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Elections Ahead …
Make Sure You Vote

This year has been such an exciting time for the country and for our industry. Mostly, we serve as consumers of political information, following the great debates underway in Washington, at state capitols and at the local level. In November, we finally have the opportunity to participate, not simply spectate, and we shouldn’t miss the opportunity.

Registering to vote is the first step toward getting off the couch. If you aren’t registered, do it now. And make sure your friends, employees, competitors and vendors are registered, too. Electing those candidates who best reflect your views will insure you have an ear to listen to your concerns. Take time to explain to everyone, especially your employees, the importance of registering. Drive them to the town hall yourself if you have to, but get them registered, educate them on the issues that matter to your business (and their jobs), and encourage them to vote.

There are a lot of single issue voters out there for whom a candidate’s stance on gun control, abortion, or funding for the military override all other concerns. There are also a lot of voters who vote for one party, Democrat or Republican. There are almost as many reasons to vote as there are issues to consider. Here are a few reasons to vote that work for me:

- More money for the programs I support;
- Less money for the programs I don’t support;
- If I don’t vote, I am in effect voting for the other guy;
- I care about who is running my town, my state and my country;
- If I don’t vote, other people are going to make critical decisions for me;
- I need to cancel out my wife’s vote;
- I can’t describe the positive feeling I have when I walk out of the polling place – but I like it.

The Tree Care Industry Association is the only trade association that represents the interests of commercial and utility arboriculture in Washington. TCIA serves as the voice of tree care through the association’s regulatory affairs expertise, lobbyists and the Voice for Trees political action committee. The concerns of tree care companies – large and small – are forcefully argued before federal officials. An active government affairs program helps secures TCIA’s place as a respected partner and source of information for legislators and regulators about industry standards. When a regulator or elected official needs facts about an issue that affects your business, they consult TCIA – your trade association that represents you.

But this “voice” is strengthened exponentially when you, the professional, take an active role in legislative, regulatory and media-related activities at the national, state and local level. OSHA treatment for small businesses, ergonomic regulations, PPE standards, taxes on small businesses and estates, depreciation on equipment, emissions regulations, CDL regulations, crane operator certification, fair labor standards, standards that cover tree trimming near energized lines, immigration policies, health insurance, pesticide, herbicide and fertilizer regulations, and wood waste utilization regulations are all subject to debate and vote. The outcome will be influenced by your vote this November.

Our government may swing between being unresponsive at times all the way over to one that reacts instantly to whatever headline rules the day. Nevertheless, it is our government and it is designed for citizen participation. So participate … your industry and your country need you.

Mark Garvin
Publisher
Armillaria Root Disease

From: Steve Williams Landscape, Berkley, CA
To: Keith Gierlych [kgierlych@growthproducts.com]
Subject: Re: Great Improvement on Japanese Maples

We treated six 30-50 year old Japanese maples that had construction damage and were suffering from Armillaria root disease. The fungus was under the bark, the bark was peeling off, and gooey resins & exudates were seeping out from the trunk – both clear signs of extreme stress. Water movement up and down the tree was completely impaired. The tops of the trees defoliated, causing more stress and making the remaining leaves turn red prematurely.

Starting in 2009, we began treating the trees with Companion Biofungicide and Essential Plus, a bio-stimulant. We lost one tree – the one that had been most badly damaged – but the other five trees experienced a remarkable turn-around. By Spring 2010 all five remaining Japanese maples leafed-out nicely, returned to more normal coloring, and looked much stronger than before. Thanks for your help with this project!

Another photo of stressed foliage prior to treatment.

Color has returned to normal and clients are pleased.

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**Growth Products Disease Program**

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>RATE</th>
<th>APPLICATION</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Plus 1-0-1</td>
<td>1 quart per 100 gal water</td>
<td>Fall - Apply two applications 30 days apart.</td>
<td>Thoroughly “sprunch” planting bed to cover leaves, stems, and roots thereby attacking the fungus pathogens wherever they are present.</td>
</tr>
<tr>
<td>Companion Biological Fungicide</td>
<td>1 quart per 100 gal water</td>
<td>Spring - apply two applications 30 days apart.</td>
<td></td>
</tr>
<tr>
<td>“TKO” Phosphite 0-29-26</td>
<td>1 quart per 100 gal water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydro-Max - An All Natural Wetting Agent</td>
<td>1 quart per 100 gal water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14-7-14 All Purpose Fertilizer</td>
<td>1 quart per 100 gal water</td>
<td>Include 14-7-14 in spray tank mix when trees are no longer under stress.</td>
<td></td>
</tr>
</tbody>
</table>

A liquid phosphorus and potassium solution, TKO is rapidly absorbed by leaves and roots to correct nutritional deficiencies and to enhance plant vigor.

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By Deanna Meinke & Thea LaBere

Profits from Snow & Ice
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Carbon Footprint of Natural vs. Synthetic Organic Fertilizers
By A.D. Ali Ph.D.

Safety is Increased with Proper Chain Saw Operation
By Keith Pancake

Business of Tree Care
By Lee Gilman

TCIA Accreditation
By Janet Aird

Consulting Corner
By David Lusk

Classified Advertising

Safety Forum
By Danny Raines

CTSP Corner
CTSP celebrates fifth year with fifth EXPO workshop.

TCIA Reporter
Safety and training products, news, commentary and benefits of membership with TCIA.

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Beekeeping is a sweet hobby for an arborist.
You’ve been asking for it and we’ve listened. Visit our newly redesigned website to find out how you can take control. Go to www.raycomfg.com.
By Deanna Meinke and Thea LaBere

The “daily grind” has a different meaning for urban tree service workers when it comes to the risk of noise-induced hearing loss. For these workers, the noise levels from the “daily grind” are causing hearing loss by destroying the delicate inner ear structures, crucial for speech perception and music appreciation. In addition, constant ringing or buzzing in the ears (tinnitus) may also develop as a consequence of loud sound exposure. Equipment such as stump grinders, chain saws and wood chippers are permanently damaging ears, especially for those workers not wearing effective hearing protection devices. Typically, noise-induced hearing loss develops slowly, affecting the high frequency sounds first, and workers are not always aware of the subtle changes over time.

This article looks at the findings of a recent study of noise exposure on 20 urban tree service workers representing city crews, university facilities crews and private employers.

How loud is safe?

The risk of noise-induced hearing loss is a product of both the noise level and the amount of time spent exposed to the hazardous sound. Repeated exposure to time-weighted average (TWA) sound levels above 85 decibels (dBA) is considered hazardous to hearing. The National Institute for Occupational Safety and Health (NIOSH) recommends that exposure time is halved for every 3 dB increment above this level (www.cdc.gov/niosh/docs/98-126/). For example, the permissible exposure time at 85 dBA is 8-hours, at 88 dBA it is 4-hours, at 91 dBA it is 2-hours etc.

To make it simpler, noise exposure can also be expressed in noise dose. An 8-hour exposure at 85 dBA is equal to 100 percent dose and a 2-hour exposure at 91 dBA is also 100 percent dose. This conveys what a person is allowed to hear safely in one 8-hour workday. It becomes useful to think in terms of dose when one exceeds these permissible levels. For instance, an 8-hour exposure at that same 91 dBA is a 400 percent dose or equivalent to 4-days work exposure at 85 dBA.

It is worthwhile to note that these dosages assume that there are not any non-occupational (or recreational) noise
exposures in the same day. If there is added noise, the worker’s ears continue to accumulate additional damage from off-the-job noise exposures.

How to protect the ears

If the hazardous sound levels cannot be avoided, then there are strategies that can be used to reduce the risk: turn it down, walk away and/or use hearing protection devices such as earplugs or earmuffs. The only way to “turn down” tree service equipment is to purchase quieter equipment or consult noise control engineers to reduce the sound levels. The mining industry has worked with the equipment manufacturers in recent years to reduce the noise hazard for miners and this same strategy might be useful to the tree service industry. In the meantime, the choices for workers are to increase the distance from the noise source (walk away), which results in lower sound levels to the ear (assuming they are not the equipment operator), or wear earplugs, earmuffs or both when using loud equipment. These recommendations are adapted from the Dangerous Decibels® program, which targets hearing loss and tinnitus prevention for youth (www.dangerousdecibels.org).

The study

Thea LaBere, an audiology graduate student at the University of Northern Colorado (UNC), recently completed sound level measurements and noise exposure surveys on 20 urban tree service workers representing city crews, university facilities crews and private employers. The noise exposure measurements were obtained with a noise dosimeter, a special instrument designed to collect sound levels and integrate time durations during a typical workday. The device is worn on a worker’s belt or pocket with the microphone located on their shoulder. The results can be downloaded to a computer and analyzed at the end of the day. In addition, a sound level meter was used to measure specific noise levels emitted from equipment commonly operated in the urban tree service industry.

The job site locations of the 20 participants included residential and rural neighborhoods, city parks and streets, and university property including mountain woodlands. Job duties varied based on the type of employer and what kind of job they were performing at the time of noise sampling. Some of the participants were in a bucket truck all day using a chain saw to cut branches. Others were climbers and operated the saws while suspended or standing in the trees. A number of participants also operated shears, leaf blowers and mowers to aid in the tree removal and the clean-up process. Grounds crew personnel were responsible for picking up the fallen trees/branches, cutting the brush up with a chain saw, if needed, and feeding the wood-chipper. Several participants operated a stump grinder to grind away old or dead tree stumps. Lastly, one participant was a water pump truck operator who watered all of the trees for the city.

Equipment noise levels

The measured sound levels will increase if the workers’ ear is closer to the noise source, for instance if you are cutting branches in a tree vs. on the ground, the chain saw may be positioned closer to the operator’s ear. If you do not have a way to measure the sound levels, a good rule-of-thumb to apply is: In the presence of noise, if you have to raise your voice to communicate with someone at an arm’s length away, then the noise level is probably above 85 dBA.

Daily noise exposures

In the UNC research study, the average noise dose for the 20 workers wearing the noise dosimeter was 752 percent (92.3 dBA TWA) with 95 percent (19) of the participants exceeding the exposure limit of 85 dBA TWA. Only one city worker did not exceed the recommended limit and that
was the water truck operator at 42 percent dose. The highest dose (2,073 percent) is equivalent to working 8 hours at 98.1 dBA TWA. Or putting these results in terms of dose, the average worker is receiving 7.5 times the allowable noise each day and some workers received 10-21 times the recommended exposure in one work day. At these exposure levels, a worker may receive a year’s worth of noise in 3-6 months time. These results emphasize that the majority of tree service personnel are at risk of noise-induced hearing loss, even if working seasonally or part-time.

Use of hearing protection

Fortunately, 80 percent of the workers in the UNC study reported using hearing protection at work at least some of the time. Only one worker used dual ear protection (earplugs and earmuffs combined), especially when operating the chipper. NIOSH recommends that dual hearing protection be utilized for any sound exposures above 100 dBA. For many workers, they “occasionally” used hearing protection for the “loudest” equipment such as chain saws, chippers and grinders.

Ideally, the decision to use hearing protection should not be decided on the basis of relative loudness judgments, but rather on the physical sound levels produced by the equipment. It is best to wear hearing protection devices for any exposure above 85 dBA, which in the case of urban tree service personnel applies to most of the equipment. Specialized hearing protection is available that can afford speech communication with co-workers/clients and monitoring of environmental sounds.

It takes time to acclimate to wearing hearing protection devices full-time, just like breaking in a new pair of shoes; you might not wear them all day or walk miles the first try, but each day you can wear them longer and become more comfortable wearing them. In fact, for some workers, once they begin using earplugs/earmuffs consistently, they find the noise levels extremely uncomfortable without hearing protection devices. Your ears do not “toughen up” to the noise, instead you experience a temporary hearing loss just after the high noise exposure and hence the equipment “sounds quieter.” Eventually, these short-term temporary losses become permanent.

The hearing protector must adequately seal out the noise and, for new hearing protection devices, fit-test equipment is now available to assess the amount of attenuation (or protection) that a given earplug provides to each ear. This will assure that the device is being worn properly and provides the needed amount of protection. The noise reduction rating (NRR) label on the packaging is only reflective of laboratory testing. Depending on the type of hearing protector, the actual “field benefit” is somewhere between 30-70 percent of the NRR on the package.
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The EPA is currently considering revising the hearing protection devices package labeling to more accurately reflect the amount of protection the average wearer would receive in everyday situations (see www.nrrupdate.com/sites/nrr_update/ for details).

### Recreational noise exposure
No one leaves one set of ears at work and puts on another set for listening away from work. The same ears that were noise exposed all day on the job may continue to be exposed to hazardous sound levels away from work. This increases the risk of noise-induced hearing loss and adds to the overall noise dose received in a lifetime.

Hearing protection, again, is not routinely used, and this is especially of concern with regard to hunting and firearm use. The sound levels from firearms routinely exceed 150 dBA peak levels and may cause instantaneous hearing loss for the shooter and/or nearby bystander.

### Prevention programs needed
Only 15 percent of workers in the UNC study were provided a hearing conservation program by their employers. OSHA requires a program for noise-exposed workers be implemented for any worker with an exposure of 85 dBA TWA or above. (www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=9735).

A comprehensive hearing loss prevention program (HLPP) is comprised of noise measurements, noise control, provision of hearing protection devices, baseline and annual hearing testing, worker education and motivation, and evaluation of program effectiveness. The OSHA regulations were written in 1983 and are outdated in many respects; most occupational audiologists and physicians will recommend that employers follow the NIOSH guidelines published in 1998 (www.cdc.gov/niosh/docs/98-126/chap1.html). Hearing testing is a critical program component to assure that hearing levels are being maintained and hearing protective devices are working properly.

Some industries, such as construction, struggle with the logistics of delivering effective hearing loss prevention programs. Many of these same challenges
experienced by the construction trades are relevant to the urban tree service industry – seasonal workers, variable work shifts, mobile workers, changing work environments, variable noise exposures, unsupervised personnel, self-employment and general unawareness of the risk and the need for protective equipment. Perhaps these same issues are the reason for the lack of programs in the tree care industry?

Resources for employers

Efforts to prevent noise-induced hearing loss require the expertise of a variety of disciplines: audiologists, physicians, nursing, industrial hygienists, safety engineers, equipment manufacturers and hearing protector manufacturers. A number of organizational resources are available to employers and are summarized in the table above at right.

Many hearing protector manufacturers have excellent resources and training materials on the topic such as E-A-R Hearing Conservation and Howard Leight. One manufacturer markets a low-cost consumer-oriented noise dosimeter that is useful for quantifying noise exposure and monitoring both on-the-job and off-the-job noise levels (www.etymotic.com/pro/er200.aspx). This may be especially useful for self-employed individuals or those not required to comply with formal health and safety regulations. Local universities may also have expertise in this particular topic area.

Noise-induced hearing loss is the most common cause of both hearing loss and tinnitus, and the majority of these cases can be prevented by becoming aware of the risk and learning to turn it down, walk away or wear hearing protection. Take care of your ears and prevent the daily grind from destroying your hearing.

Deanna Meinke, Ph.D., is an associate professor of audiology at the University of Northern Colorado and past-president of the National Hearing Conservation Association. Thea LaBere is completing her final year as an Au.D. graduate student at the University of Northern Colorado. This article is based on her Au.D. capstone research project.

