottest, coldest and driest during temperature and moisture extremes. Trees growing under these conditions benefit from subsurface applications of nutrients that encourage deeper rooting to avoid competition and injury. Suspending fertilizer in a water carrier, which is injected under pressure at a depth of 4 to 12 inches, creates capillaries that enhance air and water movement while distributing nutrients throughout the desirable root zone.

Roger C. Funk, Ph.D., is vice president and chief technical officer of The Davey Institute at The Davey Tree Expert Company. This article was excerpted from his presentation on the subject at TCI EXPO 2007 in Hartford.
Bobcat launches 50th with “How Bobcat Unleashed Me” contest

As Bobcat Company marks 50 years of equipment innovation, the company is still seeking input from customers through the “How Bobcat Unleashed Me” contest.

Some 50 years ago, Minnesota turkey farmer Eddie Velo asked blacksmith-inventor brothers Cyril and Louis Keller to build a self-propelled loader light enough to be lifted to the second floor of Velo’s turkey barns and small enough to clean around the poles that supported the floor above. In 1958, North Dakota-based Melroe Manufacturing Company, which later became Bobcat Company, partnered with the Keller brothers. This partnership led to the creation of the skid-steer loader and, over time, the compact equipment industry.

In 2008, Bobcat will commemorate the partnership between Melroe Manufacturing and the Keller brothers.

The How Bobcat Unleashed Me Contest asks users to share how Bobcat equipment has helped them in performing work better, smarter and faster. To enter, equipment users need to write a brief essay about their experiences with Bobcat equipment and fill out an entry form at the Bobcat 50 Years Unleashed Web site, www.bobcat.com/50, by May 30, 2008.

Bayer CropScience settles infringement lawsuit

Bayer CropScience LP and Nufarm Americas Inc. in December reached a settlement in a lawsuit filed by Bayer for infringement on its patent for the pesticide imidacloprid on fertilizer.

Nufarm has acknowledged that Bayer’s patent is valid and enforceable. Under the terms of the settlement, Nufarm and its business partners have been granted freedom to operate under the patented imidacloprid on fertilizer technology, including the ability to commercialize products incorporating the patented technology. Other terms of the settlement will remain confidential.

Separately, Bayer CropScience states that it continues its legal action against Etigra LLC, asserting Etigra’s infringement of the same Bayer patent for imidacloprid on fertilizer.

California court upholds emissions reduction law

A federal court in California ruled in December in favor of the state of California and environmental groups Environmental Defense, Natural Resources Defense Council, and Sierra Club in a case brought by the automobile industry seeking to strike down the state’s greenhouse gas law.

Judge Anthony W. Ishii of the U.S. District Court for the Eastern District of California issued a 57-page decision in Central Valley Chrysler-Jeep, Inc. v. Goldstone. He held that the federal law establishing automobile fuel economy standards (EPCA) does not prevent California from adopting and enforcing a greenhouse gas emissions reduction law. In so doing, he revised a prior ruling in the case, stating that a recent Supreme Court decision on global warming required him to hold that the Department of Transportation must conform federal fuel economy standards to be consistent with greenhouse gas pollution standards adopted either by the U.S. EPA or by California.

Judge Ishii’s opinion states: “Given the level of impairment of human health and welfare that current climate science indicates may occur if human-generated greenhouse gas emissions continue unabated, it would be the very definition of folly if EPA were precluded from action simply because the level of decrease in greenhouse gas output is incompatible with existing mileage standards under EPCA.”

The federal Clean Air Act allows California to set stricter emissions rules for automobiles than the federal government. California exercised this authority by enacting AB 1493 and the automobile industry challenged the rules issued under AB 1493 by filing the lawsuit.

Eleven other states have adopted California’s greenhouse gas rules; 34 percent of Americans lives in the 12 states that have adopted the rules. Several other states also have announced intent to adopt the rules. Judge Ishii also held that federal foreign policy also does not prevent the law’s adoption or enforcement. In September, a federal Judge in Vermont ruled in favor of the State of Vermont and the same three environmental groups.

More information about the law and a copy of the decision is available at http://pawalaw.com/cases/pavley.php

HMI, Bartlett agree on assessment training

Bartlett Tree Experts and Horticultural Asset Management, Inc. have agreed to have Bartlett arborists available nationwide to support the creation of Certified HMI Horticultural Assessments. Bartlett personnel will also be available to conduct both remedial and preventive services that may be required as a result of the assessment process. The agreement greatly expands HMI’s market coverage by making its products and service available throughout Bartlett’s pre-existing network.

Certified assessments provide HMI clients with detailed assessments of the trees and shrubs on their properties that can be used for insurance, tax, real estate or risk management applications. HMI is currently providing assessments to insurance companies to support enhanced insurance products on landscaping as well as for risk mitigation services. This evaluation will help identify plants which may require follow-up evaluation for health or other issues, and will allow the property owner to remediate identified issues to reduce the likelihood that a tree or shrub would fail under adverse conditions, such as a storm or pest infestation.

“Bartlett has always prided itself on offering its clients superior service and valuable information about their trees and shrubs,” said Greg Daniels, Bartlett president. “Certified HMI assessments represent a perfect complement to our mission of increasing consumers’ awareness of the value of their plant material.”
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For Over 75 Years.

In the real world, one requirement that never changes is finding ways to help your crews work more safely. That’s why Altec tree care equipment is rugged, reliable and designed with integral safety features. Our complete line of aerial devices and wood chippers is highlighted by our newest machine – the Altec LRV60-E70. It will help your crews work smarter and more efficiently. This unit combines 75 feet of working height and smooth maneuverability with the lowest cost of equipment ownership in the industry and unmatched financing options. For tree care units that help you work “Safer and Smarter®”, call the company that builds them – Altec.

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Dakota Tree Transplanter

The Dakota Tree Transplanter is the first tree spade to be completely controlled by a wireless remote, allowing the operator to conduct the transplanting operation from any location on the job, providing greater operator safety, reduced work effort and faster completion of jobs. Two Transplanter models, the 65 and 90 (65-inch, 90-inch maximum rootball width, respectively), are available. The Dakota Transplanters are made using state-of-the-art CAD/CAM technology with laser cut parts, eliminating the need for custom made replacement parts. The industrial grade Transplanter features a no-lube lift track and heavy duty blades with replaceable cutting edges, a feature that reduces down time and saves money for owners. Made with high-grade materials finished with powder coated paint for a durable, long-lasting, aesthetic exterior finish, the Transplanter also features separate water and hydraulic tanks with a hydraulic water pump in place of the industry standard electric pump. Contact Dakota at 1-800-424-3443 or via www.dakotapeat.com.

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Stokes improved tripod ladders

Stokes Ladders, Inc., long known as an industry leader for its safe ladder designs, has added innovative features to its line of aluminum tripod ladders. These orchard-style ladders, long been used in the tree fruit industry, have been gaining in popularity with professional arborists for use around ornamental and fruit trees and general use on sloping or uneven terrain because of their inherent stability. Made of high-strength structural aluminum, standard features include a wide base for stability, comfortable 3-inch-deep, non-skid steps and a shoulder pad at the balance point for easy carrying. A solid red warning step reminds users of safe climbing levels. The new line adds optional features such as slip resistant non-marking feet for safety on patios, walks and driveways, a galvanized steel cable to keep the third leg from sliding out too far (detachable for use over tree limbs), and a telescoping third leg to allow the ladder to be used on steeper slopes and terraced gardens. Contact Stokes ladders at 1-800-842-7775 or via www.stokesladders.com.

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LawnGrips shoes feature Stihl logo

Stihl Inc. dealers nationwide are now able to offer three models of LawnGrips lawn-friendly footwear featuring both the Stihl and LawnGrips logos. Specifically designed with landscape professionals in mind, each of the three styles – the Classic slip-on model with hook and loop closure; the Pro, with six-inch lace-up, and the Pro8 work boot with eight-inch lace-up – is made with a steel toe encased in rugged molded rubber. The shoes are available in whole and half sizes 7 through 11½, plus 12 and 13. All feature LawnGrips patented Grip-N-Go outsole for superior traction on freshly cut grass. The tread pattern of the Grip-N-Go outsole has specialized, oblique cleats positioned in the forefoot and heel areas that provide great traction for pushing, turning and stopping. The lugs and centers of the heel and forefoot are slightly rounded to easily shed grass clippings and dirt. Contact LawnGrips, LLC at 1-877-4GRIPS1 (447-4771) or via www.lawngrips.com.

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Brooks Adjustable Tree Brace System

The new, patented Brooks Adjustable Tree Brace System is easy to install, reusable and looks great. It comes fully assembled, fits a wide variety of trees and palms and can be installed in under two minutes by one person. The legs are adjustable for length, and the footpads are adjustable for any terrain. It is available in adjustable lengths from 44 inches up to 85 inches. All you need to install it is a hammer, a 2 1/2 inch wrench and a Brooks Tree Brace key. Made of powder coated steel and extra durable UV protected materials for longevity, the Brooks system was judged strongest in its class in a University of Florida study. Braces come with reflective tape on them for safety. Contact Brooks Tree Brace Systems Inc. at (877) 246-3390 or e mail brookstreebrace@bellsouth.net.

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Send your Cutting Edge Product information to:
Don Staruk at staruk@tcia.org
**Allied Utility’s Stump’r Guard**

Allied Utility Equipment Inc.’s Stump’r Guard is a portable debris retainer designed for stump grinding, air tool excavation and other jobs that cause flying debris in the work zone. It helps contain woodchips for easy cleanup. The material allows wind to pass through while blocking flying debris: wood, rocks and even metal. Made of strong, construction grade material with a high tensile strength, it is rated at 211 PSI, 357 PSI burst strength. Its portable design collapses to 6-inches in diameter and has a lightweight yet curable framework that expands up to 12 feet. The four-section framework stands 5 feet high and can be positioned to provide protection in even the tightest areas. It weighs less than 15 pounds, is weatherproof And UV resistant and will not fade. For less than the cost of an average damage claim, you can own a Stump’r Guard and leave your worries behind. And your customers will love it when they see you take the extra time to protect their property. Contact Allied Utility Equipment at 1-800-303-0269 or via www.alliedutilityequipment.com.

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**SOLO 681 chain saw**

With its exceptional power-to-weight ratio, the new SOLO 681 chain saw model is the ideal cutting tool for felling and bucking timber. The chain saw weighs only 13.9 pounds, but easily handles a 36-inch guide-bar and delivers 6.4 horsepower with a powerful high rpm, high-torque 80.7cc gas-fired, two-cycle engine. In addition to the “easy start” primer and advanced vibration isolation system found on all SOLO chain saws, the 681 model features a maintenance-free ignition system that ensures long life and trouble-free operation. The chain saw also has a large 25.4-ounce tank capacity and is supported by a two-year limited warranty. Contact SOLO Inc. via www.solousa.com.

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**The Northeast’s Premier Expo!**

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This is the foremost show for bringing together thousands of hard working people who make their living in the region’s forest products industry; with hundreds of businesses devoted to supporting them with equipment, tools, supplies and services designed to make their hard work more productive and more profitable.

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Events & Seminars

February 6-8, 2008
New England Grows!
Boston Convention & Exhibition Center, Boston, MA
Contact: Mary (508) 653-3009; www.NEGrows.org

February 8-12, 2008
U.S. Composting Council Annual Conf. & Trade Show
Oakland Marriott City Center, Oakland, CA
Contact: www.compostingcouncil.org; (831) 737-4931

February 10-12, 2008
Ohio Chapter ISA Annual Meeting
Columbus, OH
Contact: www.ohiochapterisa.org; (614) 885-1885

February 10-14, 2008
Winter Management Conference
Tree Care Industry Association
Westin Aruba Resort, Aruba
Contact: Deb Cyr 1-800-733-2622; cyr@tcia.org; www.tcia.org

February 12-13, 2008
Washington Landscapers & Contractors Expo
ShowPlex Puyallup Fair & Events Ctr, Puyallup, WA
Contact: www.landscapingexpo.net, 1-888-570-0499

February 12, 2008
Recognizing, Understanding & Managing Insect Pests of Ornamentals in the Landscape
Bingham Farms, MI
Contact: MGIA (248) 646-4992

February 13-15, 2008
ISA Ontario Chapter Annual Meeting
Niagara Falls, ON, Canada
Contact: www.isaontario.com; (888) 463-2316

February 15, 2008
Sixth Annual Rochester Arborist’s Workshop
Rochester International Event Center, Rochester, MN
Contact: Ed Hayes (507) 285-7431

February 18, 2008
Why is My Plant Wilting? Diseases of Woody Plants
Bingham Farms, MI
Contact: MGIA (248) 646-4992

February 19-22, 2008
ASCA Consulting Academy
Sheraton Suites, San Diego, CA
Contact: (240) 404-6482; www.asca-consultants.org

February 22, 2008
Woody Plant Symposium
Chicago Botanic Garden, Glencoe, IL
Contact: (847) 835-8261; www.chicagobotanic.org

February 24-29, 2008
2008 Municipal Forester Institute
T-BAR-M Conference Center, New Braunfels, TX.
Contact: www.NJArboristsISA.com

February 26-27, 2008
Trees, People & the Law Symposium
National Arbor Day Foundation
European Crystal Banquet Ctr., Arlington Heights, IL
Contact: www.arborday.org/tpl or (888) 448-7447

