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We know that when the end of March/early April comes for our members who are not living in warmer areas, the speed at which you run accelerates. Here at your TCIA home base, we have been running the race with you hard and fast since the beginning of 2008. Through mid June, we:

- managed government affairs issues in British Columbia, Michigan, Florida and New Jersey, and at the federal level on multiple fronts with OSHA – on a separate standard for arboriculture, chipper winch safety, and Lyme disease;
- formed an Alliance with Michigan OSHA and several arborist organizations;
- began a dialogue on a separate standard for arboriculture with Virginia OSHA;
- donated more than $28,000 to support future students in arboriculture through our Robert Felix Memorial Golf tournament;
- provided a limited health benefits program to help you recruit and retain your employees;
- put on free EHAP workshops, through an OSHA Susan Harwood Grant, training more than 1,500 arborists all over the country;
- applied for more federal OSHA grants for future EHAP and CTSP workshops;
- held our fifth record-breaking meeting of cutting edge education at the Winter Management Conference;
- applied for EPA grants to help retrofit your vehicles and contribute to sustainability in our industry;
- held our first Washington, D.C., fundraiser for a Congressperson; and
- moved your trade association’s home to serve you better in the coming years...

I share this to let you know that when you’re running the race, we are keeping pace right beside you.

We are putting your interests first trying to help you stay safe, build the future work force, attract and retain members, keep the regulatory climate favorable to you, provide you and your team with top notch education, incorporate your experiences into our planning, and always challenge ourselves to be ahead of the curve in meeting your needs.

We don’t just develop services without your insight or throw resources at problems. We work with you to create opportunities for this industry; to meet your challenges head on.

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Cynthia Mills, CAE, CMC
Publisher
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The Next Generation

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TREE GEAR. TREE PEOPLE.
Throughout the southern Appalachian Mountains the eastern hemlock forests dominate many places in the landscape. They represent the largest (by wood volume), tallest and most common trees in places like Great Smoky Mountains National Park. Increasingly, the scenic overlooks there now offer vast views of dead giants. Hemlocks are in visible, massive decline – generating much public awareness, even though what the public is seeing is the impact of a crisis that has been mounting for two decades.

Devastation is caused by an Asian relative of the aphid, *Adelges tsugae*, hemlock woolly adelgid (HWA), a sap-sucking insect that set up camp in the southern Appalachians much more quickly than anyone could have guessed. It was first spotted on eastern hemlock in Virginia in 1951, and eastern North American hemlock forests provided a new frontier – no enemies in sight and a seemingly endless supply of food.

Twenty years ago, the HWA spread to Shenandoah National Park. By 1992, 95 percent of the hemlocks were dead. It continued to make its way north, up through New England, and south through the forests of the Blue Ridge; it was eventually discovered in the Smokies in 2002. Mild winters there fomented a population explosion. Now the subject of much anxiety for land managers, the HWA poses the single greatest threat to both eastern and Carolina hemlocks. It’s even sparked fears that the two species could become functionally extinct.

But as the HWA spreads, so too does the effort to fight them. Scientists, arborists and land managers are among some of the people racing against time to preserve the hemlocks. Arborist and TCIA member Will Blozan is one of these individuals who has lately made saving the hemlocks the cause of his life.

Blozan regularly ascends some of the tallest and largest old-growth hemlocks in existence. Climbing from the forest’s darkness into the open, airy canopy offers him a friendly perspective. It’s sunnier, with endless views of sky and mountain, where hummingbirds might survey his red climbing gear with curiosity. Over the years, the biggest and tallest trees have become his specialty. When it comes to hemlocks, he’s downright obsessed.

“There’s something about these ancient trees that’s inexplicable to humans,” he says.

In 1993, one year after Shenandoah’s tragedy, Great Smoky Mountains National Park hired Blozan to assist with surveying the park’s hemlocks and prepare for the arrival of the HWA. For three years he worked among these trees, developing a deep appreciation for the species. Along the way he developed a talent for finding champion trees. To date, Blozan has contributed some three dozen champions from over 15 species to the American Forests National Register of Big Trees. After leaving the park service, Blozan took his knowledge of trees to the private sector and started Appalachian Arborists, Inc., a tree service in Asheville, N.C., specializing in HWA management. In his spare time he shares his passion with other tree enthusiasts by serving as president of the Eastern...
Native Tree Society, an online community (www.nativetreesociety.org) primarily dedicated to finding the biggest and tallest trees of the East. (The acronym is ENTS, named for the enchanted trees in J.R.R. Tolkien’s Lord of the Rings.)

By 2005, Blozan could see that the die-offs were going to be massive. Unable to sit idly by, he poured himself into a project of historic proportions: finding, climbing and measuring the 15 biggest and 15 tallest eastern hemlocks before they perished. He didn’t want to see them go the way of the American chestnut, which, until it was obliterated by a non-native fungus in the early 1900s, had probably been the most common tree in the southern Appalachians. Yet no historical records remain for what that species was capable of in terms of height and mass. Blozan knew that if he couldn’t preserve the hemlocks, he could at least preserve their data. To him, it was a matter of historical record. His seven notebooks worth of information might one day prove useful for hemlock restoration.