Resources
OSHA www.osha.gov/SLTC/noisehearingconservation/index.html
NIOSH www.cdc.gov/niosh/topics/noise
NHCA: National Hearing Conservation Association www.hearingconservation.org
Council for Accreditation in Occupational Hearing Conservation www.caohc.org
Howard Leight™ www.hearforever.org
Dangerous Decibels™ www.dangerousdecibels.org
Noisy Planet www.noisyplanet.nidcd.nih.gov/
CDC Healthy Youth! Noise-Induced Hearing Loss www.cdc.gov/HealthyYouth/noise/index.htm

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Tree care contractors all over the northern portions of the country struggle with whether or not to begin (or continue) plowing snow in winter months. This is the time of year when tree care activities slow to the point where cash flow can become a concern. At some point, most contractors are tempted by the talk of highly profitable revenues that can come from pushing snow. Obviously, some portions of the country experience more snow than others – but most contractors do not know that every single one of the 50 states experiences snowfall (of some kind) at least three times per decade. Of course, snowfall in Florida is usually the kind that is gone within minutes, but generally some revenues can be generated in at least 45 states each winter.

Should tree care contractors consider entering this endeavor and then treat it as a profit center? Snow work is not suited to everyone. Generally, it means working in (sometimes) horrendous conditions, providing a service that is underappreciated (unless we don’t show up), to people who have little respect for what it takes to do a good job for them. We are belittled by those who think we plow snow because we cannot find real jobs. Some feel paying for our services is an afterthought that needs to be taken care of sometime before August. The hours can be excruciatingly long (just ask contractors in the mid-Atlantic region of the U.S. about this past winter season).

However, the work can also be rewarding. Often this is for the same reasons as mentioned above. We do work in horrendous conditions. Most individuals would not even consider leaving their driveway, much less drive across town with little sleep to push snow off a parking lot, or shovel it from a sidewalk. Our services are absolutely a necessity in today’s instant gratification society. When you think about it, most other businesses rely on snow contractors in order to conduct THEIR business in the winter months; if the snowplow operator does not show up, people don’t get to work.

In my snow business, I was fortunate to have secured all the snow removal business for the 2002 Winter Olympic Games in Salt Lake City, Utah. As it was explained to us at our first organizational meeting in Salt Lake City – if the janitorial service does not show up today, there is some more dust in the corner. If the waste haulers don’t show up today, we have a few more garbage bags in the corners, and we can hide them from the TV cameras. If the recycle fellows don’t pick up today, we can put that stuff out of sight until tomorrow. However, if the snow guys don’t show up – the Games don’t go on. This is a very powerful statement. This also pertains to office parks, retail stores, parking garages (the upper floors) and the streets. Think about it. As those who clear snow and deice paved surfaces, we are paramount in allowing others to do business on inclement days.

As such, being an integral part of all commerce in areas where it snows, we become THE most important people in the business world, even if it is before any of them get out of bed. Every bit of pavement you see gets serviced in winter – including the vast majority of residences. To that end, the vast majority of the pavement is cleared through outsourcing. And, the money (generally) is very good – if you treat it as a profit center.

Running snow operations like a business is very important to your ultimate success, or failure. Recently, snow contractors have awakened to the fact that customers seek value for the money they spend with us. Contractors are being squeezed to provide the same high quality service at reduced prices to those who purchase our services. The same is happening in all service industries, including tree care, landscape maintenance, parking lot sweeping and snow removal. Unfortunately, some contractors are under the impression that means they need to reduce profits. This is simply not the case.

While we are being forced to re-evaluate how our services are provided, looking for ways to reduce cost, we should not equate the demands being placed upon us as meaning we need to reduce profits. Using more productive methods of relocating snow, appropriately distributing deicing products, and showing customers how to reduce costs by rethinking how the site is actually maintained are solutions that often
escape scrutiny when contractors begin to determine how to thrive – and sometimes just survive – being in business.

So, what can we expect when adding snow services to our service offering? If run well, we can fully expect snow services to become the highest margin portion of our service offering. Basically, it is “crisis management” and should demand higher margins than those services offered with a more predictable cash flow. Having the correct pricing mix will allow for better cash flow projection as well as more steady cash management. It is all in how this portion of the business is viewed when starting out.

Over the past decade, many who offered snow removal as an add-on service to their core business have found it advantageous to eliminate the core business and focus on snow management. This is due to the potentially higher return on investment, a reduced overhead, and lower actual labor costs to achieve desired revenues. There is also the prospect of a slower summer schedule. Although not a long summer vacation, as the year-round snow contractors will attest to (there is quite a lot of preparation involved in running as a “snow-only” contractor). The margins are higher than the core business – and often much, much higher. The actual “fire drill” mentality associated with snow work is squeezed into a much shorter timeframe. And, the rewards can be much greater than running a year-round business, if managed properly.

As with all things in life – I find one overriding factor falls into place with the snow business: if you think you can, or you think you can’t – you’re right.

John Allin is a snow and ice industry consultant with more than 30 years experience, and author of Managing Snow & Ice. He will be speaking on this same subject, “Profits from Snow and Ice,” at TCI EXPO 2010 in Pittsburgh this November. Register for TCI EXPO online at www.tcia.org.

The vast majority of the pavement is cleared through outsourcing. And, the money (generally) is very good – if you treat it as a profit center. Photo by biggie_robs at flickr.com
Stens driveway markers

Stens’ solid and hollow driveway markers make snow cleanup tasks a breeze. The markers vary from flexible polyurethane 26-inch long x 3/8-inch outside diameter varieties, fiberglass 48-inch x 5/16-inch options, and a fiberglass 36-inch x 1/2-inch option. The color selection includes orange, green, yellow, red-and-white striped and more; all designed for easy visibility. Stens is a manufacturer of lawn and garden equipment that is available through its U.S. and International distribution network.

Circle 92 on RS Card or visit www.tcia.org or call 1-800-733-2622

Youngstown Ropework XT glove

Youngstown Glove Company’s new Ropework XT glove is built specifically for rope work professionals. For the Ropework XT, Youngstown partnered with C.O.R. Ergonomic Solutions to create features such as the tacky Ropegrip™ palm reinforcement, which works to enhance grip while reducing hand fatigue. Ropegrip reinforcement is also used in the saddle between the index and thumb, allowing the worker to grasp tightly and securely, all with the highest level of dexterity possible. The top of hand is lined with Kevlar for ultimate cut-resistance protection. Memory foam padding sewn into the palms dampens shock and gives an additional layer of safety. A heavy-duty grommet allows for easy hang storage from/on a carabiner. A terry cloth brow wipe on the thumb is for dabbing sweat or debris. A supportive cuff with an adjustable Velcro closure keeps hands safe from outside elements. Available in sizes small through XX large.

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Morbark’s redesigned Beever chippers

Morbark, Inc.’s Beever M12R and M15R Brush Chippers have been redesigned to improve efficiency and productivity. Key modifications to the Beever M12R include a reduced overall size, widened infeed, separated fuel and hydraulic tanks and the incorporation of a chambered air impeller. Shortening the machine length by 15 inches makes it easier to park and maneuver. The increased infeed width results in a 25 percent greater infeed perimeter opening. Separate fuel and hydraulic tanks eliminate the chance of cross contamination between fuel and hydraulic oil; and a separate fan chamber increases air flow with less “blow back” at the operator. Beever M15R enhancements include a larger-diameter, four-knife drum with replaceable holders, split fuel and hydraulic reservoirs and a more ergonomically designed infeed. At 30 inches, the drum diameter is 40 percent larger; the four knives allow improved performance in larger wood and better wear life per knife. The knives are now located in replaceable knife holders, eliminating the need to replace the entire drum when one holder in the pocket wears out. Modified positioning of the feed wheel pivot point and lift cylinders decrease dead space and necessary down pressure; and separate fuel and hydraulic tanks reduce the chance of cross contamination.

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Corona QuickSaw handsaws

Corona’s new QuickSaw 7900 fixed-blade and 7800 folding-blade handsaws are designed to reduce fatigue and cutting time. The QuickSaw’s highly durable blade, with a patent-pending tooth pattern design and impulse-hardened teeth, keeps the cut channel sawdust-free during cuts, reducing the time and energy needed by up to 20 percent over comparable saws. The blades are made of the same SK4 high-carbon steel used in advanced knives and precision cutting tools, and are hard-chrome plated to increase durability. Combined with its taper-ground design to reduce friction between the blade and material being cut, the hook on the blade’s tip helps keep it in the cutting channel, minimizing time lost reinserting. The ergonomic and lightly textured elastomer grip helps reduce hand fatigue and provides longer cutting time. Its lightweight construction makes the QuickSaw 7900 – with a full metal tang designed to increase strength and stability – convenient and less cumbersome than totting power saws on the job site. The QuickSaw™ 7800 can be folded and kept close at hand and always accessible. And, through October 31, 2010, Corona is providing a free replacement blade with the purchase of a new QuickSaw.

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For more information on products featured here, circle the number on the Reader Service Card, call 1-800-733-2622, or visit www.tcia.org/Publications.

Send Cutting Edge Product information to: editor@tcia.org
DuraTech TC-12 Tree Chipper

DuraTech’s TC-12 tree chipper features a 122 hp (91 kW) CAT C4.4 diesel engine and PT-Tech clutch, and can chip limbs and logs up to 12 inches in diameter. The TC-12 features a spring-loaded feed wheel with adjustable down pressure, an optional height sensor that automatically adjusts the feed roller to material size and an optional hydraulic gathering winch. The hydraulic two-drum system feeds the heavy duty chipper disc. This chipper discharges debris through a chute that rotates 360 degrees and has a manual chip deflector. The TC-12 features innovative hopper safety light bars with easy and instant shut down of the feed wheels. There are two E-stop switches, a disc-hood-closed proximity switch and a breakaway brake switch to ensure the safety of the operator. The TC-12 is available with a pintle or ball hitch and measures 79 inches wide x 208 inches long.

Pro-Tech Switchblade containment plows

Pro-Tech’s new Switchblade containment plows have the ability to switch between a rubber edge and steel trip edge to handle changing weather and jobsite conditions without changing plows. The steel edge features patented IST technology, including a steel edge mounted on a specially blended memory urethane. When an obstruction is hit, the edge flexes and snaps back to its original angle in a smooth, non-shocking trip action. Compared with trip-edge systems that use springs or hinges, IST reduces maintenance as well as the risk of breaking. A cutting edge that now spans the entire width of the unit eliminates snow trails at its sides. Redesigned wear shoes cut through hard snowpack, keeping the edge in contact with the surface. When dealing with wet, heavy snow or sensitive surfaces, the Switchblade can be easily flipped to push with a rubber edge, which acts as a squeegee to produce a clean pass. Twelve Switchblade models include the 10- to 18-foot loader models that can push 12 to 23 cubic yards of snow in one pass, respectively; the 10- to 14-foot backhoe models push 9 to 13 cubic yards, and the 6- to 12-foot skid steer models can handle 5 to 11 cubic yards.

Imitate this... if you can!

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Maximum Wire-Core Flip-Line Performance

Eye terminations minimize in-use wire rope axial fatigue. Cover has proven to give the highest wear resistance. The leading brand for consistent quality and long life. Covers generate high and consistent hand grip.

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Swingle acquires Tropic Green Lawn & Tree

Swingle Lawn, Tree & Landscape Care has acquired Tropic Green Lawn & Tree Care customers.

Bob and Robert Siebers, former owners of Tropic Green, said “We worked very hard on our search for a Colorado-based company with exceptional customer service and the expertise you have come to expect to take over our valued customers’ care.”

Since 2005, Swingle, a TCIA member company, has acquired 10 other landscape care and holiday décor companies. These acquisitions along with their newest acquisition of Tropic Green will all be supported by Swingle’s branches located in Denver and Fort Collins.

“We look forward to servicing even more Colorado communities as we grow and develop the Swingle brand in these new market segments along Colorado’s Front Range communities,” said Thomas R. Tolkacz, CEO of Swingle.

Arborwell makes Inc. 5000 list fourth year running

Arborwell Professional Tree Management, of Hayward, California, has earned the position of 3,934 on the 2010 Inc. 5000, Inc.’s annual ranking of the fastest-growing private companies in America. This is the fourth year in a row Arborwell has been an Inc. 5000 honoree. The Inc. 5000 is ranked according to percentage revenue growth from 2006 through 2009.

Since the company’s start in 2001, TCIA member Arborwell has grown at a staggering rate. Between the years 2005 and 2008, Arborwell grew 78.9 percent and almost doubled in annual revenue. A combination of aggressive marketing along with up-selling existing customers has expanded the company’s territory across Northern and Southern California. In 2009, Arborwell also added a regional office in Orange County, giving it six locations statewide.

“I am very excited about what we have accomplished at Arborwell over the past 10 years,” said Peter Sortwell, president and CEO. “Our growth numbers for this industry are unparalleled. I cannot wait to see what the future holds for our company.”

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Green meets Steel

If your TCI EXPO 2010 brochure is not attached, please call 1-800-733-2622 or go online to tcia.org to see the schedule and to register.

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November 11-13, 2010
Pre-Conference Workshops, November 9 & 10

Register early and save up to 40% details inside

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Presented by the Tree Care Industry Association

1-800-733-2622 www.tcia.org
### Upcoming TCIA webinars

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<td>Nov. 18</td>
<td>Brian Kraff, Market Hardware 7 Ways Your Web Site Could be Losing Sales &amp; What to do about it</td>
<td>Contact: (215) 247-577x144; <a href="http://www.morrisarboretum.org">www.morrisarboretum.org</a></td>
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<td>Dec. 2</td>
<td>Nick Bomber, CTSP, SaveARee How to Hold an Effective Safety Meeting</td>
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<td>Steve Kenyan Effects of Weather on Equipment, Gear &amp; Crew</td>
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### Events & Seminars

**October 3-5, 2010**

**Mid-Atlantic Chapter ISA Annual Conference**

Morgantown, WV

Contact: mac-isa.org

**October 5-7, 2010**

**9th Canadian Urban Forest Conference (CUFC9) “Water, Trees and Communities”**

Truro, Nova Scotia, Canada

Contact: Andrew; cufc9info@truro.ca; www.cufc9.ca

**October 6, 2010**

**Suburban Subsoiling workshop**

Adkins Arboretum, Ridgely, MD

Contact: (410) 634-2847

**October 7-8, 2010**

**Tree Risk Assessment in Urban-Urban/Rural Interface**

Lansing, MI

Contact: ASM/Mich. Chapter ISA asm@acd.net; www.asm-isa.org; (517) 337-4999

**October 8, 2010**

**Identifying and Controlling Invasive Plants**

Morris Arboretum, Philadelphia, PA

Contact: (215) 247-577x144; www.morrisarboretum.org

**October 12-13, 2010**

**Tree Risk Assessment Course & Exam: TRACE Training**

Morris Arboretum, Philadelphia, PA

Contact: (215) 247-577x144; www.morrisarboretum.org

**October 13, 2010**

**Rebuilding the Urban Forest**

Morris Arboretum, Philadelphia, PA

Contact: (215) 247-577x144; www.morrisarboretum.org

**October 15, 2010**

**Advanced Plant Health Care**

Morris Arboretum, Philadelphia, PA

Contact: (215) 247-577x144; www.morrisarboretum.org

**October 19, 2010**

**Pruning Deciduous Trees**

Morris Arboretum, Philadelphia, PA

Contact: (215) 247-577x144; www.morrisarboretum.org

**October 20, 2010**

**Identification & Use of Shrubs in the Landscape**

Morris Arboretum, Philadelphia, PA

Contact: (215) 247-577x144; www.morrisarboretum.org

**October 21-22, 2010**

**Desert Green XIV conference**

Sam’s Town Hotel and Gambling Hall, Las Vegas, NV

Contact: Helen Stone (702) 454-3057; helen@swtreesandturf.com; www.desertgreen.org

**October 22-23, 2010**

**NJ Shade Tree Federation 85th Annual Meeting**

Crowne Plaza, Cherry Hill, NJ

Contact: Donna Massa (732) 246-3210; njshadetreefederation@att.net; www.njstf.org

**October 24-27, 2010**

**New England Chapter ISA Annual Meeting**

Plymouth, MA

Contact: newenglandisa.org

**October 26, 2010**

**Managing Shade Trees with Soil Biology**

Morris Arboretum, Philadelphia, PA

Contact: (215) 247-577x144; www.morrisarboretum.org

**October 29, 2010**

**Pruning Shade Trees in the Landscape**

Morris Arboretum, Philadelphia, PA

Contact: (215) 247-577x144; www.morrisarboretum.org

**October 30, 2010**

**12th Annual Tennessee Tree Climbing Championship**

East Lake Park, Chattanooga, TN

www.urbanforestryconference.org; (615) 352-8985

**November 5, 2010**

**Single Rope Techniques in Arboriculture**

Morris Arboretum, Philadelphia, PA

Contact: (215) 247-577x144; www.morrisarboretum.org

**November 9-10, 2010**

**Certified Treecare Safety Professional (CTSP) Workshop**

TCIA, in conjunction with TCI EXPO

Pittsburgh, PA

Contact: 1-800-733-2622; csp@tcia.org; www.tcia.org

**November 11-13, 2010**

**TCI EXPO 2010 Conference & Trade Show**

Pittsburgh, PA

Contact: 1-800-733-2622; cyr@tcia.org; www.tcia.org

Register online today!