February 27, 2008
Woody Ornamental Updates: Review ‘07, Anticipate ‘08
Bingham Farms, MI
Contact: MGIA (248) 646-4992

March 4-5, 2008
MGIA’s 21st Annual Trade Show & Convention
Rock Financial Show Place, Novi, MI
Contact: MGIA (248) 646-4992

March 6-8, 2008
Trees & Utilities Conference
Wyndham Orlando Resort, Orlando, FL
Contact: www.arborday.org/TUConference

March 7-9, 2008
Cert. Pesticide Applicator Training/Testing (In Spanish)
Bingham Farms, MI
Contact: MGIA (248) 646-4992

May 17, 2008
ISA Certified Tree Worker Exam
NJ Forestry Research and Education Ctr, Jackson, NJ
Contact: Matt (609) 625-6021; www.isa-arbor.com

May 20, 2008
ISA Cert. Arborist, Utility & Municipal Specialist Exams
NJ Forestry Research and Education Ctr, Jackson, NJ
Contact: Matt (609) 625-6021; www.isa-arbor.com

May 20, 2008
ISA Cert. Arborist, Utility & Municipal Specialist Exams
PSE&G Training Center, South Plainfield, NJ
Contact: Matt (609) 625-6021; www.isa-arbor.com

August 20-21, 2008
Certified Treecare Safety Professional-CTSP Workshop
San Jose, CA
Contact: 1-800.733-2622; www.tcia.org

July 24-25, 2008
Certified Treecare Safety Professional-CTSP Workshop
Milwaukee, WI
Contact: 1-800.733-2622; www.tcia.org

November 11-12, 2008
Certified Treecare Safety Professional-CTSP Workshop
In conjunction with TCI EXPO 2008, Milwaukee, WI
Contact: 1-800.733-2622; www.tcia.org

November 13-15, 2008
TCI EXPO 2008
Tree Care Industry Association
Milwaukee, WI
Contact: Deb Cyr 1-800.733-2622; cyr@tcia.org; www.tcia.org

EHAP workshops scheduled for 2008

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<td>WA</td>
<td>Spokane County Conservation Distr.</td>
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For more Electrical Hazards Awareness program information or to register, visit www.tcia.org and click on Meetings, then EHAP Workshops, or call TCIA at 1-800-733-2622. (or, See more about EHAP on page 63)
Please circle 32 on Reader Service Card
What I learned at TCI EXPO '07

1. Fatality updates are happening even as we comfortably sit in on seminars, lunches and meetings. We’ve got to reduce the deaths and dangers associated with our industry.

2. Along that line: don’t sell “Danger Tree Work.” It belittles us all.

3. The value you see in yourself, and your services, is the MOST important selling tool.

4. When a fatality occurs at a job site, the crew members seem to always say that they “kinda knew something was wrong before they started the job – but went ahead anyway.”

5. Never provide a verbal tree risk assessment. Put it in writing. Too much can go wrong.

6. Prune out the 5 D’s: dead, dying, diseased, defective or duplicating.

7. An estimate is when you [the customer] tell me [the contractor] what is wrong. Then, I tell you what I charge to fix it. A consultation is when you don’t know what’s wrong.

8. Allocate 12 percent of your time at the show for “chats” afterward with other TCIA members. Some of the most valuable learning I find happens during these chats.

John P. Martyn
JPM Tree Service
Burnaby, British Columbia, Canada

Tree protection laws again

I read the description, in “Washington in Review,” TCI, November 2007, of a new tree protection law in Maine. I have also read Dave Ryan’s reply in TCI, December 2007.

There have been other reports, recently, of both new laws and new court cases that regulate trees on private property. And there have been other comments on the appropriateness, fairness or “rightness” of such regulation of private property.

As tree care professionals we certainly should, as Dave Ryan suggests, “promote tree care based on the tree” and our technical expertise. Similarly, as tree care professionals, we can play an important role in helping communities develop practical and sensible regulations. As voters and taxpayers in our own communities, we certainly have a right to voice our opinions on any law or regulation that is proposed. But as responsible professionals, we are constrained – just as our clients are – to work within laws and regulations that are put in place.


In fact, regulation of private property is a proper exercise of the “police power” of government, clearly established in the U.S. Constitution. There are many constraints on the use of private property, including tree ordinances and regulations. The constitutionality of zoning ordinances under the Fourteenth Amendment was upheld in a landmark 1926 U.S. Supreme Court case: Village of Euclid, Ohio v. Ambler Realty Co. Any such regulations must, however, be soundly based and comply with constitutional “due process” requirements. (For a comprehensive look at properly crafted ordinances see: Duerksen, Christopher. 1993. Tree Conservation Ordinances: Land-Use Regulations Go Green (PAS 446). APA Planning Advisory Service. http://www.planning.org/APAStore).

Should we, as tree care professionals, “stay away” from such ordinances? People – taxpayers and voters – propose and enact such regulations. If we, as professionals, avoid involvement in that process, people may pass weak or overly constraining or impractical regulations. Once regulations are in place, we have no choice but to be aware of them. We might challenge them on legal grounds, but more frequently our job as tree care professionals is to help our clients comply with them.

Scott Cullen
Registered Consulting Arborist
Greenwich, Connecticut

Clearing up ROW regulation and enforcement facts

I was disappointed at some inaccuracies reported in the article “Clearing the Way for Energy” in the December 2007 issue of TCI magazine. While the subheading accurately reads, “New federal regs encourage
more thorough approach to vegetation management for utility companies,” the article makes a number of misstatements that imply that the Federal Energy Regulatory Commission (FERC) regulates vegetation, and that new rules adopted by FERC dictate certain vegetation management practices; neither of these is true.

To clarify my point, I would like to make a few comments about government process, and then to relate those to the instant case.

Statutory law is passed by legislative branches of government. Such laws normally have a purpose clause and provide certain authorities. Title 42 of US Code is titled The Public Health and Welfare. It contains chapters pertaining to many aspects of life. One of these is Chapter 84 – The Department of Energy. The purposes of the Department of Energy focus on national energy policy. One of the activities authorized under this chapter is establishment of the Federal Energy Regulatory Commission (Subchapter IV). FERC is an independent commission that functions similarly to a state public utilities commission, but at a national scale. According to FERC, “FERC, is an independent agency that regulates the interstate transmission (note: not intrastate transmission or distribution) of electricity, natural gas, and oil...” It is important to note that Title 42 and Chapter 84 contain no authorities to regulate vegetation; in fact, the words “vegetation” and “tree” do not appear in Chapter 84.

The East Coast Blackout of 2003 occurred on lands owned in fee by a utility (there were no regulatory or permission-related obstacles to vegetation management) and where resources (personnel, funds, contracts) for vegetation management were in place. The primary cause was simply someone not doing their job. However, industry reps have disappointingly vilified trees, with the president of the North American Reliability Council (NERC) being quoted by Reuters in 2003 as saying that trees are more of a threat to the U.S. power grid than terrorists. Saying this blackout was caused by a tree is like saying if someone leaves the pub after a night of drinking and drives home in the rain at twice the posted speed, drives off the road, and strikes a tree, then that accident was caused by a tree. I guess that “we have to take care of our own house and do a better job on our existing management rights and obligations first” didn’t bubble up as compelling for some reason.

FERC subsequently was charged with investigating the causes of the blackout. The investigation was outsourced to a “utility consultant” who concluded that, since some utilities are incapable of managing vegetation on lands they have full management rights on, one answer to the problem is to create a larger management obligation by giving utilities right of entry to manage on any lands, regardless of utility ownership or easement (or private property rights). Prior to passage, the heavy rumor in the industry was that the Energy Policy Act of 2005 would contain a national vegetation management standard. However, this did not occur. The only mention of vegetation in that Act was with
regard to permission for utility vegetation management on federal lands.

Following the blackout investigation, FERC charged NERC with coming up with new reliability standards. NERC has adopted those standards (FAC-003-1). The standards call for transmission owners to self-identify vegetation management cycles and clearances and to report on attainment compared to those. These standards cannot and do not grant transmission owners trespass rights or any other rights of entry.

These standards are often cited by utilities in Maryland as the “new federal regulations” that give utilities direction and authority to enter property regardless of ownership or easement to manage vegetation, in some cases regardless of the voltage of the transmission or distribution lines. However, a reporting standard adopted by a council as directed by an independent commission is not the same as a national law passed by elected officials in the legislative branch and conveying certain authorities. Indeed, FERC states that, *These standards cannot and do not grant transmission owners trespass rights or any other rights of entry.*

“The standard FAC-003-1 applies to all transmission lines operated at 200 kV and above and to any lower voltage lines designated by the Regional Reliability Organization (RRO) as critical to the reliability of the electric system in the region. This standard provides guidance for the clearances to be provided between power lines and trees. To the extent that there are vegetation management regulations and ordinances, typically, they are established by state or local jurisdictions (personal communication, J. McLane Layton, director, Office of External Affairs, FERC, to me, 2006).”

This may leave you saying: what are utilities to do? If they are charged by FERC and NERC with maintaining these standards but prohibited by the owners of the vegetation from meeting the standards, what is the answer? The answer is not to engage in misrepresentation of authorities or disregard of property rights – it is to engage elected officials in an attempt to obtain the authority needed to perform management as desired. This will provide for open dialog on the process with elected officials and the public at large, allowing bill submission, public testimony, etc. These issues should be addressed openly by the democratic process. That is what America is all about. Purchase of rights via easement and or mitigation (tree planting) programs for utility vegetation management go a long way toward addressing public concern, particularly in situations where the management is to occur on private property not owned by the utility and where the utility holds no rights or easement.

Michael F. Galvin, RCA
Supervisor, Urban & Community Forestry
Maryland Dept. of Natural Resources
Forest Service
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“All work shall be performed according to ANSI Standards” is common language in contracts these days, but what does that mean?

The American National Standards Institute A300 series of Standards for Tree Care Maintenance Operations (ANSI A300 Parts 1 through 7) – including Pruning, Fertilization, Support Systems, Lightning Protection, Management During Site Planning, Transplanting, and Vegetation Management – are often referred to in general terms, but how well are they understood? Many arborists trust some CliffsNotes-like version, such as specifications from a foreman or an agency’s Request for Proposals, but only by reading the real thing can we know what we are talking about. Our Standards are regularly updated, and constructive comments from the public are considered and incorporated if the A300 Committee agrees. The ANSI system is more efficient and more democratic than the process in other countries, where the government plays a much more prominent role.

To provide standards for specifying and practicing the care of woody plants, members of the U.S. Forest Service, American Society of Consulting Arborists, the Tree Care Industry Association, the American Society of Landscape Architects, the International Society of Arboriculture and seven other organizations develop an industry consensus. ANSI A300 standards apply to any person or entity engaged in the business, trade or performance of repairing, maintaining or preserving trees, shrubs or other woody plants. The Z60 standards on nursery operations and the Z-133.1 standard on safety are important as well, but they are outside the scope of this article. From the top of the tree to the bottom, the A300 Standards for tree care operations offer guidance on services that, chances are, your competition does not offer. These services are aimed at increasing the value of the trees. If successful, this work can be worth a lot to tree owners.

Applying ANSI can make you an expert in the eyes of clients and authorities, such as your town, county or state government. ANSI standards are also recognized as the ultimate authority in the United States civil court system. In our country, it seems that anyone can be sued for anything, so there’s no use in worrying about going to court, only in losing! There’s no reason to fear losing a lawsuit if you have read the standards and know your work complies.

A tree “hazard” is defined as a level of tree risk greater than the owner is willing to tolerate. “Hazard trees” are managed by lessening – reducing, mitigating – the risk they pose, either by removal or by arboricultural treatments, to a level that the owner accepts. Reducing or supporting defective branches, propping or bracing defective trunks, guyng trees with defective root systems; all these and more arboricultural activities can be specified and practiced relatively free of liability concerns, if they are ANSI-compliant, standard operating procedures.

Preventing lighting damage

Let’s start at the top of the tree, the part that tree owners often focus on. Better yet, let’s start in the sky above the tree and on the lightning that can blow the tree apart.

In 2002, the ANSI A300 (Part 4) committee agreed that a smaller ¼-inch conducting cable was adequate to protect trees. Lightning protection systems are now easier to sell, but that does not mean that they are always sold. In Arizona, $40,000 was spent on a transplanted saguaro cactus, but that investment was lost for lack of a simple $400 lightning protection system. According to arborist Juan Barba, this landmark cactus was fatally struck by lightning shortly after the expensive move. An investment of 1 percent of its cost could have saved...
When deciding where in the tree to install lightning protection systems, there are at least two reasons to think outside the obvious path that a climber would follow during egress, on the way down from the tree. First, if the conductor is attached along the best route to climb, then future climbing will have to follow a less efficient route. The average fastener is weakly attached because it is tapped into the bark only until it contacts wood. This minimizes infection from penetration damage and cracking, but the fasteners are susceptible to getting dislodged by falling branches, or even a slack rope brushing against it. “Arborbolts,” extendable fasteners that are screwed into a predrilled hole, can hold up to light contact, and more closely comply with 46.3.1: “Equipment and work practices that damage bark, cambium…shall be avoided.” Still, they limit that route’s usefulness for climber access or egress.