The project, named the Tsuga Search Project (Tsuga being the Latin genus of hemlock), was grueling and expensive, costing his company about $100,000. The quest for superlatives took him to five states, but not a single hemlock outside the southern Appalachians was over 160 feet. Prior to the Tsuga Search, the tallest known hemlock was 169.8 feet tall, another one of Blozan’s height champions. (Most guidebooks describe hemlocks’ maximum height at 150 feet.) By August 2007, 21 months after the project started, his team wrapped up their findings. They had climbed and measured over 9,300 feet of hemlock in some of the most remote reaches of eastern wilderness. The results clearly made his vision worthwhile. Not only did they find hemlocks that broke height and volume records, but they also engineered methods for determining tree measurements more accurately.

Walking through the woods looking for big trees is as much an art as a science. Blozan and his project partner, Jess Riddle, used a laser rangefinder and clinometer for an initial measurement before deciding if it was worth climbing for a more accurate reading – dropping a tape measure down from its top. Even from the ground, they can estimate a tree’s height with amazing accuracy, which is how during a lunch break they found the first hemlock ever recorded measuring over 170 feet. Of the many hundreds they measured, only three others were found in this height range; the tallest, 173.1 feet.

The team used a park soils map to find the bedrock that Blozan and Riddle suspected was helping produce the tallest specimens, which led them to new finds in the Cataloochee, N.C., district of the Smokies. They searched every outcrop before finding the holy grail of tall trees. That day they found seven superlatives. Every cove had something in it – super-tall tuliptrees over 170 feet and red maples over 140 feet.

“There’s no other place in the east with this much density and height,” says Blozan. The finding secured Cataloochee as the modern day “epicenter” of the tallest hemlocks in the world. But the find was bittersweet – many of the hemlocks were too far gone. “Had we done the study earlier, we could have saved them all,” he adds.

Out of the four tallest hemlocks on record, only one remains alive. Of the 30 record-breakers for height and wood volume, six are alive, but only three appear healthy enough to survive. (They have been treated with insecticides – more on that later.)

For all of Blozan’s efforts to keep the hemlocks in the spotlight, he has attracted
a lot of attention to himself. Reclusive by nature, Blozan seems more comfortable listening than speaking. But as the publicity increases, he willingly takes the mantle of speaking for the trees from whatever stage he can. In addition to local articles and presentations, his work has been featured in *The New Yorker* and *Wall Street Journal*. Now, he’s being filmed for a documentary about the hemlocks, a project begun through a friendship and fueled by a shared sense of purpose.

The documentary, entitled “The Vanishing Hemlock: A Race Against Time,” is currently being filmed in Great Smoky Mountains National Park. Filmmaker David Huff is currently raising funds for the project and hopes to have it completed by the end of the year and distributed by spring of 2009. It’s a project that developed as much from Huff’s friendship with Blozan and knowledge of his work as from his own interest in the hemlocks’ fate.

“I’ve spent a great deal of my life hiking and camping in these woods and the loss of these trees is personal,” he says. Blozan helped make the issue personal when he showed Huff a picture of one particular tree in massive decline – a tree they had climbed together years before when it was lush and full.

Whereas Blozan’s mission is raising awareness for the hemlocks by sharing information, Huff’s mission is to let people participate visually and emotionally in a changing landscape. He does this by following his friend into the woods and up the trunks of the world’s largest hemlocks, and by filming from a rare vantage point that only birds, helicopter pilots and some arborists can regularly appreciate.

As a filmmaker, Huff knows the power of images. He knew that others would be moved if they too could witness the devastation up close. Instead of raising money for the cause, he felt his biggest contribution would be to reframe the issue on a larger screen, shifting the story from the ground to the canopy.

The response from land managers who’ve seen pre-production footage from the film hints at its potential impact. The room often gets quiet when shown the aerial footage over Cataloochee, an area of Great Smoky Mountains National Park described by Blozan as the “Valley of the Giants.” But when it’s over, there’s clamoring to get the film distributed widely, and soon. It offers a new perspective for anyone, perhaps most importantly those most intimately involved in saving hemlocks.

(To learn more about this project and/or to make a tax-deductible contribution, visit www.thevanishinghemlock.com)

**Saving individual trees**

For all the attention that Blozan has helped bestow on the hemlock crisis, his work is not without heartbreak and frustration. As more information about HWA reaches the mainstream, there’s also been
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an increase in misinformation. For private property owners, confusion reigns about how to protect their investment of trees. Since it costs far more to cut down a dead tree than it does to protect it with insecticides, many landowners have fallen prey to unethical tree care companies wishing to make a quick buck.