**December 6-7, 2010**

**Certified Arborist Seminar and Exam**

Fort Harrison NR Education Ctr., Indianapolis, IN

Contact: Lindsey (765) 494-3625; lapurcel@purdue.edu

**January 5-7, 2011**

**Northern Green Expo**

Minneapolis Convention Center, Minneapolis, MN

Contact: www.NorthernGreenExpo.org; 1-888-886-6652

**January 9-10, 2011**

**National Green Centre/Former WESTERN annual show**

St. Louis, MO

Contact: www.wnla.org; 1-888-233-1876

**January 18-19, 2011**

**Certified Treecare Safety Professional (CTSP) Workshop**

Rainbow Treecare Sci. Adv., St Louis Park, MN

Contact: 1-800-733-2622; csp@tcia.org; www.tcia.org

**January 18-20, 2011**

**Indiana Arborist Association Annual Conference**

Marriott Inn, Indianapolis, IN

Contact: Lindsey (765) 494-3625; lapurcel@purdue.edu

**January 26-28, 2011**

**Midwest Chapter ISA (MWISA) annual conference**

LaVista-Omaha Embassy Suites, La Vista, NE

Contact: mnorris@oppd.com; (402) 552-5473; www.mwisa.org

**February 1-2, 2011**

**ASM Winter Arboriculture Conference**

Lansing Center, Lansing, MI

Contact: ASM/Mich. Chapter ISA asm@acd.net; www.asm-isa.org; (517) 337-4999

**February 2-4, 2011**

**New England Grows!**

Boston, MA

Contact: (508) 653-3009; www.NewEnglandGrows.org

**February 6-10, 2011**

**Winter Management Conference 2011**

Grand Cayman

Contact: Deb Cyr cyr@tcia.org; 1-800-733-2622; www.tcia.org

* Indicates that TCIA staff will be in attendance
Not all organic fertilizers are created equal. There is a common perception that if the fertilizer is a natural organic it must be better for the environment and must produce superior results than a synthetic organic product. Some people construe synthetic products as bad for the environment and associate their manufacturing with horrifying images of smokestacks producing massive amounts of pollution. Nothing is farther from the truth.

To clarify, a product is termed organic if it contains a carbon and a hydrogen atom in the molecule. Natural organic fertilizers are derived from animal (e.g., poultry manure, bone meal) or plant (cottonseed meal, kelp extracts) sources. Synthetic organic fertilizers are human-made through chemical processes using basic ingredients.

Natural organic fertilizers involve tremendous amounts of energy inputs that contribute to carbon production. This article will compare the energy inputs and resulting carbon footprint (CF) of three fertilizers. One is a synthetic organic (Nutralene 40-0-0 containing Methylene Urea [MU]); the other two are natural organics (Sustane 4-6-4 and Microstart 7-2-2). All products may be used in tree, shrub or turf fertilization programs. Mention of a specific product in this article is not intended to imply endorsement or condemnation.

Nutralene

This information is based on Nutralene production by Agrium Advanced Technologies. The overall process is as follows:

Natural gas produced in Canada is used to make urea, an organic compound naturally found in urine of mammals, but that can also be synthesized from inorganic components. Methane in the natural gas is reacted with atmospheric nitrogen and this process turns the resulting urea into granules.

Urea is then shipped to Louisiana, Missouri, and processed at that facility. It is melted down and reacted with Urea
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Urea is then shipped to Louisiana, Missouri, and processed at that facility. It is melted down and reacted with Urea...
Formaldehyde Condensate to form the MU.

The product is then shipped to distributor warehouses nationwide.

Energy inputs and other parameters to produce 1 ton of 40-0-0:
- 33,000 cubic feet of natural gas (equivalent to 34 million btu)
- Granular urea is shipped 600 miles from Toronto to Louisiana, Mo.
- 3 million btu needed for the reaction with Formaldehyde Condensate (60 percent formaldehyde concentrate by weight, 25 percent urea by weight)
- Final MU product is shipped an average of 1,000 miles to a distributor’s warehouse

Calculations

At the Canada plant:
- 120.593 lb CO₂ are produced per 1,000 cu ft of natural gas(*)
- 120.593 x 33 = 3,979.6 lb CO₂ / 2.2 lb per kg = 1,808.9 kg CO₂
- 1808.9 kg CO₂ / 3.663(b) = 494 kg C equivalent per ton
- Energy excluded: origin of the natural gas, since one has to “draw the line somewhere.” Otherwise, one can argue how many dinosaurs did it take to produce the natural gas and how much vegetation did they eat, etc…

At the Missouri plant:
- 117.08 lb CO₂ x 3 million btu(*) = 351.2 lb CO₂ / 2.2 lb per kg = 159.7 kg CO₂
- 159.7 kg CO₂ / 3.663 = 44 kg C equivalent per ton
- Energy excluded: production of the Formaldehyde Condensate

Missouri is 600 miles
- Average distance to ship product to distributor warehouse is 1,000 miles
- Total miles = 1,600

Assumptions:
- Product is shipped via trucks using diesel fuel. An International truck model 990i uses 1 gallon of fuel per 5 miles of highway when fully loaded (according to two sources). Each load is composed of 20 tons of product:
  - 1,600 miles / 5 mpg = 320 gallons of diesel fuel used
  - 320 gallons x 22.384 lb CO₂ per gal diesel(*) = 7,162.9 lb CO₂
  - 7,162.9 lb CO₂ / 2.2 lb per kg = 3,255.9 kg CO₂ / 3.663 = 888.8 kg C
  - 888.8 / 20 tons per truck = 44 kg C equivalent per ton

Total Carbon Footprint:
- 494 + 44 + 44 = 582 kg C/ton Nutralene 40-0-0

Sustane 4-6-4

This information is based on Sustane 4-6-4 aerobically composted turkey manure production by Sustane, a division of Natural Fertilizer of America, Inc. The overall process is as follows:

- Raw turkey manure is collected from various turkey houses and shipped to a compost site. At the compost site it is turned over several times over a period of weeks to aerobically compost it and to reduce moisture content. It is then shipped to the processing plant for finishing.
- The product is then shipped to distributor warehouses nationwide as well as internationally.

Energy inputs and other parameters to produce 1 ton of 4-6-4:
- Manure is shipped approx. 15 miles to the compost site
- Composted manure is shipped approx. 15 miles to the processing plant
- 20 Therms (1 Therm = 100,000 btu) of natural gas are needed to produce 1 ton
- 102 kwh of electricity are needed at the processing plant per ton
- 1.2 gal diesel per ton are needed to
handle the manure and compost.

- Final product is shipped an average of 1,000 miles to a distributor’s warehouse.

### Calculations

**At the turkey house:**

- **Assumptions:**
  - There are 5.2 flocks of hens (poults)/year at 16,250 birds/flock.
  - It takes 44 hens to provide 1 ton of raw manure.
  - It takes 1.54 tons of raw manure (68 hens) to produce 1 ton of 7-2-2.

**Energy inputs:**

- Electricity needed/house/year costs $1,200; at $0.115/kwh, results in a total kwh usage of 10,435 kwh/house; divided by 5 results in 2,087 kwh/flock; divided by 16,250 results in 0.13 kwh/bird; multiplied by 68 results in 8.8 kwh/ton.
- 8.8 x 0.43 = 3.8 kg CO2 per ton / 3.663 = 1 kg C equivalent per ton.
- **Fuel needed/house/year costs $8,750; at $3.50/gal diesel, results in 2,500 gal/house; divided by 16,250 results in 0.16 gal/bird; multiplied by 68 results in 11.6 gal/ton.
- 1.64 lb CO2 (remember there are 120.593 lb CO2 per 1,000 cu ft of natural gas) / 2.2 lb per kg = 0.8 kg CO2 per ton / 3.663 = 0.2 kg C equivalent per ton.

**Energy costs excluded:**

- Labor to maintain the poultry house
- Feed: at 45 lbs/hen x 68 = 3,060 lbs of feed.

**At the processing plant:**

- 20 Therms are the equivalent of 2,000,000 BTUs; which is the equivalent of 586 kWh (1 kwh = 3,412 btu).
- 586 x 0.43 = 252 kg CO2 per ton / 3.663 = 69 kg C equivalent/ton.
- 102 kWh electricity x 0.43 = 44 kg CO2 per ton / 3.663 = 12 kg C equivalent per ton.
- 1.2 gal diesel x 22.384 lb CO2 per gal / 2.2 lb per kg = 26.9 lb / 2.2 lb per kg = 12 kg CO2 per ton / 3.663 = 3.3 kg C equivalent per ton.

**Total Carbon Footprint:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>CO2 Emissions</th>
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<tr>
<td>Microstart 7-2-2</td>
<td>1 + 0.2 + 69 + 12 + 3.3 + 29 = 115 kg</td>
<td>115 kg</td>
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</table>

**Microstart 7-2-2**

This information is based on Microstart 7-2-2 composted chicken manure production by Perdue AgriRecycle, LLC. The overall process is as follows:

- Raw chicken manure is collected from various poultry houses in Delaware. It is then shipped to the local plant where it is processed. The product is then shipped to distributor warehouses nationwide.

**Energy inputs and other parameters to produce 1 ton of 7-2-2:**

- 1,138 chickens are needed to provide sufficient manure to produce 1 ton of finished product.
- Product is shipped approx. 40 miles to the plant.
- 200 kWh needed to process the product.
- Final product is shipped an average of 1,500 miles to a distributor’s warehouse.

**Calculations:**

**At the poultry house:**

- **Assumptions:**
  - There are 5-6 flocks of broilers/year at 20,000 chickens/flock. One poultry house can accommodate 100,000 chickens/year.
  - It takes 1,000 chickens to provide 1 ton of raw manure.
  - It takes 2,275 lb of raw manure to produce 1 ton of 7-2-2.

**Energy inputs:**

- Electricity needed/house/year costs $6,500; at $0.115/kwh, results in a total kwh usage of 56,522 kwh/house; divided by 100,000 results in 0.6 kwh/bird; multiplied by 1,138 results in 683 kwh/ton.
- 683 x 0.43 = 294 kg CO2 per ton / 3.663 = 80 kg C equivalent per ton.
- Fuel needed/house/year costs $8,750; at $3.50/gal diesel, results in 2,500 gal/house; divided by 100,000 results in 0.026 gal/bird; multiplied by 1,138 results in 277 gal/ton.
- 277 x 3.5 = 980 lb CO2 per ton / 2.2 lb per kg = 445 kg CO2 per ton / 3.663 = 120 kg C equivalent per ton.

**Energy costs excluded:**

- Labor to maintain the poultry house
- Feed: at 45 lbs/hen x 68 = 3,060 lbs of feed.

**At the processing plant:**

- 20 Therms are the equivalent of 2,000,000 BTUs; which is the equivalent of 586 kWh (1 kwh = 3,412 btu).
- 586 x 0.43 = 252 kg CO2 per ton / 3.663 = 69 kg C equivalent/ton.
- 102 kWh electricity x 0.43 = 44 kg CO2 per ton / 3.663 = 12 kg C equivalent per ton.
- 1.2 gal diesel x 22.384 lb CO2 per gal / 2.2 lb per kg = 26.9 lb / 2.2 lb per kg = 12 kg CO2 per ton / 3.663 = 3.3 kg C equivalent per ton.

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**Natural organic fertilizers are derived from animal or plant sources. Synthetic organic fertilizers are human-made through chemical processes using basic ingredients.**

**Assumptions:**

- Product is shipped via trucks using diesel fuel. An International truck model 9900i uses 1 gallon of fuel per 5 miles of highway when fully loaded. Each load is composed of 20 tons of product.
- 1,030 miles / 5 mpg = 206 gallons of diesel fuel used.
- 206 gallons x 22.384 lb CO2 per gal = 4,611 lb CO2 / 2.2 lb per kg = 2,096 kg CO2 / 3.663 = 572 kg C.
- 572 / 20 tons per truck = 29 kg C equivalent per ton.

**Total Carbon Footprint:**

1 + 0.2 + 69 + 12 + 3.3 + 29 = 115 kg C/ton Sustainable 4-6-4
0.025 gal/bird; multiplied by 1,138 results in 28.5 gal diesel/ton

- 28.5 gal x 22.384 lb CO₂/gal(\textit{a}) = 638 lb CO₂ / 2.2 lb per kg = 290 kg CO₂ per ton / 3.663 = 79 kg C equivalent per ton
- Processing at the plant requires 200 kwh per ton x 0.43 = 86 kg CO₂/ton / 3.663(b) = 23 kg C equivalent per ton

**Energy costs excluded:**
- Labor to maintain the poultry house
- Feed: at 9 lbs/bird x 1,138 = 10,242 lbs of feed

**Shipping:**
- Distance between poultry house and processing plant averages 40 miles
- Average distance to ship product to distributor warehouse is 1,500 miles
- Total miles = 1,540

**Assumptions:**
- Product is shipped via trucks using diesel fuel. An International truck model 9900i uses 1 gallon of fuel per 5 miles of highway when fully loaded. Each load is composed of 20 tons of product.
- 1,540 miles/5 mpg = 308 gallons of diesel fuel used
- 1308 gallons x 22.384 lb CO₂ per gal = 6,894 lb CO₂
- 16,894 lb CO₂ / 2.2 lb per kg = 3,134 kg CO₂ / 3.663 = 856 kg C
- 1856 / 20 tons per truck = 43 kg C equivalent per ton

**Total Carbon Footprint:**
80 + 79 + 23 + 43 = 225 kg C/ton

**Microstart 7-2-2**

**Summary**
At first glance, if one compares CF per ton of product, it appears that the synthetic organic has a heavier CF than either of the natural products. However, a more equitable comparison is to consider the actual amount needed to deliver 1 pound of nitrogen per 1,000 sq ft. The table above illustrates that, practically speaking, the synthetic product MU has a much lighter CF than either of the natural products.