Installing the conductor along another route may increase the degree of difficulty for the climber, but what tree climber does not relish a new challenge? Another reason for following a less visible route is to avoid tragedy due to aesthetic concerns. After one system was installed in a 68-inch dbh tree in the middle of a tourist attraction, the owner objected to the appearance of the shiny copper conductor, and ordered it reinstalled along a less conspicuous route. No amount of reasoning that the copper would soon tarnish and be less obvious could change this decision, so the entire system was removed. The arborist who installed it lived far away, and before he could get back to reinstall it on the back of the tree, witnesses reported seeing a huge fireball at the top of the tree during a thunderstorm.

An inspection found minor bark damage in the crown, but above the main fork the bark was dead for more than half the circumference. The electric current was apparently deflected by the obstruction at the fork, like a river’s current swirls around a large rock. This forced the sap to boil under a wide area of bark. It separated from the wood, dried, and died. The entire tree above this area was killed. This “eddy effect” fatally damages many lightning-struck trees, so an aerial inspection and resonance testing above the scaffold attachments is needed before lightning damage can be competently assessed.

Prevention and repair of branch damage

After all the severe storms this winter, many tree owners saw broken limbs and thought there was no hope for their trees. The ANSI A300 pruning standard is newly updated, showing a number of ways that arborists can prepare, repair and restore tree branch systems. Tree owners should not question unfamiliar pruning practices, if the arborist can point to their description in the standard. For the first time, this new version of the pruning standard will cover structural pruning. Your clients with young trees might appreciate the need for regular training if they see it described in ANSI, and confirmed in resources such as Dr. Ed Gilman’s An Illustrated Guide to Pruning.

A codominant stem with included bark can become a permanent side branch with one subordination (reduction) cut early in the tree’s life.

When young trees develop with poor structure, the consequences can be disastrous. The worst damage to tree branches is done with a chain saw, when owners fear the growing size of their trees and hire someone to top the trees down to a predetermined size. If neither the owner nor the tree cutter refer to ANSI, the cuts are often made without regard to the tree’s health or structural integrity. Describing proper reduction cuts in A New Tree Biology...
more than 20 years ago, Alex Shigo said that, “Cuts are made at nodes, or at crotches.” The standards are also clear on this: not all heading cuts are improper. Nodes contain suppressed buds and former branch collars with their Branch Protection Zones waiting to release stable growth and seal against decay. Internodal cuts miss these natural targets, resulting in more decay and weaker regrowth. Adding “internodal” to “predetermined” will clarify the arbitrary nature of pruning, the antithesis of arboriculture. On storm-damaged trees, it is standard operating procedure to cut some broken branches back to the first good node, instead of removing them at the origin.

**Standard root pruning**

Also in the newly updated ANSI Pruning Standard, due out this year, we are likely to see root pruning covered for the first time. We are all used to the idea of pruning branches to provide clearance for buildings and pavement, but for many, inspecting and pruning roots to provide clearance for buildings and pavement is an unrealized possibility. Homeowners and other property managers are often concerned about the possibility of tree roots cracking the building foundations, even when the tree is some distance away. Several factors make this disruption unlikely. First, the soil near buildings is typically stripped of its organic layer and then compacted for building stability within 5 to 10 feet of buildings (Matheny and Clark, 1998). The decreased porosity and permeability in this compacted soil limit root growth and function (Craul 1992). Also, leaching from concrete and other construction material alters the acidity of the soil and further decreases suitability for root growth. For these reasons, roots tend to deflect away from buildings.

Still, roots will go where roots will grow. According to the draft version of the upcoming ANSI A300 (Part 1) Pruning Standard, we shall assess feasibility and suitability before recommending root pruning to clear buildings or pavement. When determining the minimum distance for the location of the cut to the trunk, consider crown size, root characteristics, exposure, soil type, tree lean, soil slope, current vitality, stability and genetic vigor. As with pruning branches, leave a smooth surface. Typically, no sealant need be applied. Irrigation before, during and after shall be considered. Native or coarser soil should be used as backfill, and root pruned trees should be monitored. Once we master these standard operating procedures, we can confidently sell pruning services to lessen the risk of infrastructure buckling due to tree roots. Instead of buckling under to fearful demands to remove valuable trees, we have the option of preserving trees near buildings and pavement by reducing their roots.

**Supporting the ANSI way**

The ANSI A300 (Part 3) standard on Supplemental Support Systems has also evolved to embrace new procedures. Propping is now included, providing general guidance on the methods and materials for carrying out this ancient practice. Props supported by the ground, constructed with strong and durable materials and fastened adequately while allowing for future growth can be ANSI-compliant. This puts a powerful new instrument into our toolbox of standard operating procedures. Guying trees to the ground is commonly done when young trees are staked, but how many of us have guyed trees over 10-inch dbh? If the ground anchor is sufficiently strong and at least two-thirds the height of the trunk, it can be included in the ANSI A300 (Part 3), Supplemental Support Systems.
distance away, attached securely in the top half of the tree, and aligned with the direction of the pull to avoid side loading, guying large trees can be ANSI-compliant. As with cabling branches to stems, the hard part seems to be the materials and methods used to fasten the cable to the tree.

According to Part 3’s Table A-1, lag bolts are not acceptable in branches over 10 inches in diameter. Cabling in general has gotten a bad reputation because of catastrophic failures that resulted from lags installed lower than the recommended two-thirds distance, in branches too large. Dynamic cables made of synthetic material avoid wounding while allowing movement needed for the tree to reinforce itself with reaction wood, but the 2006 standard only gives this method a brief mention. Through-hardware avoids lag failure, but installing a bolt through the branch wounds the tree more. Fortunately, according to 32.42, we are not limited to bolts and rods. Another option is to drill the hole through the branch only wide enough to fit the cable itself, and secure it on the other end with wire-stop fasteners. These fasteners are composed of two individual pieces, installed with a wire cutter and pliers (these are described more fully at www.rigguy.com). Like dynamic systems, wire stops are not covered in detail in the 2006 edition, but if you clearly define the objectives, and follow the manufacturer’s recommendations, installing these newer systems can be ANSI compliant. If they work well for you, document that experience and submit a comment to your group’s representative to the ANSI committee, so the next edition of the support standard will be more complete.

ANSI A300 (Part 5), Management of Trees and Shrubs during Site Planning, Site Development, and Construction, is relatively unknown. Many municipalities call for a Certified Arborist to be involved in development, but this involvement is typically very limited in scope and duration – too little, too late, and leaving too soon. If the town ordinance specifies ANSI compliance, an arborist evaluates the trees before construction, and a conservation plan is part of the overall site development plan. The specifications and goals of the plan are communicated to everyone, and the
arborist monitors the work during construction. The arborist revises the conservation strategy as needed, and monitors tree health post-construction as well. Knowledge of this standard, and resources such as Matheny and Clark’s book Trees and Development, may empower an arborist to persuade towns and developers to hire an arborist to proactively manage trees during construction.

ANSI A300 (Part 6), Transplanting, can also prevent future tree losses by getting a knowledgeable arborist involved earlier in that process. If the depth of the rootball is measured from the bottom of the trunk flare to the bottom of the ball, many trees would be rejected as substandard, and sent back to the nursery. If the flare is installed at or above grade, and mulch is kept off the trunk, roots will not be trained to girdle the stem. If the hole is at least 1.5 times the width of the rootball, and material such as wire baskets and cloth is removed from the top third of the rootball, the roots can extend unimpeded and successfully establish the tree. People who plant trees are often unfamiliar with this standard, and it shows. If arborists demonstrate that these standard methods produce a lower-maintenance tree, they can avoid some of the root pruning chores described in the pruning standard, and deliver larger, healthier, lower-maintenance trees to their clients.

Tree care companies can maintain these same trees into the future, instead of watching dead and defective trees get repeatedly replaced by companies that do not follow the standards.

ANSI A300 (Part 7) covers Integrated Vegetation Management and Electric Utility Rights-of-Way. It calls for the site to be inspected and evaluated, and for the growth of compatible vegetation to be promoted. Over time, cultural controls are preferred, and biological controls should be considered. Arborists who can apply these methods, along with mechanical and chemical control, in a cost-effective manner will be better able to serve utilities that seek to advance their management of rights of way.

When we’re on a job where “All work shall be performed according to ANSI Standards,” we have more freedom to operate if we know those standards well. We are indeed fortunate to have ANSI committees making our work easier by keeping the standards current and accurate. Clients, be they homeowners or administrators, expect work to be done to industry standard. By reading and applying all the ANSI A300 standards very closely, tree care professionals can diversify their work and grow their companies. I keep current copies right in there with my proposal forms and other promotional material, and pull them out regularly when offering opinions and specifying work. More tree care services can be more easily sold, and more profit can be made, by following standard operating procedures.

Guy Meilleur is an ISA Board-Certified Master Arborist, climbing and consulting with Better Tree Care of Apex, N.C.
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Not quite three years ago, the issue of right-of-way clearing burst into a flaming-hot topic virtually overnight, largely among electric utility companies reeling from a huge Northeast blackout that extended to Canada. Putting aside the issue of an aging power grid infrastructure, the blame was placed squarely and unfairly on low-hanging, unattended-to branches that hit some wires, and the blackout cascade began.

Since that time the issue of right-of-way (ROW) maintenance has been on the front burner, not only for electric power utilities, but also for gas and oil pipelines. With government agencies from the feds all the way down to the locals now looking closely to see that rights of way are maintained according to specification, there’s money to be made for the tree care professionals willing to go after the business.

With government agencies from the feds all the way down to the locals now looking closely to see that rights of way are maintained according to specification, there’s money to be made for the tree care professional willing to go after the business. (Another thing to consider is that right-of-way maintenance and related equipment can be more broadly defined to include fire breaks, especially critical in the Western U.S., and a lot of equipment utilized for ROW work can be re-purposed for land-clearing.)

One word of caution: the days of ROW clearing by crews with the bucket truck and chipper setup are waning. The name of the game these days is equipment performance, and it involves equipment that is one part designed for productivity (not only how much throughput but also versatility – does it have more than one “talent”) and one part economy. Those are connected, of course, because high productivity is economical, but for the purposes of investigating ROW equipment, economical really means fuel economy. The question to ask is how much work can you get done and how much fuel does it take to do it?

Maintaining rights of way can vary, starting with simply keeping the brush away from “high-line” electrical transmission systems. That can be pretty straightforward-looking if you view these rights of way as they bisect a road, but as you get back into the brush more, and depending on where you are in the country, the right of way can get pretty challenging. You not only have to reach up for the low-hanging branches, you may have to reach up and over and often down and away to get at the problem. So, not only does the old crew and old equipment approach appear costly, it can also present safety issues.

That’s where your equipment research comes in. Specialty is the name of the game for right-of-way contractors because ROW is, well, a specialty. Will you need a voracious brush cutter/mulcher that you can mount to a tool carrier such a skid steer or other loader? Or will you need a purpose-built, tracked, self-propelled unit that can handle the terrain and address special access issues?

Jason Morey is assistant marketing manager for Bandit Industries, which features a line of self-propelled whole-tree chippers that ride on a rugged steel undercarriage. These units feature a cab for the operator to ride in and a loader. The line (e.g. Model 1850, 1900, 2400, etc.) chomps 18, 19, 24-inch, etc. whole trees, up to specimens 36-inches in diameter.
A recent addition to the Bandit line is the Model 4000 forestry mower, again riding on a steel undercarriage and powered by a John Deere 275-hp engine. But this one features interchangeable forestry mower and stump grinder heads, which allows you to mow large trees, then clean up and dress off your ROW swath. Swing-out time for the heads is about 30 minutes, Morey says. A nifty maintenance feature for this equipment is that the operator cab (with joystick controls) tilts open with the touch of a button to access the working guts, including hydraulic hoses.

Bandit also offers self-propelled hand fed chippers on rubber tracks for tight areas, lot clearing or for those right-of-way paths with light brush. The smaller units do not feature cabs, but do offer remote controls for the operator to walk or ride along as the chipper does its business.

According to Morey, the ROW units are being purchased for the traditional right-of-way purposes and also for cutting fire rows and fire cleanup, especially in the western U.S.

“We sell a lot of right-of-way clearing equipment to oil and gas contractors, plus pipeline, coal and electrical operators,” says Kevin Covert, sales and marketing manager for Rayco, “including the steel-tracked equipment to fit the bill of those needing forestry mower-mulchers.”

Introducing in late ‘07 at the TCI EXPO and with the first units shipping just last month, is the C100, a multi tool carrier “in a class of its own just above a skid steer,” as Covert describes it. This is a multi-tool carrier powered by a 96-horse Kubota engine.

According to Covert, the C100 features loader arms and accommodates the company’s Predator PM638 head, which allows trees of any height (up to a 6-inch diameter) to be mowed. “The C100 will lift the mower up to 12 feet off the ground so you can do standing trees from top to bottom, or you can push taller trees over with the push bar and grind them once they’re on the ground.

The C100 (the name approximates the horsepower) joins the C140 (140-hp) Deere-powered forestry mower. Both mow up to 6-inch diameter trees. (The C100 supersedes the C87L.)

The next class up for Rayco is the “T” series, featuring the T185 and 275 models (again ranked by approximate, 185 and 275 horsepower) engineered to mow up to 10-12-inch diameter standing trees.

Sister brands Jarraff and Geo-Boy present a pair of varied solutions.

According to Heidi Boyum, Jarraff Industries’ CFO, the Geo-Boy, a brush cutter tractor, is a first line of defense for right-of-way maintenance, ground clearing and firebreaks. “The Geo-Boy tractor has been manufactured in Minnesota for a decade and is available in steel and rubber track and 4-wheel-drive wheeled versions to accommodate all kinds of terrain, including boggy or wet areas where low ground pressure is required.”

The Geo-Boy, available with up to 300-hp, is delivered and recommended for use with Fecon heads, namely the Bull Hog, although it will accommodate other cutter brands. Options include front and rear lighting and a rearview camera!

Jarraff mechanical tree trimmers, considered the mainstay of the business, were introduced in 1978. Of different purpose than the Geo-Boy cutters, these are, essentially, a rotary saw on a telescoping boom capable of reaching up to 75 feet, depending on terrain, according to Boyum. They are available with a 97- horsepower Tier 2 engine, 4-wheel drive and various tire sizes and both steel and rubber track versions.

FAE USA Inc. offers an array of equipment applicable to the tree care industry for ROW and land-clearing operations. Matt Jackson, inside sales and marketing coordinator, maintains that FAE is experiencing greater demand for equipment as the government puts increasing pressure and
responsibility on operators and landowners to keep their rights of way up to snuff.

In some cases, he says, insurance companies are also becoming selective in the equipment they cover based on concerns over the potential for flying debris that could cause injuries.

FAE is known for, among other things, horizontal grinders that are compatible with skid steer-type equipment, excavators and PTO-equipped tractors. “We also offer a self-contained, diesel-powered cutter,” Jackson says, “the Model UML/DE with a 5-foot working capacity, capable of cutting material up to 8 inches in diameter.”

“New for this year is a 400 hp carrier, a steel-tracked tractor with mulcher, with 50 more hp added,” Jackson says. Tools for this machine are interchangeable. For example, “We also now have the 300S stabilizer (also called a forestry mulcher), which runs at 20 inches below surfaces to take out roots and other materials. It has a working width of 76 inches,” he says. (The forestry tiller/stabilizer is often termed a stabilizer because one of its primary uses is to help stabilize a subsurface in road construction prior to paving.)

“We also make rock crushers and all kinds of equipment from orchard mowers to rock crushers and now carriers in the past year. You will see more carriers this year, one smaller and one larger,” he concluded.

Tom Becker is president of Barko Hydraulics LLC, which has with three machines aimed at the ROW market.

From a pure trend perspective, Becker says, “We are seeing an increased demand for high-production machines. That comes from the installed horsepower and also hydraulic flow and pressure to the mulch...
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head. It’s a matter of speed and productivity. Contractors want higher production machines that are rugged, dependable and low in fuel consumption. Lastly, they want what I call a tight environment ... the operator cab with roll-over protection and filtered air and protection from projectiles,” all of which are featured in the Barko line.

The first is a pair, actually, of rubber-tired tractors, Models 930 and 937, featuring 300 and 375 installed horsepower, respectively. The 937 was new for ’07.

Also new, introduced in November of 2007, is the Model 640, a tracked, knuckle boom-type mulcher with 400 hp installed. The first unit shipped in December.

“The 640 is designed for ROW usage in steep or mountainous terrain and pipeline applications, Becker says. “It reaches both above and below grade. That means it can reach (below track level, not into the ground) to work in a ditch or pipeline area as well as work above.”

Brian Davis, sales rep for Gyro-Trac in the Midwest, says that for the ROW corner of the industry, the company’s core products include a low-flow cutter head (17 to 25 gpm), high-flow cutter head (31 to 50 gpm), and GT13 XP and GT25 XP mulching machines. The XP machines, introduced in ’07, feature many new updates and more horsepower. Both feature updated Tier 3 Cummins engines, and improved controls. They utilize the high-flow and low-flow heads attachable to any skid loader with the correct gpm flow. Both the GT 13XP and the GT 25XP feature an enclosed, pressurized cab to keep out smoke, dust and debris. The 140-hp GT13XP has a 64-inch cutting width. The larger 260-horsepower GT has an 88-inch cutting width, Davis explains. Want something a bit bigger? There’s a special order GT60 with a 600-horse power plant and a 9-foot cut.

Chuck Hussey, sales and marketing manager for Supertrak, says, “In relation to the right-of-way application, work for our machines in power line maintenance consists of ongoing work for any DOT (department of transportation) entity, maintenance and upkeep of railroads and railways, and any of the major utilities companies including the electric companies and electric cooperatives. The use of custom Supertrak mulching machines and
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custom mulching carriers allows the material to be mulched on-site and thus provides for a decrease in labor and then minimizes the need for the use of chipper machines.”

He maintains that, “mulcher technology

custom mulching carriers with mulching heads, and the SK140STR custom steel track mulcher with mulching head. Hussey says, “All of these units are equipped with standard skid steer and track loader quick-attach systems that allow units to be multi-talented and versatile, boasting the ability to use other implements such as grapples, rakes, tree shears, buckets, dozer blades, etc.”

Supertrak also has an addition to its arsenal for ROW work coming out this year. “We will be introducing the SK140MX custom mulching excavator, which is a high-horsepowered, compact Takeuchi excavator with high hydraulic output,” says Hussey. The unit features a side-swing boom for ease of operation and less need to travel with the unit while mulching, a standard blade, the option of being equipped with rubber or steel tracks, a 140 hp engine, and dedicated high-flow hydraulics for mulching. “The unit will also boast the capability of being multi talented – to be equipped with other implements such as a tree processor, grapple, or a shear,” he says.

This is at least a glimpse at some of the new equipment available for right-of-way clearing and should help you get started shopping. Next month we’ll take a look at more skid steers and loader options and additional features to look for.
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De-icing salts such as sodium chloride are used widely throughout Europe and the U.S. to maintain roads free from ice and snow and so ensure public safety. However, de-icing salt can be a major chemical pollutant in urban landscapes resulting in a large number of tree and shrub deaths.

Salt damage occurs by direct toxicity of the chloride molecule resulting in a reduction in leaf chlorophyll content and photosynthetic rates, breakdown of leaf structure at the cellular level, leaves yellowing, bud failure and twig and branch die-back. Sodium (Na+) damages soil structure by competition with other cation exchange sites (see more about cation exchange in the fertilization story beginning on page 8 in this issue of TCI), causing nutrient deficiency symptoms and increased soil pH.

It has been estimated that de-icing salts alone are directly responsible for the deaths of more than 700,000 trees annually in Western Europe. Within the UK, de-icing salts can be particularly devastating to young spring growth that is unable to acclimate and therefore extremely susceptible. With increases in traffic volume and the expansion of road networks throughout Europe, the quantity of salt used for de-icing operations has increased correspondingly, creating a demand for salt protectant compounds that are inexpensive, can be applied to trees at relatively short notice and require only small adjustments to existing management aftercare procedures.

For this reason research at the R.A. Bartlett Tree Research Laboratory based in the United Kingdom has been investigating the potential of film forming polymers (FFP’s) as a means of reducing de-icing salt damage to trees.

Film-forming polymers (FFPs)
Film-forming polymers are widely used as spray adjuvants (oils, plant penetrants, surfactants) and antitranspirants within the agricultural, forestry and horticultural industries (Photo 2). When applied, they form a physical barrier across the leaf or twig surface that acts as an insulating layer between the leaf/twig surface and atmosphere. This physical barrier may protect against direct salt damage caused by coastal spray, rain and/or traffic splash of water contaminated with de-icing salt.
When, however, a range of FFPs were tested by a number of UK-based researchers in the 1970s, most concluded that anti-transpirant and anti-dessication based film-forming polymers did not offer promise as a feasible salt amelioration technique, either proving to be ineffective or directly phytotoxic to leaf tissue themselves.

Developments in polymer technology have now led to the formulation of a range of new polymers that contain different active ingredients from those original products used in the 1970s trials. These products are more stable and non toxic to leaf tissue and several recent studies have found these FFPs to be effective in reducing salt and freezing damage to crop plants of economic significance such as wheat and rice.

Whether these newly developed polymers can improve the salt tolerance of trees during the winter months was investigated as part of a research initiative at the R.A. Bartlett Tree Research Laboratory. Foliar sprays of the commercially available film forming polymers:

- Bond (active ingredient, or a.i.) alkyl phenyl hydroxy polyoxyethylene
- Newman Crop Spray 11ETM (a.i. paraffinic oil)
- Designer (a.i. styrene butadiene co-polymer + polyalkylene oxide)
- Nu-Film P (a.i. poly-1-p menthene)
- Spray Gard (a.i. di-1-p menthene; sold as Wilt Pruf and Vapor Gard in the U.S.)

were applied to the foliage of evergreen oak (*Quercus ilex* L.) and laurel (*Prunus laurocerasus* L.) until run-off using a hand-sprayer. All trees were sprayed in early November, a time that corresponds to initial frost formation and subsequent de-icing salt application in the UK. To assess the longevity and durability of each polymer on the leaf surface, at one week, one month and three months after application of each FFP, trees were then foliar sprayed with sodium chloride. Developing salt damage was assessed by recording visual leaf necrosis on a 0-5 scale (0 = no leaf necrosis observed and 5 = 81-100 percent of foliage affected with 90-100 percent defoliation). Results obtained at month 3 are shown in Figure 1, Photos 1 and 3.

Irrespective of tree species, the film forming polymers Nu-Film-P, Spray Gard and Crop Spray did not provide any degree of protection against salt damage by month 3 after application. This indicates that these FFPs are degraded by sunlight and/or wind and rain during the first three months. Only the FFPs Bond and Designer provided any useful degree of protection against salt damage at month 3 after application, where foliar leaf necrosis of both tree species was reduced by 58 to 82 percent compared to non treated controls. Such positive responses indicate that application of Bond or Designer provides a significant degree
of de-icing salt protection up to, and possibly greater than three months following application.

One important property of film forming polymers is their ability to stretch during leaf expansion. Although not investigated in this trial, greater stretching properties of Bond over Nu-Film-P and Spray Gard might, as a result, protect leaf surfaces for a longer time period and, in addition, newly expanded leaf tissue. Likewise both Nu-Film-P and Spray Gard have been used for many years as antitranspirants to decrease water loss and wilting of commercially important forestry transplants as well as extend pesticide efficacy. The recent generation of film forming polymers such as Bond contains different active ingredients that results of this investigation indicate are more stable and durable under outdoor weather conditions, which may account for the longer degree of protection recorded.

To determine how each FFP worked in reducing de-icing salt damage to leaf tissue, the internal leaf sodium and chloride concentration was measured 14 days after salt was sprayed onto the leaf surface. Interestingly, where a significant degree of protection was conferred, a lower internal leaf Na and Cl content was also recorded (Table 1). Such a response indicates that the effective film-forming polymers used in this study formed a physical barrier/protective coating across the leaf surface that prevented entry of Na and Cl ions into the leaf tissue. Natural precipitation during the experimental period may then have washed off and/or diluted Na and Cl ions to a concentration non-harmful to foliar tissue. Prevention of Na and Cl ions into leaf tissue would prove an important factor in reducing salt damage (delayed bud break, reduced leaf size, leaf yellowing and necrosis) as salt injury has been correlated with the accumulation of Na and Cl ions in plant tissue.

Conclusion

In conclusion, results of this study and others elsewhere indicate that application of a suitable film-forming polymer can provide a significant degree of protection of up to three months against salt spray injury. Results also indicate that when applied, no problems associated with phytotoxicity and rapid degradation on the leaf surface exist.

Improved hardiness against salt damage by the application of film-forming polymers may contribute toward greater survival and enhanced aesthetics of trees located within urban landscapes during the winter months, in turn reducing labor and replacement costs. Importantly film forming polymers are commercially available, inexpensive and, at least according to UK pesticide regulations, are classified as biologically inert, meaning their toxicity to humans is negligible.

Glyn C. Percival is with the Bartlett Tree Research Laboratory at The University of Reading, in Reading, England, UK.
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Kansas has trees. Who knew? But Kansas doesn’t just have trees. It has a great love of trees, and its cities are really showing it. This has been something of a work in progress, according to old-timers in the state, but there has been a huge effort among tree lovers to make the urban forest a fierce part of the consciousness of Kansans.

This effort has involved everyone from the man on the street to state government, from the commercial arborist to cities. Many cities. As a result, a state known for its prairie is starting to be celebrated for its trees. And its tree professionals are getting a lot more love and business because of it.

Tree popularity is reflected in statistics from the Kansas Forest Service, which in cooperation with the U.S. Forest Service has a Kansas Community Forestry Program that aims to educate residents about trees and encourage them to plant and care for them. The most impressive statistics, according to Tim McDonnell, Community Forestry Coordinator for the Kansas Forest Service, revolve around Tree City USA programs.

The state has become such a big participant that it now has 114 cities involved. That, according to McDonnell, ranks lightly populated Kansas seventh in the nation in number of cities involved. The program began in 1976 with 42 communities nationwide, and Kansas had 11 of those. Kansas also has more communities that have been involved from the start than any other state, five. In the last five years, Kansas TCUSA cities have spent over $59 million on program trees, and some of those communities have only a few hundred residents.

“We were one of the first states to have a community forestry effort,” McDonnell says. He himself seems to find this somewhat amazing, since the state is mostly flat, with only the southeast corner historically being heavily wooded. Even those areas are inhabited by mainly savanna species such as the blackjack oak. The western two-thirds of the state is pure prairie.