The above calculations contain several assumptions that, if modified, may provide

<table>
<thead>
<tr>
<th>Product</th>
<th>Kg C Equivalent/Ton</th>
<th>Rate to deliver 1 lb ai N/1,000 sq ft</th>
<th>Kg C Equivalent/1,000 sq ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene Urea (40-0-0)</td>
<td>582</td>
<td>2.5 lb</td>
<td>0.7</td>
</tr>
<tr>
<td>Chicken Manure (7-2-2)</td>
<td>225</td>
<td>15 lb</td>
<td>1.69</td>
</tr>
<tr>
<td>Composted turkey manure (4-6-4)</td>
<td>115</td>
<td>25 lb</td>
<td>1.44</td>
</tr>
</tbody>
</table>

**Fig. 1**
When considering the entire Greenhouse Effect, one must include various gases in addition to carbon dioxide, such as methane (CH4), nitrogen oxides (NOx), sulfur oxides (SOx) and Peroxyacetyl Nitrates (PANs), among others.

Organic fertilizers, in general, are preferred over mineral-based ones. The slow release of nitrogen from organic sources provides a plant-safe fertilizer with low burn potential. However, based on the above calculations and assumptions, it is obvious that simply because the product is termed “natural” does not make it more environmentally friendly than a product termed “synthetic.” When it comes to organic fertilizers, know the facts.

Footnotes
(a) www.eia.doe.gov/oiaf/1605/factors.html
(b) From www.nef.org.uk/energy-advice/co2calculator.htm
(c) www2.ncsu.edu/unity/lockers/users/v/vukina/extension/Budgets/turhen97.xls
(d) From www.extension.umn.edu/distribution/livestocksystems/D13605.htm
(e) This is the average distance for domestic shipping. Much of this product is shipped internationally. The cargo ships arriving from Asia with goods to major retail stores need a backhaul commodity to carry back. This results in very low shipping costs internationally. For example, the cost of shipping a truckload of product 1,000 miles in the U.S. is about the same as shipping it by boat to Europe.
(f) From pubs.caes.uga.edu/caespubs/pubcd/B1240-3/B1240-3.htm

Additional Resources:
www.bestfootforward.com
www.davidsuzuki.org/issues/climate-change/
www.nef.org.uk/greencompany/co2calculator.htm
www.ghgprotocol.org/calculation-tools
www.carbonfootprint.com/carbonfootprint.html
www.eia.doe.gov/oiaf/1605/coefficients.html

A.D. Ali, Ph.D. is a technical advisor with the Davey Institute, a division of the Davey Tree Expert Company.

Simply because the product is termed “natural” does not make it more environmentally friendly than a product termed “synthetic.”
Great September issue!

I wanted to pass on some feedback on the September 2010 issue of TCI Magazine. OUTSTANDING! The “Look Before You Leap” article was short, to the point, and very clear. This would be a great topic for the writer(s) to talk about at EXPO; of course this is coming from our position in litigious California, but the problem exists throughout our industry.

The article about chippers and portable diesel engines – PERFECT. I would love to see this spread awareness throughout the country. This type of legislation is killing business in California and punishing legitimate business throughout the state with increasing “taxes” for operating equipment. I could go on … Peter Gerstenberger’s section on training verification, Kezar’s article on aerial rescue. Everything seemed to hit a home run with me and our company.

Thank you for continuing to put out a great product.

Joshua McClernen, MS, CSP, CTSP
TCIA member
S.P. McClernen Co., Inc.
Portola Valley, California

Wash your gasoline

Thank you for the great article on alcohol and gasoline (“Is Alcohol and Gasoline a Bad Mix?” TCI, July 2010). It explains much.

I just ran an experiment. The only gasoline I have available at the moment is pre-mixed 40-to-1 with oil, but I used it anyway. I measured 4 ounces of the pre-mix and put it into the jar in the attached picture (Photo 1). I then added three drops of food dye to 1 ounce of water and mixed that into the gasoline mixture. The water dissolved the alcohol from the gasoline. I then poured as much of the gasoline as I could off the water/alcohol mix (Photo 2). Using the measures at hand, I could not totally separate the two fluids, but enough to show that the water indeed washed alcohol out of the gasoline/alcohol.

I then poured as much of the gasoline as I could off the water/alcohol mix (Photo 2). Using the measures at hand, I could not totally separate the two fluids, but enough to show that the water indeed washed alcohol out of the gasoline/alcohol.

You might have someone try my experiment with straight gasoline/alcohol (without the oil) and see how the cleaned gasoline works in two-cycle engines.

Save the trees, tone down the rhetoric

I like your magazine. But I was saddened by your editorial in the July 2010 issue (“Minneapolis Surrenders to Ignorant Irrational Ideologues”) – saddened by both the message and the tone.

I hope that there has been a change in the message – that Minneapolis will not, after all, let half a million mature urban trees die.

And I hope that there has been, or soon will be, a change in your tone. There are examples all around us of the increasing polarity and incivility of our society. Please don’t encourage the tree care industry to follow that bandwagon.

Please look at your editorial with a new reader’s view. Do you see all the name-calling, the cynicism, the self-righteousness, the intolerance? Does the writer resemble those whom he denounces?

(Continued on page 45)
For many arborists, the most frequently used piece of equipment is a chain saw, and rightfully so. A properly tuned saw with a chain that has been sharpened correctly can be a very productive tool in the hands of a thoroughly trained arborist. That same saw has the potential to be very unforgiving, and even deadly, when used by personnel who haven’t completed formal training on its safe use.

Chain saws are dangerous and it is a privilege to operate one. This privilege is earned by gaining a thorough understanding of more than just how a saw works mechanically. In addition to knowing the components of the cutting system and the safety features, an operator needs to know about and employ the proper usage of personal protective equipment. Equally important is to understand what it takes to properly tune a saw that starts, idles, runs, cuts and stays sharp throughout the rigors of daily arboricultural operations. Handing a sharp chain saw to an unprepared operator who hasn’t been properly trained and is not versed on the saw’s safe operation could be compared to giving a loaded handgun to a person who is inexperienced in the safe handling and responsible use of a firearm.

Ultimately, it is the employer’s responsibility to provide this training. There are many formal training programs available to supplement in-house safety training programs and tailgate meetings.

Developing a maintenance routine and gaining an understanding of the mechanics and cutting system, coupled with proper technique and safe operation, can pay huge dividends to arborists who use chain saws. This includes saving energy and time, and reduced injuries and broken saws. Volumes of materials are available for motivated individuals for training in the mechanics and safe use of chain saws. The Fundamentals of General Tree Work by Jerry (G.F.) Beranek is an excellent choice for someone interested in the basic principles of cutting systems and cutting techniques. Another very informative source is a pamphlet produced by Oregon Chain/Oregon, Blount, Inc. entitled the “Oregon Maintenance and Safety Manual.” This free publication discusses how a chain saw works and why it fails. It is available at www.oregonchain.com. Most chain saw manufacturers include detailed booklets with their saws, which should be read and understood prior to the operation of that saw.

These booklets contain valuable information on how to adjust the carburetor for proper idling (the chain should not run at low idle) and running speeds (engine acceleration should be smooth). Knowing how to make slight adjustments to correct the idle speed will allow you to run the saw at appropriate speeds, making both starting and cutting easier.

Using the proper oil-to-fuel ratio for two-stroke engines avoids operating the chain saw with fuel too rich or too lean. Also important is the grade octane recommended by the manufacturer. Another engine operation tip often overlooked is the winter operation settings, which help to draw heated air from around the cylinder, thereby preventing carburetor icing. These adjustments are usually pre-filters that are reversible or made out of different fabrics. Having a saw that runs smoothly reduces vibration, improves cutting and extends the life of the saw. Also, as a bonus, the number of times you have to pull the starter cord will be reduced, and, of course, proper usage and maintenance saves money.

Also, found in manufacturers instruction
manuals are recommendations on the chain’s proper setting for pitch, angle and depth gauges. Too often the depth gauge is filed incorrectly, or not filed at all, resulting in poor performance of what is otherwise a properly sharpened chain. Sharpening chains is an art form and requires patience and experience, along with appropriate tools. Using a file that is too large or small, the wrong shape, or dirty and rusted will cause cutters to run rough, cut poorly, and potentially cause the chain to fail.

Setting the proper height of the depth gauge, or raker tooth, is easy to do but often neglected. Filing gauges are available to match the chain pitch and automatically set the height correctly. Having a saw that gets through the cut faster obviously increases performance. From a safety standpoint, having a properly sharpened chain reduces the chance of kickback and affords more precise cuts. It’s a good feeling watching a sharp saw chew through a piece of red oak like a warm knife through soft butter.

Other important parts of the cutting system include the sprocket, the bar, the chain brake and the chain catcher. If the bar is properly dressed and filed the chain travels correctly as it makes a rotation around the cam chain tensioner in the correct motion. Most manufacturers recommend rotating the bar after each sharpening, and performing a visual inspection looking for tempered metals and dents or dings. Bar dressing tools are available that allow you to adjust the bar with a few passes.

Knowing what the proper chain tension is and how to adjust it is critical to proper and safe operation. Chains that are properly tightened cause less wear on the bar, stay sharper for longer periods of time, and reduce the chances of the chain slipping off. In the event of chain slippage, a necessary piece of safety equipment is a functional chain catcher. The chain catcher is a small piece of metal on the base of the saw usually underneath the chain sprocket cover where the chain re-enters the saw. Always perform a visual inspection of the chain catcher during a routine maintenance and after each chain slippage event.

Speaking of the sprocket, how often do you inspect it? Most manufacturers recommend replacing the sprocket after two chains, and rotating two chains with one sprocket. It is important to visually inspect the sprocket for wear and damage during routine maintenance. The sprocket is critical for delivering all the engine’s power to the chain. While performing the visual inspection of the sprocket, it’s a good idea to inspect the studs, clutch, clutch housing, chain brake, and any other components that are under the chain sprocket cover.

The chain brake deserves special attention. The ANSI Z133.1 section 6.3.10 states “the chain brake shall be engaged, or the engine shut off, before setting a chain saw down.” Section 6.3.11 also cautions “when a chain saw is being carried more than two steps, the chain brake shall be engaged or the engine shut off...” and Section 6.3.5 adds “… The chain saw shall be started with the chain brake engaged, on saws so equipped...”

Most chain saws are equipped with an inertia brake, which operates as a reaction to kickback. This is made possible by a small piece of lead embedded inside the chain brake guard/handle. The brake can also be operated manually by pushing the brake guard/handle. It should be visually inspected for cracks, making sure any connectors are tightened, that the handle moves freely, and there is no dirt or debris. The brake mechanism itself should be checked for wear while the clutch cover is removed.

The brake can be checked for proper operation while the engine is at idle speed by engaging the brake and accelerating the engine to full throttle for no more than three seconds. The brake is subject to nor-
mal wear and tear. Braking at high revolutions or while the engine is accelerating to high speeds can lead to excessive wear. It is important to disengage the chain brake before accelerating the engine. To avoid excessive wear, the brake must be engaged prior to starting, and disengaged immediately after the engine starts. It is important to also test the inertia brake reaction. This can be done by dropping the tip of the bar a short distance onto a stump while securely holding the saw by the handle. The sudden stop should engage the inertia brake, and this should become a part of routine inspection.

Most chain saws have ergonomically correct features to combat fatigue and insure safer operation. These features include grips and handles, the trigger safety devices, anti-vibration springs and rubber shock absorbers. It is important during routine maintenance to check that the shock absorbers and springs are in good condition and all parts of the saw are tightened to the manufacturer specifications.

The shocks, springs and other anti-vibration elements can be checked by a visual inspection. Apply light pressure to the handle and engine housing, checking to see if they flex and return to normal position. Doing these simple procedures can reduce vibration of the chain saw that causes operator fatigue, which otherwise could lead to impaired judgment. Excessive vibration can cause nuts to loosen, as well as chain tension screws and engine adjustment screws to back out, creating unsafe situations and causing the saw to run poorly. The trigger safety mechanisms should be tested for proper operation, signs of wear and tear, and damage. Do this routinely prior to each start.

A key factor in safe chain saw operation is appropriate selection based on application. Today’s chain saw market has a saw for any situation. Lightweight top-handled saws with short bars are appropriate for aerial work. Smaller rear-handled saws are good for bucking small wood and limbing in tight situations, taking small trees down, and doing brushwork. Larger more powerful, rear-handled chain saws are available with many bar sizes and are good for take-downs and bucking larger wood. The potential for an accident to occur is greater when using the wrong saw for the job.

Another area where safety and selection has made great gains is in personal protective equipment. There are now a wide variety of chain saw pants, chaps and shirts. ANSI Z133 does not require the use of chaps for aerial work. However, many arborists agree that using chain saw pants for aerial work is comfortable, allows for mobility, and gives protection from an errant chain saw. Huge improvements have also been made in style, form and function for both ear and eye protection. It is much easier now to be comfortable and safe simultaneously than it was in years past.

Appropriate preparation and training, and the development and implementation of a maintenance routine can boost your productivity and reduce the chances of a chain saw injury. Properly working equipment will also perform better and last longer. When all this comes together, the day goes by more easily. Search for resources for choosing the right saw and PPE, resources that explain mechanical safety components and training that focuses on technique. However, above all, develop a safety-focused attitude.
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Man trapped while trimming tree

A South Huntingdon, Pennsylvania, man had to be rescued from a tree August 1, 2010, after his hand became lodged between the tree and a fallen limb. The unidentified man was trimming branches near the top of a tree at his home when one of the limbs fell, trapping his hand between it and a V-shaped portion of the tree. The limb that fell was approximately 6 inches in diameter. Firefighters used aerial ladders on two trucks to reach the man. The victim was taken by ambulance to an area hospital, according to the Pittsburgh Tribune-Review.

Trimmer injured in a fall

A tree trimmer was seriously injured in a fall on the job in Rowlett, Texas, August 2, 2010. The worker reportedly had fallen at least 20 feet. Emergency workers reportedly performed CPR on the victim and moved him to a nearby school parking lot so a helicopter air ambulance could land and retrieve him. The extent of his injuries was unknown, according to FOX 4 News.

Trimmer stung by bee swarm

A man was stung as many as 150 times by Africanized honeybees August 7, 2010, in Safety Harbor, Florida. Ralph St. Peter and co-worker Michael Foster, who swatted the bees off St. Peter with his bare hands and also was stung, were taken to a local hospital. Doctors kept St. Peter overnight before releasing him.

The next day, St. Peter returned to finish the job, but probably wished he hadn’t after a felled tree went the wrong way and took out a power line.

Man dies after fall from tree

A 60-year-old man died August 05, 2010, after he fell from a tree that he was trimming on a property he owned in Lexington Township, Ohio. Donald Papes was trimming a tree with a chain saw around 2 p.m. when he lost his balance and footing and fell out of the tree, sustaining fatal head and chest injuries. He was taken to a local hospital and then transferred to a larger hospital, where he was pronounced dead later that night, according to The Repository.

Trimmer electrocuted

A man was hospitalized in critical condition after he received a severe electrical shock while trimming a tree August 6, 2010, in Chicago, Illinois. The man was believed to be a private tree trimmer.

A woman who saw the whole incident and called for help reported that she “saw fire come out of his head and his feet. Then, he did begin to move, and he was able to climb down himself,” according to a WLS-TV Channel 7 report.