Ron Keith, owner of TCIA member Arbor Masters Tree and Landscape in Shawnee, says that the state, and much of the Midwest, suffered a catastrophe when Dutch elm disease swept through here in the 1970s. “Kansas City had probably some of the most beautiful American elms in the United States,” he says, and that was the primary landscaping tree in the state. Dutch elm disease destroyed the canopies of cities across the state.

A third-generation arborist, Keith says he spent his teenage years cutting and removing American elms from the beautiful neighborhoods of Kansas City (Shawnee is a suburb). One reason that cities became so involved with TCUSA is that with many of their trees dead, communities really had to think about tree recovery. When they’re missing, a lot of the community is missing.

Keith points out that one of the best
things that TCUSA did was to educate people about the value of trees. McDonnell
seconds that. He notes that the City of Greensburg was basically destroyed by a
tornado in May of 2007, and when his department and Kansas State University
went in and inventoried the dead and damaged trees for the purpose of putting a
value on them, people were shocked. This town of 1,500 people had had an urban
canopy valued at over $3 million.

“It kind of opens up people’s eyes,” McDonnell says. That, of course, is in
addition to the aesthetic value.

Catastrophe is a recurring element in the life of Kansas trees, and it has been a strug-
gle to cope with that over the decades. McDonnell says that the state’s lack of
species diversity in its urban trees has been a severe handicap - after Dutch elm dis-
etease took its toll many areas replanted with three main species: Siberian elm, silver
maple and hackberry. That leaves the canopy vulnerable to disease as well as
leaving something to be desired in the landscaping palette.

Among the many elements working to upgrade the state’s trees is a forestry
research station at Kansas State that has a goal of finding appropriate landscaping
species for the region. McDonnell also conducts species trials with the university’s
Cooperative Extension tree specialist, Jason Griffin, in Haysville. In addition, the
Forest Service conducts public training sessions and seminars around the state, as
well as assisting the TCUSA program where possible.

“We’ve got a very strong Kansas state arborists’ association,” McDonnell adds,
and volunteers make up a huge part of the state’s labor force in the planting of new
trees and removal of old damaged ones. In 2006, 15,600 trees were planted in those
114 TCUSA communities, and volunteers played a huge role. That year alone, there
were 646 Tree Board volunteers and 1,427 other volunteers. More than 80,000 trees
were pruned and 10,400 removed.

“In the last five years, we have suffered some pretty hellacious ice storms,”
McDonnell says, and cities have been fighting to recover. The goal is to plant
twice as many trees as are removed, and having avid volunteers available is impor-
tant in communities where there are no arborists or city foresters.

Having a strong tree volunteer program has proved beneficial to Greensburg,
where the May 2007 tornado destroyed 95 percent of the infrastructure and all of its
tree canopy. The F5 tornado took out about 2,000 public trees and 2,500 private trees,
McDonnell says, but various entities and volunteers have been busily removing and
replacing them even as rebuilding goes on. He wants to see that the town of 1,500 ulti-
ately has a 25 percent canopy, which is more than it had originally.

Keith says that from the private enterprise perspective, Kansas has seen a real
increase in tree awareness in the last few years, and that improves business opportu-
nities. His company has grown from 14 employees in 1985, when he took over
from his father, to 80 now. Much of that is due to awareness generated by groups such
as TCUSA. But what has made a real difference is that developers have become
tree-educated.

“That is probably the biggest factor in the last 15 years,” Keith says. Where once
developers just went into a growth area and leveled everything for houses and busi-
nesses, they have been made aware that both saving native trees and proper plan-
ning for new trees in those developments makes for a better city. Cities also erected
barriers to clear-cutting subdivisions, encouraging tree preservation.

Now, Keith adds, landscaping is integrated at the design level. No longer do
cities allow developers to leave tree planting to chance. Now there is a lot of
consultation between developers, municipalities and arborists.

"The TCIA has been a big part of that as well," says Keith, whose company is an Accredited member. He points out that when companies like his hire ISA certified arborists and spread the word about A 300 standard pruning, planting and other tree care practices, the public gradually begins to look for and expect more professionalism in tree care. That in turn reinforces the attitude that the people of Kansas and its communities care about trees. There's a snowball effect.

"There's been a huge increase in people realizing the value of their trees," he says, adding that the emotional impact of 9/11 has had something to do with that. During his lifetime, Keith has noticed a shift in the attitude of Kansans toward trees. No longer do they simply think of themselves as plains people content to have a few stunted hackberries in the back yard. He does his part by handing out a specially prepared CD showing a choice of 50 species that homeowners or developers can chose from. Now people want good trees, and in Johnson County where Keith works, they are beginning to ask for a real arborist to care for them.

Adam Moser has found the same phenomenon. He is the city forester for Topeka, and the current president of the Kansas Arborists Association. A Kansas native and graduate of KSU, he says there are still deficiencies to be overcome – in Topeka as well as elsewhere. It is difficult to get cities to allocate the funds necessary for proper tree care and planning, and they are basically playing catch-up in slow motion.

He cites one factor alone with exacerbating the problem. Pine trees were one of the main replacements for American elms in city parks, and the advent of pine wilt has decimated those trees. "We've lost a majority of them," Moser says, and Topeka - which has more than 100 parks and green spaces - is having trouble replacing them.

"We've got a lot of structurally deficient trees out there in the community," Moser says, and another huge area of need is for tree inventories. No city in Kansas that he knows of has a tree inventory, and that is going to be a big issue in the future.

On the other hand, there now is much more public awareness about the need for and value of trees, Moser says. The increasing professionalism of arborists and their drive to educate the public about tree issues is starting to take hold. Groups ranging from the Kansas Forest Service to the Master Gardeners Association are active in promoting appropriate tree selection as well as proper tree care.

The attitude of nurseries is a good example of the changing awareness of tree issues, Moser says. He used to see almost negligent care of trees for sale to the public by nurseries, but as certified arborists and other tree professionals interact more with nurserymen, these issues are being
addressed.

He says that there were two prominent problems: planting of trees too deep in pots and the pruning of young trees with poor structure right from the nursery. But as skilled arborists talked to nurserymen, the quality and survivability of sale trees has improved markedly in Topeka. Now he even has nursery staff calling him to discuss tree quality and health. That is going to boost tree health in the city for many years to come.

Moser notes that many different elements of the community have taken on tree issues in Topeka and the rest of the state. When the Kansas Arborists Association works with the Forest Service to put on pruning and planting seminars, that improves tree awareness. When qualified tree experts or educated laymen serve on TCUSA local Tree Boards, that improves planning and planting techniques in those 114 communities.

Even the local utility, Westar Energy, has become a force in Kansas trees, Moser says. A National Arbor Day Foundation Tree Line USA utility for eight years, Westar has set up a “green team” that goes around the state and assists communities and citizens who want to plant trees. No longer just replacing trees removed from under utility lines, Westar is involved in selecting the right tree for the right place as well as helping volunteers in small towns plant.

“That’s where Westar’s green team comes in,” Moser says. And this is a valuable service, because many small towns, even those in the TCUSA program, don’t have tree professionals who can assist. The City of Topeka has even developed its own working agreement with the utility to work out tree problems or disagreements. It often results in close cooperation, as well as benefits to homeowners who end up with new trees.

The upshot of all this is that communities of all sizes and shapes are getting involved in the greening of Kansas. In 2006, the town of Formoso (population 125) planted eight trees and pruned 22 for the TCUSA program. The City of Wichita (population 350,000) planted 1,398 trees and pruned 19,160.

Look for the pride of accomplishment in tiny St. John, where retired music teacher Barry Ragan volunteers to head the local TCUSA program. The town of 1,200 planted only three trees in 2006, but it pruned 175 and has received the Tree City USA award for 11 years in a row. More important, it is planning for the future.

“We purchased some of the finest tree identification markers you’ll ever find,” Ragan says proudly. These 100 markers are not only aimed at giving residents more knowledge about trees, they are also part of the plan to turn local Brown Park into an arboretum someday.

That’s the kind of tree pride that can develop in a small town like St. John, in a plains state like Kansas. Who knew?
Any chain saw in any tree is dangerous and each situation has to be judged independently of the advice given here. This advice is given to use in a general sense; specific circumstances should be considered independently.

All activities in trees are characterized by the mobility and functionality of the climber. Whatever the climber is doing sets the pace and the safety environment of the job. If the climber is confident and experienced, then the crew is relaxed and attentive, and the customer is cheerful and relieved that the job is in good hands. The safety environment is very positive and expectations are high. The job has a good character.

If the climber drives up and nobody knows him and he walks over to the tree and put his spikes on backwards while starting an argument with the homeowner, this establishes a bad character to a job. This is not a good safety environment because the climber sets the character of the activity. The education and skill level of the climber is critical to the safety and profitability of the activities. Does the climber know how to position himself in a tree in such a way that he will not cut himself? The answer is going to characterize the job.

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In order to attain safe cutting positions, the climber will have to first establish an appropriate climbing position. The first step of which is to tie in high enough that he will be able to use the safety line as a point of contact to the top of the tree as he works his way out to the extremities of the limbs. This positioning is always primary to long limb walks.

Let's talk about top-handled chain saws and their appropriate use.

I want you to visualize the climber and his climbing system as a pendulum. He or she is tied in at the top of a typical crown in a typical tree in a typical back yard. The further down the tree he relays himself, the wider his swing will be. As the climber moves out onto the lower branches, he is working in tangent to the arc of the pendulum swing. In other words the high tie-in will give him a better angle for his rope to be used as a stabilizing contact point.

There are a number of issues that begin to come into play at this point in the climb. All climbing is manipulation of contact points between the climber and the thing being climbed. Most standards require at least three contact points at all times in any kind of climbing activity. When an arborist is advancing outward from the bole of the tree toward the extremities of the limb, with a chain saw these contact points come into stark contrast.

If the climber were to hang straight down from his top tie-in he would hang in a vertical, straight up and down, angle of repose. The climber is resting upon the single point of contact – the safety line. The angle of repose for any single point of contact is always vertical. When the climber begins to advance outward on the limb, he is moving away from this point of rest that the rope always wants to return to. With a single point of contact the climber would not fall to the ground as much as he would fall to the contact point's angle of repose.

The famous tree climber “George of the Jungle” comes to mind. If he adds the second point of contact, then the angle of repose changes accordingly. The climber is tied in well over head and he is advancing out on the limb. As he does, he is now working against his natural angle of rest or repose. He is broadening his swing potential as he moves out on the limb. In order for the climber to maintain his position, he has to incorporate additional points of con-
tact. The lanyard comes in very handy to accomplish this. Once the second contact point is set or established, then the climber can rest in that position.

From this vantage point, his working area is divided into two main classifications: the area inside his swing potential and the area outside his swing potential. If and when the climber decides to set a load-line position, then he will have to consider these same elements with that line. Your safety hazards are greater working toward your angle of repose versus working away from your angle of repose. This is true with all the equipment that the climber may incorporate. For instance the load line: when a climber is working with a load line, he should always maintain a working position outside the swing of the load. In the field, this is called common sense. In the office, it is rocket science. The same is true of cutting with a pole saw. The pole saw is a dangerous tool and should be used outside of the swing area away from the angle of repose. The reason is that if the climber accidentally loses his position in the process of making a cut inside his swing area, and toward his angle of repose, then gravity pulls him into proximity of the cutting tool.

We are talking about the appropriate use of a top-handled chain saw. With the top-handled saw in use, there is no reason that a climber would have to make a cut inside of this swing area with one hand. If he chooses to do so, he is risking a cut to his free hand, his legs, or his top tie-in safety line. When the climber is cutting outside of the swing area and away from his angle of repose, then the risk of accidentally cutting himself or his rope is greatly reduced. It is in this position that a climber can safely use a top-handled chain saw with one hand. (This practice still does not comply with ANSI Z133)

Ideally, the climber is positioned out on the limb with a top tie-in with three addition points of contact - his two feet and his lanyard. His free hand is on the swing area in the proximity of the climbing knot, leaning away from the tree and the angle of natural repose, cutting the extremities of the branch with the saw in his working hand. If he loses balance he will be pulled away from the cut by gravity instead of into it. The limb being cut will fall away from the climber, saw and lines. The free hand is on the safety line acting as a slack absorber when the branch flexes from the weight change as the branch is cut. With the free hand on the climbing line, it has a task to accomplish and two vulnerable items are further and safer from the chain saw. The climber is holding the saw away and outside of his swing area with his working hand extended away from the free hand and rope.

When a climber is advancing out on a limb and he is tied in high up in the canopy, his weight is transferring to the branch that he walking out on from the safety line that is providing support. It is necessary for the climber to compensate by adjusting the safety line, reestablishing support and stability. The further away and/or higher the climber gets from his natural angle of repose, the tighter he will have to get his safety line for it to be of any use as a point of contact with the tree. At the same time, his position is losing the ability to absorb the shock that will result from the rigging and cutting of the limb. The chance of swinging under the branch and working area are increased by reason of the second tie in to the branch. There is a point when the climber will have to reach out with one hand to ward the extremities of the branch and hold on to the safety line with the other in order to keep his balance on the branch. If the climber puts both hands together and leans away from the angle of repose toward the branch extremities he will become too heavy and the safety line will lift on the feet. This is not a comfortable or safe position to work in. In order to maintain a safe working position, the climber should keep both feet on the branch with the knees bent to absorb shock. His lanyard should be around a lateral limb that is not part of the limb that is being cut off, and his free hand extended back toward his top tie-in point gripping the safety line in the proximity of his climbing knot. From this position the climber can make a comfortable and safe cut with his working hand. In this position everything is inside the swing area except the saw and the limb being cut (a good climber gets to tend the tail of the safety line to keep it out of the working area as much as possible).

Technical trim jobs and removals will have this kind of limb walking involved in their accomplishment. The physical demands and risks are considerable with each climb and not all climbers will want or should try these described techniques. I am presenting this as information only and do not advise anyone to climb trees and cut with a chain saw; it is not safe. Once in a while I run into the person who is willing
to do this work and is determined to do it regardless of the risks. This is the person that I am writing to, as helpful suggestions as they relate to being safe.

There are at least three ways for a climber to advance out on a limb with an overhead, top tie-in safety line.

Advancing out on a limb can be accomplished any way that a climber can walk over the branch against the safety line. When the climber feels his sense of balance being threatened, it helps to have tension to lean against. The climber can lean on his safety line in a backward fashion. He turns and faces the bole of the tree that he is tied off to and pushes himself backward toward the extremities of the branch, but first as he leans backward away from the supporting safety line. This method makes for easier limb walking, but it puts the climber in an awkward position to work in once he has reached his destination. Almost always he will have to change positions in order to cut securely.

The climber has the option to advance out on the limb using a sideways approach to the limb. He can turn sideways to the bole of the tree and the extremities of the branch, reaching forward with one hand and reaching back with the other on the safety line, maintaining tension on the safety line and feeding slack as needed. This is a very practical technique that will leave the climber in a good cutting position when he arrives at his destination at the extreme tip of the branch. Advancing out on the limb in a sideways fashion allows the climber to use his lanyard in such a way as to rest between the lanyard contact point with the branch and the safety line contact point in the top of the tree. The two contact points can “cradle” the climber’s weight between them. This technique lends itself to one handed-cutting with the chain saw.

Another approach to limb walking is to advance forward with the safety line against the shoulder. In this position the climber leans forward toward the extremities of the branch against the safety line. When advancing in this fashion, the safety line comes up from the saddle across the chest and up over one of the shoulders, positioning the climbing knot just above the shoulder and back with the rest of the safety line behind the climber. He can control the slack and tension with a free hand over the shoulder at the climbing knot. If the climber can advance in this position to the area of the cut, then he can use this position to cut with both hands on the chain saw, once he has established a point of contact with the limb by use of the lanyard. This position has its drawbacks, one of which was mentioned earlier. If the safety line slips off the shoulder and the climber has both hands on the chain saw, reaching out toward the end of the branch away from the tree, then the safety line can lift him off his feet with a capsizing action. This would put his head and shoulders in the direction of the cutting area. If the climber has to reach around his safety line to get into position to cut, then he will move to a sideways stance.

It is important to understand this dynam- ic in order to understand the appropriateness of using a top-handled chain saw with one hand. When a climber is extended away from his top tie-in point, he is holding himself up with the hand that is back on the safety line. He is taking up the top weight with his stabilizing hand, maintaining stability with the three other contact points of his feet and lanyard. Without the stabilizing action of the non-cutting hand, he would lose the directional pull holding him into the other three points of contact. If he were to suddenly gain slack in the safety line, he would fall onto or off the branch, neither of which are good for working with a chain saw. For the sake of argument I consider hanging off the end of a branch by your lanyard as having fallen off the branch. He has to maintain tension on the climbing line as he is working, in order to keep his balance and stance.

We are talking about working at the extremities of branches, cutting with one hand, using a top-handled chain saw. This is a scary place, it is a dangerous place, but with the right equipment and the right techniques, the climber can minimize the risks to a safe working level.

Robert Tews is owner/operator of 2’s Tree Service, LLC in Jacksonville, Fla., and TreeVentures, a recreational and professional climbing training school in Jacksonville. He has been training climbers since 1999 to climb professionally and for recreation.
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**Accident Briefs**

*Taken from published reports*

**Arizona trimmer dies in fall from palm**

Elias Urbalejo, 47, died December 17, 2007, after plummeting 40 feet from a palm tree he was trimming in Tempe, Arizona. Police said Urbalejo was cutting a tree he had been hired to trim in a yard when he fell into the alley below and suffered critical injuries, according to the *East Valley Tribune*. He was pronounced dead at the scene.

**Palm-fronds collapse, hurting tree trimmer**

A tree trimmer was rescued December 28, 2007, near Los Angeles, California, when a ring of palm fronds collapsed around him, pinning him to the tree trunk 35 feet off the ground.

The 30-year-old man’s colleagues called firefighters. The man had been working between two houses in the Athens area, according to the *Daily Breeze.com*. The man was trimming dead fronds when the skirt of fronds above him released, collapsing on top of him. He was attached to the tree by his rope and had to bear the weight of the crown, according to witnesses. The tree trimmer was not visible from the ground when firefighters arrived.

Rescuers worked for 37 minutes to cut the branches away and free the man, who was lowered to the ground with a rope.

The tree trimmer ’s injuries were not life-threatening, but he became very weak during the rescue. He was taken to County Harbor-UCLA Medical Center near Torrance.

(For an article on the dangers of working with palms and how to avoid them, visit www.tcia.org and go to CTSP, then Safety Articles. In English and Spanish!)

**Oklahoma man falls to death trimming tree**

A 67-year-old Ponca City, Oklahoma, man was killed January 2, 2008, after he fell while trimming tree branches.

The man was up cutting a tree limb about 8 p.m. when he slipped, falling about 30 to 40 feet and hitting his head. Investigators are looking into what caused the man to fall.

**Tree trimmer killed in struck-by accident**

Manuel Angel Lucas, 25, of Salinas, California, was killed January 3, 2008, while trimming trees in the Santa Cruz Mountains after being struck by a tree or part of a tree.

Lucas was working as part of a ground crew cutting back trees on a large parcel of land in a remote area of the Santa Cruz Mountains on a dirt road only accessible by four-wheel-drive vehicles. The crew was in the latter stages of a removal when a section of tree was released, apparently either hitting Lucas or knocked into another tree that then hit him, according to the *Santa Cruz Sentinel*.

**Father killed using industrial lift for tree trimming**

An Ocala, Florida, man was killed and two of his children were seriously injured November 11, 2007, when a hydraulic platform lift they were using to trim trees toppled, sending the three falling 40 feet to the ground.

Theodore Visneski, 52, had borrowed the JLG warehouse- or construction-type lift from work to trim trees at his home, according to a report in the *Ocala Star Banner*. Visneski had moved the mobile lift to the front yard and three were ascending in the basket platform between 30 and 40 feet above the ground when one of the unit’s large rubber tires broke through the septic tank lid causing the lift to fall over.

Theodore Visneski was pronounced dead at the scene apparently from head injuries. Visneski’s 20-year-old son was hospitalized with head injuries. His 10-year-old daughter suffered a possible broken leg and other non-life-threatening injuries.

**Tree trimmer attacked**

A Shawnee, Oklahoma, man working for a tree care company says a tree trimmer from another company attacked him while on the job December 14, 2007.

George Davis says he was clearing brush when another competitor pulled up in truck and got out and asked his crew to show their license. He then says he was struck by the competitor.

Davis ended up with broken bone in his cheek and a black eye, according to News9/NewsOK.com.

The other man was arrested and faces two charges of assault and battery.

Send accident report to staruk@tcia.org.
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Regularly showing a profit consistency may have elements of luck or good fortune, but a more reliable plan is — a plan. A profit strategy. Profits will have an element of uncertainty — changes in markets, suppliers, customers and costs are inevitable. This variability is the curse of planning, but, ironically perhaps, it also makes planning essential to business success, let alone survival.

The traditional view of profits is that they are a sort of leftover. At the end of the year, a business owner looks at the figures and the bottom line for the business then considers various actions. When the bottom line shows a profit, the business owner either decides to “do more of what we’re doing” or to let things continue unchanged. Both actions are understandable, but not necessarily the best plan.

“Do more of what we’re doing” is effective only if someone can identify precisely the factors that led to the success. What marketing initiative, what change, what combination of factors get the increased emphasis? Similarly, letting business operations continue unchanged — the “don’t tamper with success” school of thought — is nebulous at best, also requiring identification of the exact key factors that led to the success.

If the profit line looks “unsatisfactory,” the business may consider making some changes, tweaking the system, reasoning that action is better than inaction in this case. It’s hard to argue with that but, as we all know, some actions only worsen the situation.

Why profit strategizing?

You already budget, you already do a cash-flow forecast, so what does a profit strategy contribute?

While a profit strategy has similarities to a cash-flow forecast or a budget, the goals and emphases are different. Cash flows and budgets emphasize patterns of cash entering and leaving the business. Profit strategy begins with a goal, an end point, and then focuses on efforts for reaching that goal. It’s a difference that’s significant.

Profit strategy is macro, looking at the business in its entirety rather than its separate elements, which is more the case with cash budgets and cash-flow forecasts. The interactions of various areas of the businesses and the impact of even a small change in one area on the rest of the business are much more in focus.

It’s also macro in that it looks outside the business, considering the business in its economic, market, and competitive settings.

Other factors enter in

By looking at business situations from a slightly different point of view, a sound profit strategy is an additional resource for decision-making through the year.

Although all three planning tools utilize much of the same information, there’s value in looking at familiar information in a different way. The information and processes look fresh.

A profit strategy provides a goal that not only motivates but also gives everyone a greater sense of direction for the business and a feeling of achievement when the goal is reached. Key to this is that employees have a say in determining the goal and have a stake in the outcome. Without these factors, profit strategizing is just another meaningless manager exercise as far as most employees are concerned.

Communication and coordination can be a problem in even a very small business. We all tend to see things from our own position and point of view. A profit strategy links together different areas and aspects of the business. It also reduces the likelihood that the business is dissipating its efforts in too many directions and squandering its resources.

A profit strategy pushes the business to think more competitively and to look outside the business. Budgets and cash flow projections don’t do that. For a business to stay competitive, it’s essential that it not squander its resources. When efforts are focused on a profit strategy, efforts are less likely to dissipate in too many directions.

A profit strategy gives a business clearer direction, again something that cash flow forecasts and budgeting don’t do.
Profit strategizing: the starting point

Like any planning process, profit strategizing starts with data and a goal. You need to know specifically where you are and where you want to go. Accurate and detailed cash flows and budgets are critical data. Most businesses have this data at hand.

Goal-setting is another matter. Realism and practicality are essential. Obviously “Riches beyond our wildest dreams” doesn’t work as a goal, yet many people set profit goals unrealistically high, which only results in widespread frustration and a sense of failure. Overlooked is that this isn’t a failure in performance, it’s a failure in setting goals that are healthy for the business and for everyone working in the business.

The more you can quantify your business goals, the better chance of reaching them. You’re also better able to monitor progress toward those goals.

You may decide to increase profits by 8 percent. To determine your strategy for reaching this goal, you’ll have to consider not only a number of options, but how each option will impact all areas of the business.

Start with the obvious: increasing sales

How much will you have to increase sales to achieve this? How much of each percentage increase will be eaten up by increased costs directly related to the increase in sales? The question becomes: What is the real increase needed to increase profits by 8 percent? Fifteen percent? More?

Where will these increases come from? Realistically, how much unrealized potential is there in repeat sales to current customers? How can the business realize these sales? Here you need to get specific. What steps are you going to take, what kind of marketing? Who’s going to do it and how? What cost is involved?

Will some of the sales increases come from new customers? Again, questions arise about how you’ll generate these sales, what resources will it take, who’s going to do it, and what are the potential costs. Will the increase in sales justify the costs – and trouble – for this expansion, keeping in mind that not all costs are monetary?

Are new products a possibility? Similar questions arise.

There’s another side to be considered: instead of looking solely at sales expansion, what about sales reduction in some areas. Take a close look at low profit items. Why are they low profit? Do they carry disproportionately high cost?

Sheer numbers aren’t the only determinant here. Are these products consistent sellers? (You really need to think more than twice about reducing or getting rid of the rent payers.) Do your customers expect you to carry this product or item? Messing with customer expectations is almost always problematic.

It’s very difficult to determine if and when to cut your losses with a particular product or service. You usually need to have a product to take its place, both in terms of sales volume and profit, however low, and in terms of customer expectations. Any time you make a change that may strike customers as negative, it’s a good idea to overshadow it with a change you know will be perceived as positive.

Yet, there are times to cut your losses. I think this is one of the most difficult types of decisions in any business.

Conclusion

Because profit strategizing cuts across all areas of the business, it takes considerable thought and detail to do it right. The process may sound like a lot of nit-picking trouble, but that’s what good strategizing takes: looking at a range of options, the parameters, and the ripple effect of any tweaks or changes. This kind of analysis is the only way to reduce the possibility of surprises, which in these situations tend to be unpleasant rather than the reverse.

There’s a subtle but important difference in the statements, “My business makes a profit,” and “My business is profitable.” “Profitable” suggests a pattern and consistency. Bankers and creditors like the word and its implications. Is there also an implication of profits being generous? Perhaps. That’s in the ear of the listener. If you have a vocabulary choice, be “profitable.”
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*Must register on or before May 26

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After 10 years of maintaining the swooping, tangled branches of the Banyan Tree Plaza’s namesake on the Hawaiian island of Oahu, arborist Abner Undan knows this job is too big for one man with a chain saw.