Bucket operator struck by limb

A man was injured August 6, 2010, after he was hurt trimming a tree in Sumter County, Florida. A large limb fell and hit the
man while he was in a bucket.

The bucket was lowered and the man was rescued and flown to Orlando Regional Medical Center, according to a WESH Channel 2 report.

**Worker uses tree to escape fire**

A tree-service worker escaped injury August 6, 2010, in Lacey, New Jersey, when a company truck caught fire while he was in the aerial bucket. Police and the firefighters found the boom truck fully engulfed by flames. The worker was in the bucket when the truck caught fire, but grabbed the tree he was cutting and slid 35 feet to the ground, according to an Asbury Park Press report.

The fire company extinguished the blaze. The worker was not identified and there were no injuries reported. Indications are that leaking hydraulic fluid ignited on the truck’s hot engine.

**Trimmer electrocuted by power line**

Mark E. Thomas, 30, of Jefferson City, Missouri, was electrocuted Aug 9, 2010, while trimming a tree at a residence near Millersburg, Mo. It appears a chain saw Thomas was using while he was standing in an elevated bucket may have cut into a service line.

Thomas was a foreman and had been employed by the same firm for the last seven years. His company was a subcontractor on the tree trimming job to trim limbs away from power lines. Thomas was one of a two-member work crew that was trimming trees when he was electrocuted.

Emergency medical workers were not successful in reviving Thomas, who was pronounced dead at the scene by a doctor from University Hospital in Columbia. Survivors include his wife, Jamie, and five children, according to The Fulton Sun.

**Man dies after knocked from ladder**

James Pfeiffer Jr., 30, was trimming an oak tree in front of his Mountainside, New Jersey, home August 22, 2010, when a branch snapped, swung down and struck the ladder he was standing on. Pfeiffer fell to the ground, landing on his head. Rushed to University Hospital in Newark, he was pronounced dead that night.

Pfeiffer was a decorated Westfield, N.J., firefighter, according to The Star-Ledger.

**Teen electrocuted trimming trees**

A Fairfax, Virginia, teenager died August 24, 2010, while using a power saw to trim trees. The teenager was working about 10 feet from a power line, according to WTOP and Channel 9 TV reports. Current from a 19,000-volt distribution line may have passed through a tree branch to the boy’s body. He was taken to a nearby hospital, where he later died.

Submitted by Preston A. Leyshon at PLANET in Woodbine, Maryland.

**Tree falls on landscaper, killing him**

A tree being removed on an Avon, Ohio, golf course fell on the owner of a landscaping service Aug 24, 2010, killing him. Guy P. Goodman, 42, of LaGrange, Ohio, was killed instantly by blunt force trauma and crush injuries to his head, neck and body.

(Continued on page 65)
New program will make employees safer, companies stronger

By David Rattigan

The Tree Care Industry Association is rolling out a new program designed to keep companies ahead of key changes coming from the Department of Labor’s Occupational Health & Safety Administration (OSHA). While the program will help companies adhere to anticipated mandatory changes, it will also have big benefits on the ground – where employee safety and retention go hand-in-hand.

The Illness & Injury Prevention Program, already nicknamed I2P2, is the most extensive safety program developed for the tree care industry, based on industry standards and regulatory guidance. Following OSHA’s lead (even the name corresponds to OSHA’s regulations), it includes industry-specific policies and procedure, with sections on federal- and state-regulation compliance, and includes checklists, forms and other resources that can be used to implement a better safety program.

“It gives the employer a template and some tools to put a comprehensive illness and injury prevention plan in place,” says Peter Gerstenberger, TCIA’s senior advisor for safety, compliance & standards.

TCIA is releasing the program – a new product derived from TCIA’s well known Model Company Safety Program – this fall, with an introduction scheduled for TCIA EXPO in Pittsburgh in November.

The company guide includes detailed instruction for evaluating your current safety program and implementing changes, a 29-page section on program policy, and forms to help document your company’s safety-related activities. Among 30 forms included in the new I2P2 are: an incident investigation report, witness accident statement, building/facility protection checklist, employee report of safety hazard, new employee safety checklist, brush chipper preventative maintenance checklist, safety committee meeting planner, employee safety improvement action plan, and more.

The program can help the small business owner add content, structure, documentation and, in many cases, formality to their existing safety program, according to Gerstenberger.

“There’s a basic requirement of any employer in any industry that has employees, and that is to uncover all the hazards associated with the work in that industry, and to make the employees aware of how those hazards are going to be avoided, or mitigated,” Gerstenberger says. “Particularly in our industry, which is recognized as a high-hazard industry, that requirement is very important.

“The program is simply a template for the employer to use – and to educate themselves on how to use it – so it’s a self-guided tour to putting together a comprehensive safety program.”

An employer’s goal is to make employees better trained, more fully informed, more aware and more accountable for safety, he notes adding that from a regulatory compliance (OSHA) standpoint, docu-
menting one’s policy, training and program enforcement is absolutely vital.

At the time that TCIA readied this program for publication, OSHA was considering a rule requiring a written safety program for all employers, says Gerstenberger, adding that several state plan OSHA programs already have those requirements. Purchasers of the TCIA program will find more information and even sample “State Plan-compliant” programs on the CD that comes with the program. It, therefore, serves the additional purpose of helping companies achieve compliance with state or federal regulatory (OSHA) requirements.

“Half the states in the United States have their own state plan OSHA, where they run their own program,” explains Gerstenberger. “A handful of those already have mandatory requirements for – they might call it different names, but basically – illness and injury prevention programs. What we did was look specifically at those programs and make sure that everything we were requiring was harmonious with those programs. This program exceeds the requirements of any of those programs.”

The documentation involved with the new program may not relate directly to safety in the field, but it serves a valid and important purpose in worker safety. For one thing, setting up program schedules and documenting meetings keeps a company’s safety plan on track, Gerstenberger notes.

Among other benefits, documentation also limits exposure on several levels, including liability. In the case of an OSHA investigation, documentation can create a valuable paper trail.

“Anybody who’s had an OSHA inspection can certainly attest to the value of having things documented,” Gerstenberger says. “It makes all the difference in the world between a smooth inspection and hasty exit, and deliberated, contracted fighting over citations and often fairly sizable penalties.”

Accreditation and protection

This program is tied to TCIA’s push for Accreditation in that each accredited company gets a copy of the program. Copies of the new program have been sent to newly accredited companies and to companies in the process of becoming accredited. Like accreditation itself, the program will help businesses grow competitively as it protects their workers in the field.

Safety program in order to pick up a new client, or new market.

“It’s also the kind of thing insurance companies look for,” Rouse adds. “Particularly in our industry, with potential for high losses and higher risk, insurance applications usually ask to see that a safety program is set up. Instituting I2P2 would allow a company to check ‘yes’ on most of the insurance applications questions they ask, such as ‘Do you have a safety committee?’; ‘Do you have safety training?’ A company that uses I2P2 will be able to answer yes to all of the questions an insurance company will ask, so that – combined with a decent loss history – can be the difference between being on a state fund and getting private insurance for workers’ comp.

“It can also be used, if a company has losses and an insurance company wants to see some improvement, to demonstrate that a company is recognizing that it’s an issue, instituting changes and making the workplace safer for employees; also training employees, and verifying that employees are safe, because part of the program is enforcing the policy,” says Rouse.

“There are a lot of benefits all the way around, and with our loss control program as well (TCIA endorses the ArborMAX insurance program and also provides the loss control auditing for that), that’s an area

Particularly in the tree care industry, with potential for high losses and higher risk, insurance applications usually ask to see that a safety program is set up, if training is being done.
Randall McDonald, CTSP, is a TCIA Accreditation auditor as well as a loss control specialist for the TCIA Foundation. He says that the benefits of Accreditation are already being demonstrated in states such as California, where many colleges, municipalities and private companies are requiring tree care companies they contract with to be accredited. Accreditation limits the company’s exposure because it encourages a better safety culture, McDonald says, and this I2P2 program, industry-specific and easily customized for each state’s safety rules and issues, furthers that goal.

“When it comes to liability and exposure, one truism is, ‘If you didn’t document it, it didn’t happen,’” McDonald says.

“Safety training and documentation can make or break a business in the long run,” says McDonald, who notes that “This is a very unforgiving industry, even with the best crews. (In the case of an accident), if you didn’t document that you’ve done safety training, you’re at the mercy of a good lawyer.”

Filling out forms may not be anyone’s favorite part of the process, but it does provide results. Keeping the paperwork up-to-date often keeps a program on schedule, the safety expert says.

“There is absolutely a parallel; they work hand-in-hand,” McDonald says, acknowledging that some veteran individuals or crews may be resistant because of the feeling that the training and documentation is time consuming. “Mentally, it seems like it eats up half the day. The reality is that it takes about 11 minutes a day, and we all have 11 minutes a day if it means you’re going to keep your hand or your foot.”

Using the program

The Illness & Injury Prevention program content is divided into three sections: Employer Guidance, Forms and Policy. The employer starts by reviewing the information under the Guidance tab in a three-ring binder. This is their guide to the adaptation and use of the Policy and Forms sections, which are available in both English and Spanish on the CD that accompanies the program.

The Policy section gives the employer most of the boilerplate policy and procedure language they will need to write comprehensive guidelines for their employees. This section is provided electronically on CD, in Microsoft Word format for easy adaptation and customization.

The Forms sections provides 29 customizable forms that can be used at the employer’s discretion to support and document various aspects of the overall safety program, such as accident investigation, vehicle safety inspections, accident reporting, etc. Forms are in Microsoft Word table format.

Gerstenberger notes that all of the forms are easily customized for state OSHA standards. Rouse adds that TCIA was following the California OSHA model, wherein individual companies identified
and created an industry-specific safety program and manual.

Changes based on the California model are what the federal OSHA is considering adopting.

“We’re right at the cusp of that (change),” Rouse says. “Whether companies go for Accreditation or not, I2P2 really covers a lot of bases.”

McDonald notes that determining industry- and state-specific guidelines makes a good deal of sense. Among the features that McDonald likes about the TCIA program is the ability to customize it from state to state, particularly important with some states having their own OSHA guidelines.

For example, he points out that the heat in California is a much dryer heat than the heat in Florida, and with the Santa Anna winds keeping the body comfortable while simultaneously drying it out, the heat can sneak up on a worker.

“You’re not as apt to be aware of heat stress, heat fatigue and heat stroke in an area where you’re not sweating (profusely),” says McDonald.

For that reason, the I2P2 plan for California features a section specifically dealing with heat awareness and prevention of heat-related safety issues. Other states are more likely to write their regulations keeping in mind icy or snow conditions.

Other state-to-state differences may come as a result of variable rules and regulations. California doesn’t allow CO2 emitting chippers, so there are no safety rules pertaining to them, McDonald notes. In other states, laws may be more or less strict about who drives the company truck, and that usage will be reflected in the safety rules.

“This program, you can customize your program to allow for the nuances from state to state,” he says.

At the heart of this program (also provided on the CD) is TCIA’s Safety Program Checklist, a comprehensive and vetted list of all important best practices for a safety program. Using the checklist helps the employer to establish a baseline for their safety program and to periodically benchmark changes in practice, Gerstenberger says.

Combined, all the elements make a tree company safer on the ground, but also make it a more solid business.

“The main goal is loss prevention,” Rouse says. “The elements in here are the policies and techniques that have been demonstrated to improve safety over the years. The other part is that, from a liability and documentation standpoint, it helps protect the company so that it can prove it has been doing the right thing. There’s a basic legal concept that if it’s not documented it’s not demonstrated, so that a company can do all these things, but OSHA and the courts are generally not going to accept verbal verification. This helps set up documentation to help the company.”

For more information on the new TCIA Illness & Injury Prevention Program, visit www.treecareindustry.org.
Many green industry professionals hit the wall in the summer months. The stress of the hectic spring season has taken its toll. The spring rush is filled with challenges, pressure, and long hours. As summer ends, burnout is a real threat for many.

Employee burnout is the condition of being emotionally exhausted. An employee experiencing burnout often dreads going to work and may feel drained of energy throughout the day. Their once positive attitude may turn negative and even cynical. They may pull away from other people and even become a destructive influence in the organization. Their performance may decline. They may begin to experience personal, health or family issues.

Employee burnout is difficult to correct after it has occurred. The destructive nature of this condition often severs relationships beyond the point of no return. Many times there is no going back. In less severe cases, restoration is possible, but only if the situation that caused the burnout in the first place is addressed.

It is much better to avoid employee burnout in the first place than to attempt to deal with it after it has developed. Of course, it is necessary to understand what causes employee burnout in order to avoid employee burnout.

According to Susan E. Jackson, a faculty member in the Psychology Department of University of Maryland-College Park and co-author of the Maslach Burnout Inventory, there are two categories of causes — organizational and personal.

Organizational causes may include (1) lack of rewards, (2) lack of internal controls, such as excessive and outdated policies and procedures, combined with close supervision, (3) lack of clear expectations and responsibilities, combined with conflict, or (4) lack of support or cohesive work groups.

These organizational causes may not be sufficient to develop employee burnout on their own. Jackson states that employee burnout is usually the result of one or more of these causes being combined with one or more of the following personal causes — (1) idealistic expectations about how the organization will work, (2) idealist career goals resulting in a low sense of accomplishment, and (3) taking personal responsibility for feelings of low accomplishment.

Managers may help their employees avoid burnout by rewarding employees for performance, both on an individual level and a collective level. TCIA-member ValleyCrest Landscape Companies presented new Ford Ranger trucks to five employees for superior performance in workplace safety as part of its 2010 Safety Awareness Day. Here, Las Vegas Region 1 truck winner Aureliano Benitez-Garcia, a crew leader and 10-year ValleyCrest employee, is presented with his truck by Andy Mandell, executive vice president and CFO, ValleyCrest Landscape Companies.
organizational causes listed above. They should strive to create an organization that rewards employees for performance, both on an individual level and a collective level. They should be working diligently to implement clear policies, procedures and systems. They should be clearly outlining expectations and ensuring support when things go wrong.

In my consulting practice, I see these causes present in most organizations to some degree. There is room for all companies to improve in all of these areas. Not only will improvement help avoid employee burnout, it will also improve the health of the company and its bottom line.

Managers also may address the personal causes of employee burnout by understanding its causes, recognizing employees who are likely to experience burnout, and taking proactive measures. Employees working long hours with big smiles on their faces and with pie-in-the-sky expectations are going to crash and burn in the green industry. It doesn’t take a university professor to tell us this is going to happen. Experienced managers should see this coming long before it happens and intervene.

New employees to the industry are especially prone to employee burnout. I’ve seen it happen a hundred times in my career. People are attracted to the green industry because they think they’ll be communing with nature every day. But, the seasonal nature of the industry and the long hours quickly wear down the idealist. They might survive the spring, but they won’t make it through the summer. This is true at all levels, including management.

By promoting from within and proactively allowing employees to experience the realities that exist, managers will be reducing the likelihood of employee burnout. This socialization helps to establish realistic expectations for the newly promoted or newly hired employee.

Managers should be developing their people, creating a “bench” of capable employees to promote. They should be recruiting at all times – prowl for the next employee to bring into the company. Managers should also be making sufficient time to interact with new employees so they feel welcome and have a clear understanding of their roles and responsibilities.

By addressing both organizational and personal causes, managers can help their employees avoid burnout. Telling a burned-out employee to take a vacation isn’t going to solve the problem; it will only put a band-aid on it. By digging deeper into the psychology behind the situation, managers may have a real impact on their organizations.