That’s why he now relies on at least two lift trucks, three chippers and a dozen men – not to mention members of the local Honolulu police force to direct traffic – when it’s time to perform this Indian banyan’s annual pruning.

“It’s a tremendous task. It’s not just going up, cut and drop,” says Undan, president of Trees of Hawaii, which is based on Oahu and has operated on the islands since 1968. The tree, which he estimates is more than 120 years old, sprawls at least 100 feet in diameter and stretches approximately 90 feet tall. He and his crews last attended to the tree in July. “You have to deal with people, with cars, with buildings, with wires. We need a lot of people there to help.”

An Indian banyan, Ficus benghalensis, grows horizontally as well as vertically, dropping new roots downward into the ground. Those roots serve as much to stabilize the limbs as they do to provide hydration and nutrients from the soil.

The typical chores of pruning, shaping and maintaining the tree is only the beginning of the job. Undan’s employees must maneuver around heavy, twisting branches that are firmly planted between a major traffic intersection and the 35-story condominium complex. Add to that a busy sidewalk, customers walking in and out of a spa on the plaza’s ground floor, a telephone cable running alongside the street and electrical wires on the other side, and this job suddenly becomes much more than your typical tree pruning.

“There are obstacles all the way around. It’s stop and go, stop and go,” explains Undan, who no longer wields a chain saw himself, but spends most of his time doing consulting work and diagnosing tree problems. He makes a point, however, to be present when it’s time to put the saw to this Indian banyan.

“They really entrust the tree to us,” he said, referring to the Plaza’s board of directors. “Loss of the tree would mean loss of property value. Without that tree, you cannot properly call the building the Banyan Tree Plaza. That tree is irreplaceable.”

Even when the tree is not due for a pruning, it takes a lot of effort to maintain, staining the ground with bright red berries four times a year as well as a shower of leaves, says Ron Komine, Jr., the plaza’s resident manager.

“But it’s our signature tree. A lot of people all over the world just stop here to take pictures of it,” he says. “It’s in great condition. During Christmas we decorate our front with reindeer, and we use lights around those roots and it looks very beautiful.”

Undan first came face to face with the
sprawling tree nearly 10 years ago, when the plaza’s board of directors became concerned with a number of heavy limbs that had snapped. Undan’s diagnosis: improper pruning of the tree over the years had failed to leave the banyan enough vertical roots to support its long, heavy limbs.

“Loss of the tree would mean loss of property value. Without that tree, you cannot properly call the building the Banyan Tree Plaza. That tree is irreplaceable.”

“One of the mistakes of some tree maintenance people is that they don’t really look at the long term benefit to the tree,” he says. “If you continue to allow a banyan tree such as the Indian banyan to grow, you have to think about selecting some roots as the roots to help support those heavy horizontal limbs. If you can’t do that, maybe (due to) lack of space, you need to really contain these long, heavy horizontal limbs. Otherwise, failure of the heavy horizontal limbs is inevitable.”

That challenge becomes more real for Undan every year, as its canopy grows taller and wider over the rolling traffic and asphalt of Punahou and Beretania streets. Where roots cannot be allowed to grow due to the path of the sidewalk and the street, Undan’s crew reduces the weight of the branches and removes deadwood.

“It’s selective removal of branches, including water sprouts that form along the limbs,” he says. “So far, since we undertook the maintenance of the tree, it has not lost any limbs.”

The work – which Trees of Hawaii squeezes into a seven-hour Saturday to minimize impact on commuters, plaza residents and spa customers – is about a $6,000 job. But the tree’s size and condition have been well worth the cost and effort, says Mary Steiner, CEO of Hawaii’s environmental advocacy group Outdoor Circle.

“Trees of Hawaii was honored for its work on the tree by TCIA (then still NAA) with an Excellence in Arboriculture award back in 1998, given the extraordinary challenges the banyan posed.

Undan recently nominated the tree for inclusion on the state’s Exceptional Tree program, a list of trees singled out for their size, age, historic or cultural value, location

David Lee, TCIA membership director, left, met Abner Undan, Trees of Hawaii president, while on Oahu last summer.
or rarity. Inclusion on the list protects the tree or a cluster of trees from pruning or other maintenance unless the work is approved by all parties involved. Property owners are eligible for a state tax deduction to help compensate for the cost of caring for the tree, though that deduction is limited to $3,000 per every three-year period.

“The idea (behind the law) was that we had lost so many significant trees in Hawaii that we needed to do something to protect and encourage people to take care of their trees,” says Steiner.

Oahu presently has 158 trees or clusters designated as exceptional, according to Stan Oka, urban forestry administrator for the city and county of Honolulu. Each Hawaiian county has its own nine-member council that oversees the Exceptional Tree program on the local level. Undan and Steiner are both members of Oahu’s council, which is scheduled to vote on this particular Indian banyan’s status in the near future.

After a tree belongs to the program, any person wanting to do any significant amount of work on or around that tree must obtain a permit. That person responsible for the work must be a qualified arborist or have a qualified arborist on the job, and have approval from the local council.

“I think the intent of the law here is to encourage property owners to take care of their trees properly, because in the past, property owners employed the services of the lowest bidder and almost always the result is catastrophic,” says Undan.

“I personally will be voting in favor of exceptionalizing that tree,” says Steiner. “It’s very large for the location. They’ve taken fabulous care of it over the years. You see so few trees of that caliber any more in this town.”

Undan estimates that this Indian banyan could be worth as much as $400,000, given its age, size and health.

“I think (the plaza’s board of directors) understands that we treat the tree like ours,” says Undan. “I treat that tree like mine, even more than mine. I always make a point to be there to make sure the job is done right, because I’m protective of that tree.”

An aerial root, one of the vertical pieces the tree puts down, removed due to its proximity to the roadway.
TCIA seeks comment on proposed DOT CDL driver rule by March 25

TCIA is seeking comments from you, our members, on how a proposed rule from DOT affecting CDL drivers will impact your company. On December 26, 2007, the Department of Transportation/Federal Motor Carrier Safety Administration (FMCSA) issued a Proposed Rule to amend minimum training requirements for entry-level commercial motor vehicle (CMV) operators required to have a commercial driver’s license (CDL). The proposal mandates behind-the-wheel training in addition to the current requirements for skills/knowledge testing.

FMCSA defines an entry-level driver as a person with less than two years’ experience operating a CMV that requires a CDL. The proposed rule affects 49 CFR Parts 380, 383 and 384. If promulgated, the proposal would not apply to drivers who currently possess a CDL or obtain a CDL before a date three years after a final rule goes into effect. Following that date, persons applying for new or upgraded CDLs would be required to successfully complete specified minimum classroom and behind-the-wheel training from an accredited institution or program. The state driver-licensing agency would only issue a CDL if the applicant presented a valid Driver Training Certificate obtained from an accredited institution or program.

A cursory sampling of accredited training programs indicate they take 150-160 hours to complete and may cost several thousand dollars.

TCIA intends to submit comments on or before March 25, 2008, on the members’ behalf and will be asking you for your input.

Peter Gerstenberger is senior advisor for safety, compliance & standards for the Tree Care Industry Association.
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bright future for our industry tomorrow.
2007 TCIA Professional Communications Award winners

The annual TCIA Professional Communications Awards, formerly known as the Freeman Parr program, epitomize marketing and communications excellence for this industry. It is our pleasure to announce this year’s winners here, though Awards will officially be presented and entries displayed at TCIA’s Winter Management Conference in Aruba, Feb. 13.

This year, we had an impressive 66 entries, with dozens of excellent examples of professional writing and design. For all of these categories, we balanced budget with final project. Ultimately, our panel of judges chose 16 of the 66 entries as winners, which were selected in four categories: Brochure, Newsletter, Web Site and Special Entry. The entries were evaluated on their overall appearance, content quality, adherence to ANSI and OSHA standards, and their success in achieving the company’s marketing and communications goals.

If you would like comments and feedback on your entry, please contact Mark Garvin via e-mail at Garvin@tcia.org and we would be glad to give you our detailed reviews.

There were 14 entries in the Brochure category. The winners are:
1. Swingle Lawn, Tree & Landscape for “Doorhanger”
2. Bartlett Tree Experts for “16 Common Problems”

There were 19 entries in the Newsletter category. The winners are:
1. Wright Tree Service for “Our Family Tree” newsletter
2. Hamm’s ArborCare for “Third Quarter Newsletter”

There were 25 entries in the Special Entry category. The winners are:
1. The Care of Trees for “Brochure Display”
2. Arbor Masters for “Name Change Postcard”
3. SavATree for “Doorhanger Leave Behind”
4. S&S Tree for “Today’s Home Remodeler Show”
5. Bartlett Tree Experts for “The Bartlett Way Book”
6. Almstead Tree & Shrub Care for “On Hold Messaging”
7. Wright Tree Service for “Employee Recruitment”

There were eight entries in the Web Site category. The winners are:
1. Arborwell – arborwell.com
2. The Care of Trees – thecareoftrees.com
3. Pacific Coast Arborists – pacificcoastarborists.com
4. Top Notch Treecare – topnotchtree.com
5. Tree Tech, Inc. – treetechinc.net

A sampling of the award winners includes, clockwise from top left: Wright Tree Service’s “Our Family Tree” newsletter; Hamm’s ArborCare’s “Third Quarter Newsletter”; Arbor Masters’ “Name Change Postcard”; Bartlett Tree Experts’ “16 Common Problems” brochure; Wright Tree Service’s “Employee Recruitment” special entry; S&S Tree’s “Today’s Home Remodeler Show” (Tree Removal & Care and Wetlands DVD) special entry; Bartlett Tree Experts’ “The Bartlett Way Book” special entry; Swingle Lawn, Tree & Landscape’s “Doorhanger”; and SavATree’s “Doorhanger Leave Behind.”

Thank you to all who sent in entries, and congratulations to all winners!

The Care of Trees’ “Brochure Display” in the Special Entry category.
Get involved with programs lifting the industry

By Will Maley

The Massachusetts Arborist Association recently celebrated the 50th anniversary of its certification designation. Many of the founding members of the program were honored at our dinner meeting in November. It was interesting to visit with them and hear stories from the past. Things were different then; our recognition as an industry providing specialized tree care was very limited.

In the back of the room was a table full of memorabilia that included newspaper ads they had run promoting certification. One pictured a housewife trying to prune a tree with a pair of sewing sheers and another showed a monkey working in a tree with the caption, “Don’t monkey around.” It was clear the intent of their message was not only to promote professionalism, but also the very existence of our industry.

These pioneers understood that although they conducted business independently, they were perceived collectively by the general public. They recognized that their personal success and the health of the industry were inextricably linked and that it was essential to deliver a consistent, positive message to the consumer – that they weren’t just monkeys in trees and that tree care is not as simple as pruning with a pair of sewing sheers.

Today we reap the rewards of those Massachusetts pioneers and many others like them across the country, as we operate our businesses in an environment where consumers have a much better understanding of who we are and what we do. These advances have brought their own set of challenges however. Government regulation has never been greater. We have become fertile ground for unscrupulous “competitors,” and a shortage of qualified labor holds us back. Just as our predecessors pursued their vision to advance arboriculture, so too must we.

We are an industry made up of primarily very small businesses. However, when we join our voices and collectively work to solve problems together, our power and clout grow exponentially. TCIA is our mechanism and our mouthpiece. It is a well run organization with a highly skilled staff that provides us with business tools and articulates our message wherever opportunities or threats exist. As a member of TCIA, we all pay dues each year to fund these efforts, but dues alone are not enough. Unless each one of us embraces and puts into practice the ideas and programs offered, our clout is diminished and our combined voice is quieted.

Tip O’Neill, former Speaker of the House, once said, “All politics is local.” The same idea holds true here. In your community you are the face of TCIA. Your image, reputation, and business practices not only affect you personally, but also have a profound impact on our industry as a whole. As powerful as we are when we work together, what clients see and experience each day for themselves will either support or destroy our message.

Make this the year you improve your company by enrolling one of your staff in the CTSP program or embarking on Accreditation. Pick up the phone and call the TCIA office or one of the Board of Directors and tell them what’s on your mind. Reach out to a local competitor and explain the benefits of our association.

Take a chance and attend Winter Management and Expo this year. Any step you take in advancing your company’s image, improving its safety or business practices, or simply becoming more involved, helps raise the bar of professionalism in your area and across the country. Like an old tree that inherits new owners, it’s the least we can do to fulfill our duty of stewardship to the industry entrusted to us.

Will Maley is president and owner of Cedar Lawn Tree Service, Inc. in Ashland, Mass., and a member of the TCIA Board of Directors.

An EHAP workshop may be coming to you

T CIA has been awarded a federal OSHA/Susan Harwood grant to provide FREE* EHAP workshops in 2008, allowing professionals around the country to be trained in electrical hazards awareness at no cost.

EHAP workshops allow large groups to be trained and fulfill many of the program’s requirements in one day. All necessary EHAP program materials will be provided at no cost. Check the accompanying list to see if there’s a workshop coming to your area.

Electricity is a very significant occupational hazard for tree care & landscape professionals. ANSI and OSHA standards require anyone working within 10 feet of an electrical conductor to be trained in the potential hazards involved with such work.

All arborists are exposed to electrical hazards and should be trained to recognize them.

The Electrical Hazards Awareness Program, or EHAP, from TCIA is a training program that employers can use in conjunction with documented on-the-job skills training and assessment. EHAP adheres to OSHA and ANSI safety requirements.