Phil Harwood is the founder of Pro-Motion Consulting and Pro-Motion Marketing. He will be presenting on “Secrets of Successful Subcontracting” at TCI EXPO 2010 in Pittsburgh in November.
I was lucky enough to attend TCI EXPO 2009 in Baltimore. There are myriad reasons I go to EXPO. First, I can get a lot of CEUs (continuing education units). The Board Certified Master Arborist requires 60 CEUs in a three-year period and Certified Tree Care Safety Professional (CTSP) requires 30 points for the same time frame. Secondly, I get to network a little and have lunch with friends. Third, I get to look at equipment and talk to vendors. Lastly, it’s just fun.

But one of the sessions I attended last fall was an open discussion for CTSPs, and I had personal experience with the topics discussed by two speakers. One involved a gentleman in a large organization of which tree care was a small part. The other involved a woman trying to implement a safety program at a small tree company she owned.

The first gentleman was responsible for tree care on a campus. Counting himself, he had a crew of three. The fellow had an uphill battle. His chances of success were limited and he would likely have to be satisfied with small victories. His biggest problem was lack of support from management. My impression is that this man was hired with an attitude of “just take care of it.” I have been in that position and I was not successful.

If the crew knows the big boss is not going to be actively involved, the supervisor is not going to be taken seriously. If the person in charge of the safety program is not the one signing the checks, the employees need to know that safety is a priority. My impression is that this man was hired with an attitude of “just take care of it.” I have been in that position and I was not successful.

If the crew knows the big boss is not going to be actively involved, the supervisor is not going to be taken seriously. If the person in charge of the safety program is not the one signing the checks, the employees need to know that safety is a priority. This takes action on everyone’s part. The crew will push the supervisor. The boss, or next person in the chain of command, must actively support the safety supervisor. The safety supervisor needs to have some juice (discretionary power). Without it, the employees will know that ignoring safety is acceptable. The safety program may exist on paper, but it will not affect day-to-day behavior.

The woman owner was having trouble getting her safety program off the ground. She may not have realized it then, but she had already succeeded. She was the one in charge and she supported safety practices. The rest was just details.

I got the impression that she was overwhelmed and did not no where to start. Start small, start anywhere. Explain to the crews what is going on; that things are going to be different – better, but different. The response will probably be an unexcited one.

Start by having the crews clean the equipment. Proper maintenance is important. The main thing is to show the employees you’re committed to this. The speaker expressed some concern that key people on her team would quit. In 2010 – or 2011 for that matter – I would not worry about that, too much. There is no place to go.

There are other easy steps to take. Buy personal protective equipment and traffic control devices. We have to put our money where our mouth is. On-site inspections are a requirement. In a small company, the owner is usually pretty close to the action.

The difference between these two stories is commitment of management. If management is not on board, success of a safety program will be limited. If management is on board, success is unlimited.

Both speakers earned my respect. All those in attendance were trying to reduce accidents. More importantly, we were all trying to present tree work as a legitimate profession. Plumbers have a higher hourly rate than us. I’m not saying they don’t earn it, but my point is that they show up with one or two vans and a bunch of hand tools. We show up with equipment worth anywhere from $100,000 to $1 million. Then the homeowners get mad if we want $100 per hour per man.

My wife and I have six employees. I have always maintained a safety mentality. Since becoming a CTSP, I have concrete tools to use. I rely on TCIA’s Tailgate Safety Program.

I do not run the meetings. I have two foremen, Bill and Wilson, who do that. Bill leads the first discussion in English and Wilson leads the second discussion in Spanish. I sign the attendance sheet as a participant.

I attend every meeting for three reasons. First, I need to show workers’ comp that I was there along with everyone else, should this become an issue. Second, the crew needs to see I believe in this stuff. Third and lastly, I want to be there to maintain order. If someone is not paying attention or talking amongst themselves, it is very easy for me to put an end to it. I control attendance and discipline. Now the leaders can
Implementing a formal safety program was easier once I became a CTSP. There were a few bumps in the road. So far the biggest hurdle has been to pressure the lead crew member to wear his hard hat. First I made sure everyone had a new, or near new, hard hat. When I caught the lead man without his hat on, he said he wanted a hard hat like the one Mark Chisholm (ITCC climbing champion with TCIA-member Aspen Tree Expert Company in New Jersey) wears. When I caught him without the new, expensive hard hat, he said he left it in the other truck. I had threatened to fine him or dock him, but the crew all work so hard I felt bad and I never actually did it. Then a few things fell into place.

The big chipper blew up on a Wednesday, so I was in a bad mood. On Thursday we were doing a big crane job with the smaller chipper. After everything was set up, I left to look at a few jobs. When I got back, the lead man was on the stalk of a dead ash cutting out the top without his hard hat on. I told him to stop what he was doing and get his hat on. The response I got was not the one I was looking for and it came down to me saying, “Put your (@#*#*#@) hat on or go home.” These guys have never seen me yell. It produced the desired effect.

What I am trying to do with my company is to show the public we are professional tradesmen. I am meeting with some success. We are well known in the towns we work in. We have good relations with the code enforcement officials. The trucks are clean and well maintained. The guys are polite and well trained. They wear their PPE, and the condo/homeowner associations like the idea of having a CTSP on board.

Colin Milde, CTSP, is owner of Ramapo Tree & Shrub Care LLC, a six-year TCIA member company located in Mahwah, New Jersey.
Integrating a landscape edge with adjacent parks, woods or forestlands is a high-value way to increase functionality and improve design. It enhances the beauty already embedded in the collage we call a wood line. These wood edge interfaces are often sharp and linear transitions. They separate an area managed for ornamental use and another area that might be managed for recreation or fiber.

In areas with successional forests, it is the nature of the wood edge to become an encroaching line of dense native growth. This interface is also where invasive plants often take advantage of an environmental disturbance, gain their foothold, form a thicket and spread outward. Despite their highly dynamic nature, wood edges are often not managed at all and they become a visually dominant and unintended artifact of the design and maintenance practices.

Integrating woodlands into the landscape involves an interdisciplinary approach combining concepts from arboriculture, forestry and landscape design. It involves incorporating transitions between different zones and softening that transition. The four zones involved in a complete conversion are: formal landscape, informal landscape, improved woodlot and unimproved woodlot. Each zone should blend with the next. Our task here focuses on establishing or promoting the improved woodlot transition between the informal landscape and the unimproved woodlot.

With vertical stratification of the forest layers, the land surface covered by canopy often approaches 100 percent, placing light as the limiting factor of plant growth. For the purposes of woodland gardening, we often want to reduce canopy cover to 60 percent or less. A woodland alternates between sunlit and shaded spaces. The increased light penetration allows for growth of lower canopy layers.

To achieve this reduction in canopy cover we grade existing trees and shrubs and the site itself based on multiple criteria. Then we progressively take out the low-rated plants and leave the high-rated plants.

### Plant grading criteria includes:
- Species desirability
- Species diversity
- Structural quality
- Safety/risks
- Health
- Spacing & competition (stem density)
- Aesthetic appeal
- Color
- Texture
- Bloom
- Scale or size

### Site evaluation criteria includes:
- Size of area
- Intended/potential use
- Natural beauty
- Recreation
- Wildlife habitat
- Timber products (fiber)
- Water
- Forage
- Sightlines
These plant grading and site evaluation criteria only become meaningful in relation to client-based factors such as:

- Current goals
- Future plans
- Intended uses
- Time frame
- Financial resources

By considering and prioritizing grading criteria in relation to client-based factors, a management plan will begin to reveal itself. The process is largely a matter of what I call design by subtraction. Common elements found in most good management plans include: managing invasive and noxious plants at the onset before they respond to increased light, maintaining and managing each forest layer to optimize sustainability, cleaning most deadfall and brush piles near landscape edges, cleaning prominent or hazardous dead branches, and pruning to open sight lines (as desired).

A customized management plan will have unique elements. In one area, the release of climax species for shade or as focal points might be controlling. In another area, such as looking downhill where a vista exists over the top of trees, it might be more desirable to promote early successional growth so that height can be more easily managed.

Opening breaks in the forest canopy by reducing stem density provides many benefits such as: removing competition, increasing light, redistributing growth and controlling species composition. However, as many native deciduous species are cut to stumps, they will re-sprout with vigorous and undesired coppice growth. The undesirable stump sprouts can be avoided by treating freshly cut deciduous stumps with certain herbicide mixtures. Oil-based herbicides are generally more effective than water-based herbicides for this purpose.

When a quality specimen is found hiding in the collage we call a wood line, it deserves special attention. The specimen’s future development can be improved by removing low rated trees encroaching on the ultimate green industry experience

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its growing space. The specimen will also be fully highlighted and brought into the landscape if its entire profile is revealed to an important sightline. In this manner, many large specimens along a wood line can be injected into the landscape at a price far below their nursery cost.

Many of the edge trees will be found to have leaning trunks or flagging canopies because they have been growing only toward available light. These same trees are the most likely to have had their roots disturbed when the landscaped areas were graded. When the wood edge is freshened to straight growing trees with vertical and radial symmetry, a very positive character is presented.

When woodlands are thoughtfully brought into the landscape, property owners are wowed. Dollar for dollar, this service provides a tremendous value compared to other landscape or tree services. For the price of planting one large landscape tree, many can be integrated into the landscape and an extreme makeover can be had along an expansive wood edge.

When woodlands are thoughtfully brought into the landscape, property owners are wowed. Dollar for dollar, this service provides a tremendous value compared to other landscape or tree services.

1) Successional forests involve pioneer species (the first species to colonize a disturbed area leading to ecological succession), intermediate species (species with increasing shade tolerance and more demanding soil requirements), and climax species (species with the most demanding soil requirements and where composition remains essentially unchanged as long as the site remains undisturbed).

2) Six Forest Layers: 1 - Dominant Trees – receive full light from above and partial light from the sides; 2 - Codominant Trees – receive full light from above, but comparatively little from the sides; 3 - Intermediate Trees – receive little direct light from above, and none from the sides; 4 - Suppressed Trees – receive no direct light either from above or from the sides; 5 - Shrubs; 6 - Ground Covers.

Lee Gilman is principal of Lee Gilman & Associates, LLC, in Amherst, New Hampshire. He will be presenting on this same subject at TCI EXPO 2010 in Pittsburgh this November.
I think you can do better than this. And I think you and Minneapolis would be the beneficiaries.

Ben Williamson
Oaklyn Plantation Nursery
Darlington, South Carolina

Choosing freedom over OSHA and safety

In response to the editorial, “OSHA is Armed and Ready to Fire,” TCI, August 2010.

Those who advocate the widespread adoption of certain tree work safety practices are free to encourage others to join with them in such adoption, and to petition their state and local private organizations and governments to recommend or require the adoption of those safety practices. But the notion of federal employees evaluating the safety practices of private citizens is morally repugnant, and it would be so even if it completely eliminated all tree work-related injuries and deaths.

Liberty and the rule of law are the foremost traits in my notion of being an American. They’re even more important than life itself. Therefore, it is preferable to die or be maimed while young in a tree work accident as a free citizen than to enjoy a long and rewarding career as a tree worker under the supervision of dictators, regardless of their benevolence or malignance.

Each of us ought to be free to inaugurate our own tree service company and to vie for the patronage of customers. If a yokel with a ladder and a pole saw solicits tree jobs, and a private citizen invites him to submit a bid for work, any agreement that they strike should be their business and nobody else’s. If, while on the job, the yokel injures himself, that should be his problem alone.

And if an ambitious diploma-waving entrepreneur inaugurates a tree service company with immense financial backing, all the newest and best equipment, the most elaborate support infrastructure, a gaggle of slick-talking sales professionals, thick and lawyerly insurance documents, a glitzy advertising campaign and scores of certifiably drug-free, alert, physically fit and thoroughly trained crews, that’s OK, too. There are plenty of customers who cheerfully – and mindlessly – pay a showy company top money for tree work that is of equal or lesser quality than the work that could be done by a more ordinary outfit that does a yeoman’s job and makes an adequate living on much less income.

It is naive to think that the primary concern of an OSHA bureaucrat or clock-watching opportunist is the safety of tree crews. Most of them are careerists. They’ve never been supported by an overhead line with a running chain saw in their hands, and many of them probably don’t know a shotline from a hank of arborplex, or a carabiner from a saddle, and it’s a safe bet that quite a few of them have never done an honest day’s work. But they have a checklist that they more-or-less understand, they have a career to build, they have appetites that require a reliable paycheck and they have the moral compass of a reptile.

OSHA careerists are required to bring money back to the office, and one way and another that’s just what they’re going to do. And when a clipboard-wielding OSHA official shows up on your jobsite out of the clear blue sky and dings you – to the tune of hundreds or thousands of dollars – for trivial or imaginary infractions, you would be wise to keep your mouth shut, paste-on a big grin and to just pay your fine. OSHA is right and you are wrong, and you must mend your ways.

In the aftermath of an accident, we imagine how it plainly and obviously could have been avoided. But most of the time we are, thereby, deluding ourselves. No accident has a single cause, and any sufficiently comprehensive set of safety regulations – regardless of how enthusiastically they’re followed or how assiduously they’re enforced – will either do more harm than good, or they’ll merely shift tragedy from one category to another.

Dan Martinez
Rio Grande Tree Service
Alexandria, Virginia

Peter Gerstenberger, TCIA’s senior advisor for safety, compliance & standards, responds: While some might be somewhat sympathetic to Mr. Martinez’ views on OSHA, I believe they’re here to stay and this rhetoric is pointless. While an individual might argue, right or wrong, that he or she has the right to put him or herself in danger, nobody has the right to put an employee in an unsafe environment. The fact is that an arborist company has the ability as well as the responsibility to be safe, and a safe company has nothing to fear from OSHA. Accidents, however complex they might be, are preventable.

(Continued on page 46)
The new morality

It has been a long time since...no, it has not been a long time, it is the first time I have seen freedom, justice and truth expostulated in an arboricultural magazine relative to defending against the ravages of the MGH. (mindless grazing herd).

I refer, of course, to Mark Garvin’s offering of reality and common sense in the July TCI Magazine, “Minneapolis Surrenders to Ignorant Irrational Ideologues.” It appears he has, like anyone with any sense, ditched the politically correct nonsense of today and told the truth on this issue.

The referral to those who “peddle fear” is not a lax observation; we have always had these “Chicken Little” types amongst us since time immemorial. Reaching back in my time, I well remember the DDT scare triggered by Rachael Carson that resulted in the deaths of millions of people of Africa through the scourge of the tsetse fly, which was kept under control until she falsely proclaimed the dangers of this chemical. A few years ago the United Nations quietly re-instituted its use again.

Then we have the “Population Time Bomb” by another peddler of fear whose false prophecies at the time, if true, would have seen us all starved two decades ago.

Next there was the nuclear scare, the ozone hole scare, the ice age scare, the globaloney scare, and now we have the climate change scare. Seems I may have missed a few, but certainly I am waiting with bated breath for the next one.

The use of chemicals is not the issue, the real issue should be the irresponsible use of same. I am aware of operators who think that spraying, needed or not, is good for cash flow for the company. I am aware of operators who apply pesticides outside of the proper windows of opportunity and on trees that do not need them. I am, however, aware of operators who use chemicals sparingly, and responsibly, and ONLY when required.

The reasonable and responsible operator merely considers systemics, spraying and other options but another tool in the handbag of the professional, to be used only where and when required. We need no cauterwauling, politically correct, rubber-stamped enviro-fascists to tell us what is or is not best for trees.