For more information about the EHAP program, visit www.tcia.org and click the Safety tab, or call TCIA at 1-800-733-2622.

Upcoming 2008 EHAP workshops

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* A nominal fee may be charged for lunch and refreshments, depending upon arrangements made with the local host.
CTSP is enriched by improvements & participation

In 2007, the ranks of Certified Treecare Safety Professionals and those currently enrolled in the program swelled to more than 400 safety professionals from 250 companies across the U.S. Of those, there are now more than 200 CTSPs actively working to improve safety culture in their respective businesses.

TCIA made some programmatic changes to the CTSP curriculum this past year, updating the Study Guide to provide a more comprehensive discussion of OJT training and adult learning concepts, refining the content and delivery of the certification workshop to address the gaps in understanding uncovered from previous workshops, and starting an online community, known simply as the CTSP Forum, to encourage networking.

The program and, more importantly, the CTSPs and CTSP candidates have served as an incredible resource to TCIA. Our CTSPs talked to us about their challenges and successes, and this knowledge helped inform our speaker and topic selection for the TCI EXPO Safety Track, the most heavily attended and highest-rated track in the overall EXPO seminar programming. Several of our speakers were in fact CTSPs themselves.

Of course, the bottom line for a safety professional credentialing program is this: Is CTSP making a difference in worker safety and accident reduction. It is our strong hunch that CTSP is starting to make a positive impact, and in the coming months we look forward to sharing the success stories of CTSPs with you.

Right now is the time to get the “right people” from your organization involved in the CTSP program, so that they are prepared to take advantage of one of the 2008 workshops.

We Regret to Report...

Jane Lucille Smith


Born in Owosso, Mich., September 13, 1916, she was 1956 graduate of the Michigan State University Landscape Architecture program and was the first woman registered landscape architect in Michigan. Jane was active as a member and in leadership roles in most of the state and national green industry organizations of her day, a pioneering woman in a then-male dominated industry. She was a member of the Tri-County Regional Planning Commission, Accident Fund Board of Directors and Zonta International. A memorial service was held January 19. In lieu of flowers, donations to Hospice House of Mid-Michigan would be appreciated.

Jane was preceded in death by Ted (Edwin E.) and her second husband Norman Ferrill, as well as her son Thomas. She is survived by her daughter Lois (husband, Gerald Gable) of North Carolina, son Chris (wife, Michelle Marquardt), daughter-in-law Patricia Smith-Kikendall, step-son Barry Ferrill (wife, Peggy), step-daughter Karen Ferrill and many grandchildren and great grandchildren.

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Member Benefits: American Arborist Supplies will contribute an amount equal to 5 percent of total products/services sold to TCIA members. Of that, 2.5 percent will be applied toward the next year’s TCIA renewal dues of those members using the services and 2.5 percent will be applied toward development of safety and educational programs for the tree care industry.

Example: If your company purchases $2,000 in product online, American Arborist Supplies will send TCIA a credit of $50 to be deposited into your membership account. Credits accumulate throughout the 12 months of membership and when you receive your annual renewal statement, the total credits will be subtracted from your membership dues. Thanks to the support of American Arborist Supplies, your company can reduce its annual dues and help offset the costs involved with keeping the industry safe.

Requirements: In order to receive a dues credit, you must let American Arborist Supplies know you are a member of TCIA and that you want to take advantage of the Affinity Program to reduce your dues.

To learn more about how your company can benefit from this and other TCIA Affinity Programs, please call 1-800-733-2622.

TCIA On the Road

David Lee, TCIA membership director, with Diane Steiner, office manager at Cassity Tree Service in Sturtevant, Wisc. Cassity had just gone through the preparation for the Accreditation audit at the time of David’s visit and Diane was happy with their progress. Cassity has since been accredited.

For information on the CTSP program, visit www.tcia.org or call 1-800-733-2622.
Helping to build a stronger marketplace can have significant benefits for your company. To learn about the many branding and marketing opportunities available, contact Deborah Johnson, Director of Development; johnson@tcia.org or call 1-800-733-2622.
Injured tree worker wins $30,000 compensation claim

Edgar Velásquez, an illegal Mexican immigrant who accidentally slashed his face with a chain saw in 2006, won a $30,000 settlement in January in a groundbreaking case against the owner of a Warwick, Rhode Island, tree service company.

Velásquez was working for William J. Gorman Jr., owner of Billy G’s Tree Care, who hired the 22-year-old and then turned his back after Velásquez sustained severe injury. Velásquez alleged that Gorman tipped off immigration authorities, who arrested and deported him before he could pursue his rightful claim under state law.

Last fall, one year after his deportation, the U.S. Department of Homeland Security granted Velásquez a humanitarian visa that allowed him back into the country to face Gorman in court.

Chief Workers’ Compensation Judge George E. Healey Jr. said the settlement should put employers on notice, according to the Providence Journal.

“I think that it’s important that employers realize they cannot employ undocumented workers without consequence,” Healey said.

“My concern in this whole process is that unscrupulous employers will assume that they don’t have to provide a safe workplace and don’t have to be answerable for injuries which occur in the workplace,” he said. “And the resolution of a case like this demonstrates otherwise.”

Velásquez was not in court to hear the news. He returned to Mexico last month, after a three-month stay on his humanitarian visa.

The agreement requires Gorman to pay Velásquez $300 a month, for 10 months a year, for 10 years or until he pays all $30,000. The two-month exclusion reflects the weather-dependent nature of Gorman’s business.

If Gorman fails to pay, the state will step in and fine Gorman $150,000 for not having workers’ compensation at the time Velásquez worked for him. For now, the state has withdrawn its claim - brought separately from Velásquez’s claim - without prejudice.

The accident occurred March 31, 2006, as Velásquez was sawing tree branches. The saw blade struck a chain-link fence, kicked back and sliced through his nose, left eyelid and forehead. A plastic surgeon repaired his face, but Velásquez still apparently has difficulty closing his left eye.

Velásquez testified that Gorman knew Velásquez was an illegal immigrant when he hired him, but then denied even knowing him afterward. He also testified that Gorman was abusive toward him, provided little or no training or protective gear, and did not allow him to leave a job until Gorman declared the work day was over.

On Aug. 2, 2006, the day of a scheduled court hearing, immigration agents arrested Velásquez outside the J. Joseph Garrahy Judicial Complex in Providence. Velásquez said that as immigration agents moved in to arrest him, Gorman stood nearby.

Nevada man is guilty of killing trees

Douglas Hoffman, 60, of Henderson, Nevada, faces up to 35 years in prison for destroying hundreds of trees that blocked his view of the Strip in Las Vegas.

Hoffman allegedly severed some; others he sliced just enough so they would slowly die, according to an article in the Los Angeles Times. In a year’s time, authorities said, he wiped out more than 500 trees near an upscale retirement community just south of Las Vegas.

Hoffman had complained to a homeowners committee that greenery blocked his view of the Strip. In November, a jury convicted him on 10 charges in the destruction of nearly $250,000 worth of mesquite and other trees. He could get as much as 35 years in prison. One lawyer dubbed his type of crime as “arbomicide.”

The retirement community was fairly new when Hoffman and his wife moved in five years ago. Their back deck overlooked the peaks rimming the valley and the Strip. Soon the trees, some of which had grown to eight feet tall, marred the couple’s view. The Hoffmans asked if they could swap them out for shrubs but were told no.

In October 2004, the tops of about 60 trees were lopped off. Over the next year, even more trees - some worth $1,450 apiece - were felled. The developer hired a private security firm. Upset residents posted photos of the carnage online, and the community association offered a $10,000 reward for the tree-slasher’s capture.

On Nov. 26, 2005, just after midnight, a resident was driving to his home when he noticed a freshly cut tree and saw someone disappear into the dark. When Hoffman was chased down and caught, he had a single-blade saw in his coat.

Authorities scoured the area where Hoffman was apprehended and counted dozens of slashed trees.

Charges growing against tree firm

Prosecutors say they’ve identified a dozen victims of a Winter Haven, Florida, tree service that cheated elderly customers out of thousands of dollars and performed work that in many cases did more harm than good.

George Edward Smith, 53, and his wife, Bonita Cathrall, 54, owners of Champions Tree Service, were first arrested in October 2007 and charged with defrauding three customers, according to the Ledger of Lakeland Florida. In December the State Attorney’s Office filed additional charges involving nine more victims, ranging in age from 63 to 91.

Prosecutors say the couple overcharged customers and severely damaged, and sometimes killed, the trees they were supposed to prune. They are accused of treating trees that didn’t need it and performing services they weren’t asked to do, then demanding payment for the services.

Marjorie Coss, an 83-year-old widow, paid the tree service $8,000. According to the State Attorney’s Office, a neighbor knocked on her door Jan. 1 and told Coss a tree in her yard was full of termites. She went outside and talked to George Smith, who was working on the neighbor’s property. Smith told her that her tree needed to be removed because of the termites. He also offered to remove a damaged orange
Coss said Champions Tree Service also came back fully.

The Tree Lady employed the house to examine Champion’s Office, an employee of the Tree Lady Co. stumps from her yard as promised. They never weeded or removed tree full, their work slowed and then stopped. As soon as Coss paid Smith and Cathrall in come back fully.

According to the State Attorney’s Office, an employee of the Tree Lady Co. removed the trees and tree, but also planted roses removed. Prosecutors said Smith removed the shrubs and tree, but also planted roses that the woman didn’t ask for and then told her she owed him a total of $6,500 for the plants to die.

An affidavit said Smith gave Betty Blanton of Winter Haven a quote of $200 to remove an overhanging limb. When she asked how much it would be to do some more tree work, he told her he couldn’t give her a quote until he “got into the trees.” He then performed work in the trees and presented her with a bill for $34,000. She ultimately paid him $15,000. An Arborist reviewed the work performed by Smith and found that all of the trees had been permanently damaged and would never be healthy or stable again, the affidavit said. The arborist concluded that the tree work should have taken 20 to 25 hours to complete and cost $3,700 to $5,000.

In all, Smith and Cathrall have each been charged with 12 counts of grand theft and one count of scheming to defraud over $50,000.

When we purchased our property in 1988 – 20 wooded acres with a creek – we cleared about two acres on the only hill and built our log home. Surrounded as we are by woods consisting of large black walnut, oak, maple, locust and ash, we felt little need to plant trees except for the two ornamentals in our back yard. They provided shade for the house and a haven for the many birds.

The two trees we DID plant – Bradford pear and Canadian red cherry – are sentimental favorites. In 1991 the Bradford was still in popular use; we didn’t realize it would eventually become fragile.

We saw the Canadian cherry at a local nursery and fell in love with the leaves – emerging green in spring and turning red in summer. It also provided flowers and small berry-like fruit. “Our” birds – 40-plus varieties at last count – loved it, too. The multi-trunk tree provided an enormous umbrella and arched gracefully.

Fast forward to the violent ice storm that hit Cincinnati in February 2007! Disaster! The Bradford pear split (as we have learned Bradfords do!) and virtually imploded, peeling down in three sections and leaving a rough 4-foot stump. The cherry seemed to fare much better. Its long graceful branches, weighted with ice, drooped and the tips even lay on the ground – but they didn’t break! Naturally, our hope was that it would gradually raise itself when the sap started running in spring.

By May it became apparent that would not happen. The branches still touched the ground and the added weight of full foliage increased the strain on an already stressed tree. Having lost one valuable tree we were desperate about saving what we could of the other one.

When we called Tim Back, of Back Tree & Landscape, Inc., who we have depended on for 16 years, it was with the hope that part of the tree could somehow survive with the aid of drastic surgery.

Tim rejected the suggestion to remove one of the major trunks, although he said he would have to remove some branches. He had a better idea.

“Darlene, we’ll sink a telephone pole into the ground and cable all three trunks to it,” he said. “The cables will have to be monitored as they will need to be tightened as the tree regains its strength.”

Our reaction was “Can you do that?” We enthusiastically agreed to the project!

So, a couple of weeks later he arrived. He was followed by his crew – one in a Bobcat loader with an auger, one with the crane and a 28-foot electric pole, and the last in the bucket truck. What a parade!

The first day they augered out a 6- to 8-foot-deep hole and set the pole with what looked like a dozen bags of concrete, then lashed it upright. The next day was a joy to watch! (Is there anyone out there who is not fascinated watching real pros do what they do?)

The climber attached ropes/cables, one by one, to the trunks. With the bucket truck, they were able to secure the ropes to the upright pole and slowly raise the trunks. Several weeks later, Tim and the crew returned with bucket truck and cutting equipment and proceeded to trim out the weight.

Wow! The answer to our earlier question was, “Yes, we can do that.”

In recent years, Cincinnati has been subjected to some violent weather: a tornado, a 6-inch October snowfall and the usual flooding. Last year alone we experienced a destructive ice storm in February, and a record-shattering heat wave followed by severe drought. Even though we’ll miss our Bradford pear in fall, with its beautiful red foliage (up until Thanksgiving some years!), we feel that our Canadian cherry will be well prepared to withstand the winter weather.

The trees that fall in our woods become firewood, but a valuable shade tree is almost irreplaceable. Tim Back offered us a creative alternative to using the chain saw and we’re grateful that we followed his advice.

Darlene Nichols lives on the outskirts of Cincinnati. She has a lifelong interest in wildlife and the preservation of natural spaces.

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