An experience I will never forget was the removal of a large co-dominant silver maple with abcessional rot at the center of the union of four large branches at a common juncture 12 feet off the ground. During my operation of the chain saw, some idiot approached me demanding to know why I was removing the tree. I impolitely told him he must be tired of living standing in the fall zone of a tree with an estimated biomass weight of three tons and also in my operational saw zone. I then told him that info was none of his business, but the sole business of the client.

The fool marched off muttering, and did not stay around long enough to see the tree come down and the structurally compromised, large, hollow and rotten co-dominant trunks. You can bet your knickers that this fool would be the first to whine about unsafe trees if a similar tree was to fall on his gas guzzling Hummer if it crashed down in a strong wind, and would file an immediate lawsuit against the owner.

The point is that there is a word associated with many of these types of people, and that word is hypocrite. It is no different with any of this crowd who preach a message that the herd is supposed to obey while they themselves practice the exact opposite. Case in point is Al Gore and I need not expand on that reality.

The point is, as Mark has gamely demonstrated, these people do more harm than good, and are often ignorant about their direction, which often makes as much sense as a hill of beans.

I have a message to the wannabe saviors of the world, of the environment, and of life itself – go stuff it; leave the decisions to the experts, and content yourselves with accepting that you are actually ill qualified to direct professionals in what they can and cannot do in regard not only to the use of chemicals, but also what is proper tree care.

Perhaps these types should embark on yet another great cause, eliminating antibotics, medical remedies, and even necessary operations to save life. After all, such things are not natural; perhaps people should drink the enviro kool-aid and let people die instead.

Edward Kennedy, owner
Meadow Green Tree Experts &
Certified Arborists
Harrowsmith, Ontario, Canada

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To Newbury Park Tree, an educated client is a good client

By Janet Aird

Newbury Park Tree Service, Inc., in Westlake Village, California, takes professionalism seriously. The company, founded by owner Dean Lappinga, CTSP, in 1989, is not only licensed, insured and bonded, it also has its diesel-powered equipment inspected regularly for air quality. In addition, the company became TCIA accredited in April 2010.

The company includes Yari Vodraska, CTSP, a 19-year employee who is, as is Lappinga, an ISA-certified arborist; two crew leaders; two crews of between 10 and 12 members each; and Diana Merville, who saw the company through the Accreditation process and now manages the office and daily operations.

“We also utilize outside experts, such as tree consultants, on cases involving historic trees that require unique bracing or trees with specific parasite infestations,” she says. The company’s two full-time arborists write up tree hazard reports and tree valuations, and consult on whether certain trees may pose a hazard or liability to home owner associations (HOAs) and municipalities.

The company’s clients include municipalities, shopping malls, business complexes, HOAs and residences, from Los Angeles to Santa Clarita and Santa Barbara and through Ventura County. They also perform tree work for the National Park Service, such as at the Peter Strauss Ranch, where they remove large hazardous trees, and sometimes smaller non-native trees, such as fan palms, in areas where only native trees are desired. They also handle fertilization, and pest and disease control needs for the parks.

Educating clients and potential clients is a priority for the company, Merville says. Their Web site, launched in early 2010, contains a vast amount of educational material about Accreditation, local city ordinance specifications and tree care.

“Often customers, especially residential ones, want us to trim and thin more on their trees than is recommended to maintain the tree’s vitality,” she says. “We want them to be educated regarding... what factors might be causing a tree to fail, such as girdling or when gardeners weed-whack too close to the tree trunk. Much of what we do is educate our customers on proper tree care, safety considerations and their city permit obligations.”

The company does nominal external advertising. At least half their new business comes from referrals and repeat business. They belong to CAI (Community Associations Institute), an association of property managers and HOA boards of directors, where they attend networking mixers, host/sponsor a luncheon, and exhibit a booth at trade shows. They occasionally sponsor a local sports team.

They’ve received a number
of new calls since their TCIA Accreditation was announced in the local paper, Merville says.

“Some people didn’t know what Accreditation was. Many people think you can just climb up a tree and chop down branches. The press release ended up being really valuable, informing people of what’s involved in tree care, and all the factors to consider when selecting a tree care service provider.”

One of the reasons the company became accredited was to “future-proof” the company. “We feel Accreditation is coming down the pipeline,” she says. “More government jobs and larger commercial jobs will be requiring it.” Accreditation is also a good way to keep the organization in top shape, uphold safety and qualify for reduced insurance premiums, she adds.

The Accreditation process took four or five months. They enlisted a consultant to give a preliminary evaluation and provide them with a to-do list to prepare for the final audit, which she advises any company considering Accreditation to do.

Accreditation led to a number of changes in the way the company operates, especially their documentation procedures. It adds more work, she says, but there are fewer injuries, and their operations run more efficiently.

“Staples loves us, because we have so many binders,” Merville says. “Before we became accredited, we didn’t have a lot of documentation in place. Now we’re documenting everything, from safety meetings to daily vehicle inspections to incident...
reports to employee performance reviews. We have a formal procedure for reporting potential hazards before work begins at work sites, which prepares us to start each job in an organized fashion.”

They’d always had safety training, but now they’re vigilant about their weekly tailgate training sessions, and their tree workers sign off on the formal training they receive. They maintain separate files for all worker-related issues, from confidential medical files to safety violations. They’ve given all their employees a one-to-one performance review, documented their specific training and updated their personnel files to reflect the new information. They even have paperwork in place showing that the employees who drive the trucks have Class-A licenses and medical releases.

“You can’t just use any employee to do a job,” she says. “You need properly skilled personnel to do each specific job, whether they are ground crew, tree climbers or aerial lift specialists.”

Some crew leaders were resistant to doing the additional paperwork at first, she says, but the changes have made the company more organized. “We’re more vigilant about things we used to take for granted. Training used to be more casual. Now everything is watched and documented. There’s higher accountability.”

An unexpected benefit of Accreditation was the education that owner Dean Lappinga and Yari Vodraska received during their training as CTSPs (Certified Treecare Safety Professionals). Because this training is more focused on employees and safety concerns than on tree care, they learned employee-related aspects of the business they hadn’t considered before, such as how to communicate with employees with empathy and encouragement, and the reasons detailed documentation is so important.

The company also keeps their portable diesel-powered equipment on a regular maintenance program to comply with California’s PERP (Portable Equipment Registration Program). This allows them to operate throughout the district in compliance with state and local entities.

Their professionalism distinguishes Newbury Park from the local competition, Merville says, and Accreditation enhances their image as a professional, well-organized and credible company. “Clients know we’re not just hacking away at a tree.”

It also will allow them to expand in the future. She sees the company growing as they pick up more municipal work and more large commercial projects, perhaps eventually to include a third large crew. Also, since they obtained their landscaping license this year, they may take on additional landscape work, such as brush clearance, for their customers who don’t already have a separate landscaper.

“I tell potential clients that TCIA Accreditation is the ISO 9000 of the tree care world,” she says.
By David Lusk

“I do not prize the word ‘cheap.’ It is not a badge of honor. It is a symbol of despair. Cheap prices make for cheap goods; cheap goods make for cheap men; and cheap men make for a cheap country.” – William McKinley (1843-1901)

From the obscurity of America’s past, the above quote is particularly relevant to our work in today’s tree service industry. I have always admired this quote by a United States president that we moderns know little about. How do we weigh this message against one of the worst recessions in American history?

Work is still scarce while chain saw operators, tree services, “wannabe” tree cutters, tree hackers, landscapers and certified arborists search the landscape for a way to pay the bills and survive the winter. A local arborist who works for a well known and reputable tree care company tells the story of a door-to-door competitor “tree service” company rep that walked by his crew as they were getting ready to start pruning some trees.

The renegade tree man knocked on the door and professed to the homeowner, “I will do this work for half the cost that this company is charging you.” He did not know the cost. He was simply that desperate for work – cheap work, any kind of work that could be accomplished with a chain saw and his traveling day laborers.

What do you suppose were this brash door-to-door tree cutter’s specialties? Of course, the answer is in the unfortunate stereotypical tree service catch phrase that the general public sees and judges us all by: “Tree removal, tree topping, fully insured, licensed, free estimates.”

The entire phrase is the generic standard, problematic at best and suspect as a whole. For the purposes of this article, I will focus primarily on the specific language that has wrecked havoc on countless trees as well as the image of the tree service business at large – tree topping.

The consequence of topping trees has had not only a negative impact on tree health, but also a long term impact on the professional image of tree care services.

The time has come for us to do a better job of educating the consumer by taking the time to explain the difference between tree topping and tree pruning for health.

...
The time has come for us to do a better job of educating the consumer by taking the time to explain the difference between tree topping and tree pruning for health. Short term profiting from the practice of tree topping continues (even in these days of Alex Shigo’s Modern Arboriculture) to cost the tree care industry in terms of public perception and a loss of credibility. Of course, there are no absolutes in the natural world. Some trees do need to be headed back when interfering with power lines. Lowering the height of Leyland cypresses can help prevent them from falling over. Still, these are special circumstances that, on occasion, demand compromising tree height and width.

Educating the consumer about far wiser, proper pruning methods versus tree topping is our ethical duty; a duty that pays far more dividends in the long term for trees and tree care businesses.

I told a friend not to long ago that I did not want to go to my grave knowingly operating a cheap, money making business by removing trees that did not need to be removed or by ruining trees and the environment by topping them. I will end with another quote by good ole boy, President Billy McKinley:

“That’s all a man can hope for during his lifetime – to set an example – and when he is dead, to be an inspiration for history.”

David Lusk, CTSP candidate, consulting arborist and owner of Lusk Tree Service, Inc., in Winston-Salem, North Carolina, and a TCIA member since 1985, originally wrote this piece for ISA Southern Chapter’s newsletter.

Every topped maple, willow oak, white oak and crepe myrtle stands as testament to cheap, shoddy workmanship for all of the world to see.

A customer may ask to have his or her trees cut back, shaped, sculpted, hat racked, topped for any of a number of reasons; that does not necessarily mean an arborist should comply.

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AEDs In the Workplace – Are They Worth the Cost?

By Danny Raines

During these tough economic times, the last thing a company wants to do is increase the operating and maintenance budget on an item that will not increase revenues one dollar. Companies are doing all they can do now to just hold on and not furlough or decrease the number of employees on staff. Everyone understands the financial pressure on businesses today. On the other hand, how much does a fatality cost in a work-related incident? What effect does losing an employee even to a personal health problem while at work have? Is there a cost to the business?

There are many hard and soft costs when it comes to losing an employee for any reason while at work. I do not have figures relating to the number of lives saved on the job by a company purchasing automated external defibrillators (AEDs) and placing them at work locations or on trucks where two or more employees are working together. OSHA standards require employees who work on 50 volts or more be trained and able to provide first aid and CPR to employees who may receive an electrical shock. The standard does not require the employer to place AEDs in the workplace — yet.

Statistics tell us that a fatality resulting from a workplace exposure can be extremely expensive to the employer. The fatality can reach upward of $1 million in total costs. The soft costs of loss of productivity, retraining of new personnel, and the agony of the loss itself along with the mental state and low morale of remaining employees can even be more expensive. A company could purchase several AEDs at a much lower cost.

I worked at a company for more than 40 years that prides itself in providing safety training and additional resources in accident prevention to employees. As AEDs came into the workplace in the late 1990s, still rather expensive at that time, the company purchased several AEDs and placed them at strategic locations around the company’s facilities. A few years later, one of the AEDs was used at a maintenance facility when an employee had been working on a motor from a generating plant.

The employee failed to verify the absence of voltage after a test of the motor. A disconnect switch was opened, but one of the load break connectors on a 4 kV switch didn’t clear and one phase stayed energized. The employee attempted to disconnect the leads to the motor after the test and had a contact on the energized phase.

The contact resulted in electrical burns and put the employee’s heart in fibrillation. Co-workers immediately started CPR and the AED was brought to the accident location within minutes. With one shock from the AED, the employee’s heart stopped and restarted in normal rhythm. The employee was transported to the hospital and made a full recovery. The entire company was saddened by the accident, but overjoyed by the success of the AED.

The “Cardiac Chain of Survival” taught when CPR/AED training is provided teaches us that for every minute that the use of an AED is delayed could result in a 10 percent likelihood of the victim not surviving by just CPR alone. In this case, the AED made a difference.

About seven months later, another employee suffered a heart attack in the office and was immediately started CPR. An AED was in the building and was used within just seconds of the event. Again, with one shock, the employee’s heart returned to sinus rhythm and he survived.

Statistics indicate that even when AEDs are available in the workplace, an AED is used and is successful on an average of once every seven years. We had two in seven months. Of course, that depends on how many AEDs the company has purchased. Did the company save two million dollars? No one will ever know. But if you ask the families of those two employees, I’ll bet they are certainly glad the company spent the money on the equipment and the training of the co-workers.

As a result of these two incidents, the president and CEO of the company asked Safety & Health along with the company nurses to seek additional information on costs of AEDs. Within a two-year period the company purchased more than 1,000 AEDs and placed them in virtually every facility and on every vehicle with two or more employees.

With the correct information and cooperation of national companies, a decreased price can be obtained. A contract with these companies can assure the best price and allow more AEDs to be located in the work place. AEDs are worth the price.

Danny Raines retired after working at Georgia Power Company and Southern Company for 40 years. He currently operates Raines Utility Safety Solutions LLC and provides OSHA-compliant general industry and construction training, and safety keynote presentations for many investor-owned utilities, co-ops and municipal electrical companies across the U.S.
CTSP celebrates fifth anniversary with workshop at TCI EXPO

“A critical component of safety is networking,” says Peter Gerstenberger, arborist for TCIA. “You can learn a lot from other tree care professionals and discover new solutions for your problems. TCI EXPO is the perfect outlet for those discussions.”

This year’s CTSP workshop at TCI EXPO 2010, on November 9-10, marks the fifth consecutive certification workshop at EXPO. And, as Gerstenberger points out, the convenience of attending the world’s largest tree care conference while also becoming a certified CTSP is unparalleled. Not to mention effective.

TCIA has successfully credentialled more than 500 CTSPs in the five years since its inception, and that number is only growing. The largest workshops take place at the annual TCI EXPO, and last year was no exception.

“We divided the CTSP training into two workshops because there were so many attendees,” explains Gerstenberger. This year’s workshop in Pittsburgh promises to be just as popular.

CTSP is the only safety credentialing program in the industry, but it does more than just establish a company safety trainer. CTSP can create a safer environment that both saves lives and increases profits through lower insurance premiums, less lost time due to accidents and injuries, and increased business from marketing your commitment to safety to clients. In addition, CTSP provides a new career path for key employees, while also increasing their job satisfaction and company loyalty.

Every tree care company employee who becomes a CTSP adds to the progress we are making as an association in improving safety in the industry. According to a 2006-2007 Tree Care Industry Accident Survey, employees enrolled in the CTSP program are 10 times less likely to experience a lost workday incident compared with companies that did not have a CTSP on staff.

To become a CTSP, you must meet the prerequisites, pass the Safety Fundamentals exam, attend a CTSP workshop and pass the Core Exam. TCIA has made it even easier for arborists to develop their safety expertise by running CTSP workshops at TCI EXPO.

If you’re a CTSP and attending TCI EXPO 2010 in Pittsburgh, don’t forget about the CTSP Open Forum with Gerstenberger and other safety-minded colleagues. If you’re thinking about CTSP and want to learn more, why not attend the CTSP Meet & Greet at EXPO on Thursday, November 11? Take advantage of this dynamic networking opportunity and make safety a top priority for your tree care company.

Participants in a CTSP open forum at TCI EXPO 2009 in Baltimore.
“We are pleased to announce that the board unanimously agreed to select Mark Garvin as the association’s next president,” announced Randy Owen, chair of the board of directors. The decision follows an extensive executive search involving internal and external candidates.

Since November, Garvin has served as interim president of the nation’s only trade association dedicated to advancing tree care businesses.

Owen said that Garvin’s work as interim president “clearly demonstrated his strong leadership skills, combined with the ability to execute the association’s strategic initiatives and a strategy of delivering increasing member value. We have recruited a president who will hit the ground running, with a deep knowledge of the association and the industry.”

“Mark has been in the industry and the association for many years, so he is familiar with the people and the issues. He believes in our cause. He’s demonstrated his skills on the political side, helping strengthen our voice in Washington. He understands the importance of building new relationships and strengthening our relationships with our allies in the industry – OSHA, ISA and the TREE Fund. He understands that we need to continue growing and building these relationships to further safety, unity and advancements in tree care for the future.”

Owen commended Garvin’s leadership during the last nine months.

“Mark and the rest of the association’s staff have gotten us through these tough economic times without sacrificing services or having to draw on our reserves,” Owen said. “His leadership during this interim period has allowed us to maintain stability and to make a seamless transition, so that we can move forward and maintain the focus on our members, both small and large, and their needs.

But, Owen added, the work has only just begun.

“Our may be a small industry, but it is an important one. We are the original Green Industry, and part of Mark’s challenge will be to deliver that message through greater recognition of what our industry does for society and a sustainable environment.”

Garvin joined the association in 1996 as managing editor of Tree Care Industry Magazine, served as vice president of public policy and communications, and as chief program officer. Prior to joining the association, he worked as a journalist, editor, business consultant and lobbyist in New England and Washington, D.C.

“I am extremely honored to be asked to help lead the industry toward a more professional and profitable future,” Garvin said. “This is an exciting time to be involved in the green industry, and I have promised the board – and through them the membership – that we will continue the positive momentum developed over the past decade. The industry and the profession face a number of long-term challenges. We will work together on those issues, fully aware that the efforts of utility and commercial tree care companies can significantly improve the environment in which we live.”

A300 alert: three standards under public review

TCIA and the ANSI-accredited Standards Committee (ASC) A300 have placed a call for public review on the revision of two national tree care standards and the draft for a new national tree care standard. The public review periods will run through October 4, 2010.

► A300 (Part 2)-201X Soil Management
  a. Modification, b. Fertilization, and c. Moisture: This is the fifth, and intended final, revision draft of ANSI A300 Part 2-(2004) Fertilization standard.
  ► A300 (Part 5)-201X Management of trees and shrubs during site planning, site development, and construction: This is the first revision draft of ANSI A300 Part 5-(2005) Management standard.
  ► A300 (Part 9)-201x Tree Risk Assessment
  a. Tree Structure Assessment: This is the second draft of an intended new standard.
  Visit: www.treecareindustry.org/standards/CurrentProjects.htm

For additional information, contact Bob Rouse, ANSI A300 secretary and vice president of industry standards & credentialing at TCIA.
We find that many TCIA members and others do not know or truly understand all that TCIA can do for them. Our “Call of the Month” feature highlights a request for help from a member – and TCIA’s response to that request. This month’s call was handled by Peter Gerstenberger, TCIA’s senior advisor for safety, compliance & standards.

**Q:** We had a potential client – a fairly large commercial account representing a national company – ask for our “recordable case rate” in a pre-bid meeting. When we furnished the information, we were told that they could not consider us because our accident rate was way above “the average.” We have always considered ourselves a fairly safe company with fewer accidents than a lot of our colleagues. Can you shed some light on this?

**A:** Your recordable case rate (also known as the incident rate, or IR) for 2007, 2008 and 2009 was 11.4, 14.3 and 14.3, respectively. While it is true that the all-industry IR average for those years has hovered right around 5.0., that is definitely not the average for tree care, which should be what this client looks at. The “average” for the tree care industry, as you can see from the attached information excerpted from TCIA’s accident survey, is much higher than the all-industry. There’s a lot of inherent risk in tree care.

I hope this is a start and helps. Please let me know if you need additional help with questions or sources as you move ahead.

Remember, TCIA staff are here to help with just about any question you may have. If we don’t have the answer, we’ll do our best to help you find it. Call us at 1-800-733-2622. And, if you have an anecdote about how a staff member helped you with a question or problem, please e-mail editor@tcia.org.

### Why your Reportable Case Rate appears high

<table>
<thead>
<tr>
<th>Company Type</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
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<tbody>
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<td>Accredited/CTSP TCIA Members</td>
<td>15.4</td>
<td>12.1</td>
<td>9.2</td>
</tr>
<tr>
<td>Non-Accredited Members</td>
<td>13.8</td>
<td>16.5</td>
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</tr>
<tr>
<td>Non-Members</td>
<td>17.7</td>
<td>15.4</td>
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1 – Excerpted from annual TCIA accident surveys.
TCIA’s “Business Boot Camp” covers business basics for tree care company owners and managers who are serious about improving their business profitability. These webinars are beginner-level and available to all tree care companies.

These are not one-size-fits-all solutions, but this format should allow an opportunity to discuss how to customize and implement best business practices for your company.

Moderators will be Bob Rouse, TCIA’s vice president of Industry Standards & Credentialing, and John Iurka and Randall McDonald, both Accreditation auditors and consultants.

The webinars will on Fridays, from 1 to 2 p.m. EST. Dates and times are subject to change. We recommend use of a high-speed Internet connection.

1. Business Basics. October 22 – How to plan, read financial statements and balance sheets, and understand corporate ratios with a basic review of some financing options, etc.
2. Basic Business Forecasting. November 19 – Covers how to analyze your budget and set hourly break-even rates, set hourly sales rates, and analyze results, etc.
3. Safety and Insurance. December 17 – Covers how to evaluate current safety culture, set up a safety program, maintain safety documentation, and develop a culture of safety, etc.
4. Regulatory Compliance. January 21 – How to navigate and comply with government regulations, OSHA, DOT, FIFRA, FLSA, etc.
5. Sales and Marketing. February 25 – How to do basic proposal writing, leverage industry standards and credentials to differentiate your company, basic marketing including other service lines, etc.

For discounted pricing and other information, call 1-800-733-2622.

Don’t forget to check TCIA’s Training Center (click the tab at www.tcia.org) for upcoming fall EHAP and CPR train-the-trainer workshops (all under the EHAP heading).

TCIA Facebook Fan Freebies

Do you like free stuff, great deals, and special promotions? If so, become a fan of TCIA on Facebook and take advantage of our monthly Fan Benefits!

Each month, TCIA unveils a new benefit exclusive to our Facebook fans. So far, we’ve given away Invasive Bug ID Charts to help identify ALB and EAB. More giveaways will be hitting Facebook in the coming months!

How can you score these great deals? Just click the “like” button on the TCIA Facebook Page to become a fan and take advantage of our exclusive offers! By becoming a TCIA fan on Facebook, you’re not only gaining great deals but also the latest news, event details, photos, contests and other interesting things happening in the tree care industry.

You can also follow TCIA on Twitter (@Voic eofTreeCare) for information on workshops and classes, great promotions and deals, and engaging tweets about the world of trees.

If you haven’t tweeted, fanned or otherwise used social media and don’t know where to begin, e-mail Amy Tetreault, TCIA’s marketing and public relations coordinator, at Tetreault@tcia.org or give her a call at (603) 314-5380, Ext. 126, and ask her to help you get started.
YOUR WINDOW OF OPPORTUNITY IS OPEN WIDER THIS FALL

There is still time to fertilize your trees.

Fall is the best time for fertilizing trees to build strong roots and overall strength. The vascular system will disperse and hold the nutrients until the tree comes out of dormancy in the spring, allowing the tree to use nutrients at its perfect time. As the pioneer of micro-infusion, Mauget has been the trusted resource for micronutrients since 1958.

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EAB spreads in Ontario

The Canadian Food Inspection Agency has confirmed the presence of the emerald ash borer in the City of Ottawa, outside the current Ottawa/Gatineau regulated area. An adult EAB was retrieved from an insect trap. CFIA also confirmed EAB in the Regional Municipality of Waterloo; in the County of Oxford, Ontario; and in the United Counties of Leeds and Grenville, Ontario.

Movement restrictions on regulated wood materials have been placed on the affected properties. Further regulatory measures will be considered once survey work is completed for the year. For more information, please visit the CFIA Web site at www.inspection.gc.ca.

Brits test carbon assurance scheme

The British Forestry Commission is testing a new quality assurance scheme for tree planting projects designed to sequester carbon. The market for such projects is increasing but, until now, there have been no standards to measure their claims against, or to ensure that real benefits will accrue. The new Woodland Carbon Code will encourage a consistent approach to projects and provide clarity and transparency to potential customers and investors about what their contributions should achieve.

To comply with the code projects must:
» be responsibly and sustainably managed to national standards;
» use standard methods for estimating the carbon that will be sequestered or locked up;
» be independently verified; and
» must meet transparent criteria and standards to ensure that real carbon benefits are made.

“There are now many commercial schemes that encourage individuals and businesses to contribute to tree planting to help compensate for their carbon footprint,” says Tim Rollinson, Forestry Commission director-general. “But before investing in projects people want to know that schemes will actually deliver what they claim. The Woodland Carbon Code will provide that reassurance and will encourage more investment in tree planting in the UK.”

The six-month pilot phase will test the scheme with around a dozen pilot projects throughout the UK. For more information, visit www.forestry.gov.uk/carboncode.

Recall of rope bridge used on climber saddles

Anchor Bridge Ropeworks, Inc. is calling for the immediate cessation of use of the Anchor Bridge Replacement Rope Bridge (part # ABR 7110).

This product (ABR 7110) has been included on Weaver Cougar Harnesses, model numbers 08-01075 (with leg loops) and 08-01076 (with batten seat), since January of 2010 or may have been purchased as a separate unit from local arborist supply shops. This unit has a red core and a solid black sheath covering the core, with white whipping at the throat of the eye splices.

“If you have this product on your harness, remove it from service immediately. We have become aware of a single product failure, that occurred within normal use of the product, resulting in no injury to the climber. This isolated incident suggests a problem with the long-term structural integrity of this product that has the potential to result in injury, if the product, “says Hattier.

Anchor Bridge Replacement Rope Bridge (part # ABR 7110).

rope bridge is not immediately pulled from service,” says Richard Hattier, owner of Anchor Bridge Ropeworks, Inc.

Hattier is asking owners of this rope bridge to immediately remove the product from their harness and render the rope bridge inoperable by safely cutting the cord on one or both of the eyes with a pair of scissors. For any questions on how to remove the bridge from the harness or as to whether a particular harness has this bridge in use, please contact Rich Hattier at (216) 276-1581 or contact the arborist supply shop where the harness was purchased.

Anchor Bridge has begun working aggressively with its dealers to identify all end users of this product in order to implement the immediate cessation of use and replacement of this product. Suitable replacement units for the ABR 7110 Rope Bridge will be supplied in coordination with the arborist supply retailer where the unit was purchased. The replacement bridges will be made available as quickly as possible at no cost to the user upon verification that the unit has been rendered inoperable. This issue has nothing to do with the workmanship, manufacture, design or production of Weaver Leather’s Cougar harnesses.

Intensive testing is being performed on the single failed bridge as well as numerous new bridges to determine the cause of the failure. Further information will be released as it becomes available.

“I would greatly appreciate any and all assistance with implementing this call for cessation of use and apologize for any inconvenience that this action may cause to users of this product,” says Hattier.
Accident briefs

(Continued from page 33)

The tree slipped out of a front-end loader and fell on Goodman after he and two crew members had cut it down, according to the Akron Beacon Journal. Working alongside Goodman were his father, Guy Goodman, and another employee.

Trimmer killed in lift failure

Adam Mackintosh, 34, of Denver, Colorado, was killed while trimming trees August 25, 2010, in Littleton, Colo., when the arm on the articulated boom he was working in snapped and he fell about 30 feet. He was being lowered when the incident occurred and he was thrown from the bucket, according to The Denver Post.

County worker dies in tree accident

Matthew Don Crowell, 31, a Wood County, Texas, worker since January 2008, was killed August 30, 2010, in Quitman, Texas, after he became trapped between two large limbs while cutting a tree from a county road right of way. Crowell was transported to a hospital, where he was pronounced dead. The preliminary cause of death was ruled blunt force trauma, according to KFDA News Channel 10.

Trimmer dies after electrocution

Alan D. Daley, 28, of Mount Airy, North Carolina, a tree worker seriously injured August 28, 2010, after the bucket truck he was in struck an electrical line in Pilot Mountain, N.C., died September 6, 2010, according to the Winston-Salem Journal.

Daley, a tree care company employee, was doing tree work in a bucket truck around a power line when he came into contact with a primary electrical line. He was brought down from the tree after the incident and was in cardiac arrest. He was revived on the scene, and then was transferred to Wake Forest University Baptist Medical Center in Winston-Salem where he died two weeks later.
A ny arborist who has ever cut into a limb, only to discover that bees were taking up residence there, is not likely to get close to another bee tree. For me, discovering that there is a tree with bees on the schedule for removal is the highlight of my day.

I am new to beekeeping, but I find a wealth of information from my mentors at the Bridgeport Bee Club. Most of the members have been beekeeping longer than I’ve been alive. There is so much information to be learned by attending the meetings, and your questions will most likely be answered with a great story.

I’m thankful that Glen Jennings, my boss at Arbor Masters in Saginaw, Texas, allows me to attempt a bee removal before removing a tree. Arbor Masters recognizes the importance of the honey bee and its vital roll in our food supply and is willing to take the steps in preserving them. The United States has experienced a decline of bee colonies in large numbers. The preservation of the honey bee is a concern to a lot of people, and I have a list of people who would like to have a hive on their property.

Recently, Jennings received notice of a City of Fort Worth tree scheduled for removal that had bees in it. I was given the address and prepared for a bee removal on a Saturday evening. Just so you know, bee removals are best done in the early morning or late evening hours.

The hive entrance was about 12 feet off the ground in a hollow limb of a dead American elm.

With bee suit, bee vac, climbing saddle and chain saw, I approached the entrance to the hive. My wife, Lisa, acted as ground crew. Lisa was also dressed in a full bee suit – she knows how angry bees can get when the chain saw is started.

I started by vacuuming up bees at the hive entrance. Then came time to make the entrance larger; I cut away a little of the tree at a time and vacuumed up more bees after each cut. Slowly the hive was exposed and I could reach in and start removing comb.

I found brood and a small amount of honey. The comb was very dark, which indicated that the hive had been in the tree for at least couple years. I was able to remove about 2 pounds of bees and 10 pounds of comb. I was not able to reach all of the hive because it went down into a deeper cavity in the trunk. It was very unlikely that I got the queen, so the bees that I did recover were combined with another one of my hives. The honey comb was also taken back to my hives and laid out for the worker bees to clean it up.

Jennings checked the tree about five days later and found no evidence of bees. That means either I got the queen, killed the queen or disrupted the hive by taking so many bees that the remaining bees relocated. Even so, I plan to have my bee jacket on site during the tree removal just in case a few bees are still hanging around to welcome me back.

Kristoffer Rasmussen is an arborist with Arbor Masters Tree Service in Ft. Worth, Texas, A TCI A accredited company.
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