A recent heartbreak occurred just outside of Asheville, N.C., where Blozan had been keeping an eye on a healthy hemlock grove in an old churchyard – trees that were planted circa 1820. He wanted to leave the church a note about his services, but the next time he passed, the trees were gone. Someone had convinced the church that trees were dead and it would be better to cut them down than to treat them. Blozan could have treated them with about $300 worth of insecticides.

The standard treatment for HWA-infested hemlocks is with imidacloprid. For years it has been the short-term means of killing the HWA, and studies have shown it to be effective without compromising the environment. In 2005, it was approved for backcountry forestry use. Even so, Blozan is seeing that its slow uptake is nearly ineffective on large, heavily-infested trees over 30 inches in diameter.

Blozan points to current research that says that any hemlock over 32 inches diameter is under-dosed when treated with

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current imidacloprid dosage rates. “Some of the largest trees are probably only getting one tenth the dose [of imidacloprid] that they need.”

Blozan, who’s worked with HWA since 2001 and has been a big proponent of proactive imidacloprid treatment, has recently seen great promise from a newer chemical made by Valent called Safari (dinotefuran). It’s a solution 80 times more water soluble than imidacloprid and can translocate into the needle within days, essentially giving heavily infested hemlocks a new lease on life.

Blozan is hoping that Valent will be able to set up research plots in the Great Smoky Mountains National Park, where HWA is killing trees at an alarming rate. Desirable results could allow Safari’s label to include forestry use.

Private property owners are understandably fearful about HWA. For the hemlock, the cycle of death is quick: first the needles fall off; then the adelgid population crashes. The tree tries to recover by sprouting new needles, and the tree becomes re-infested. Without intervention, a fully infested tree can literally starve to death within five years, during which time it will turn a grayish-green color.

Scientists are also fearful, knowing that the loss of the hemlocks could be even more ecologically disruptive than was the loss of the American chestnut. The chestnut left gaps that were eventually filled in with other hardwood and nut producing trees. In the southern Appalachians, no other native evergreen exists to fill the specialized niche of the hemlocks.

In some ways, arborists are perhaps most uniquely positioned to educate land owners about HWA and the best available treatments, as well as to dispel myths from predatory tree service companies.

Whether from the pest itself or the slow human response to treating against HWA, Blozan has had many frustrations in his work. A realist, he’s not always hopeful about the overall fate of eastern hemlocks, but he remains firmly committed to the task at hand: saving one tree at a time.

Will Blozan checks out hemlocks at Pole Road Creek in Great Smoky Mountains National Park. He hopes new treatments can help save the hemlocks before it’s too late. Photo by Jason Childs, March 2007
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SherrillTree partners with investment firm GEI

SherrillTree this past spring became a shared business with funding from Generation Equity Investors (GEI), an investment firm specializing in growing businesses.

Still running the show, Tobe Sherrill, CEO, says this chapter in the book of SherrillTree’s history is a little different from the evolution of the business past. From its beginnings as an independent firm in lawn and garden hardware since 1960, to a retailer of tree care machinery in the 80s and 90s, SherrillTree has become what the company promotes as “the world’s largest supplier of arborist gear in alliance with Vermeer Manufacturing.”

“This is an exciting time for our company. GEI brings a tremendous amount of experience that will help grow the company while allowing me to focus on what I do best and enjoy the most – helping to discover and improve products for the arboriculture industry. I very much look forward to being a part of every stage of SherrillTree’s future successes,” says Sherrill.

“The Company has demonstrated consistent top and bottom line growth under the capable leadership of Tobe Sherrill and SherrillTree’s president, Alma Hill, through product innovation, incredible service and unique programs that support its customers and its industry,” says Gary Furst of GEI. “We are energized to help realize the company’s potential over the coming years.”

Stihl opens online iCademy to train and test future techs

As part of its continuing commitment to education, Stihl Inc. has opened its iCademy online dealer training program to vocational education students. The move allows educators to access Stihl’s Internet-based distance training and testing program and augment all aspects of their technical instruction curriculum. The site launched in 2007 and has 200 schools participating to date.

“It’s no secret that one of the biggest challenges employers face today is filling openings for skilled trade positions, including those of competent service technicians,” says Fred J. Whyte, president of Stihl Inc. “Certainly, by providing the iCademy content to vocational instructors, we are giving them one more tool to help develop future service technicians.”

Because it sells only through servicing dealers, Stihl developed the current iCademy program to help dealers improve their business. It has become an integral tool for them, enabling employees to access first class training while limiting travel to remote locations, conserving time and minimizing expense.

Students in outdoor power equipment classes will also now be able to go online and learn about certain components of repair on a Stihl products, how to effectively merchandise a retail selling area or proven techniques in selling and customer service. Then they can test themselves to see if they have absorbed the knowledge well enough to make repairs in the shop or to interact with customers.

U.S. Armed Forces orders 85 Bobcat S330 Loaders

The Bobcat Government Sales Department in West Fargo, N.D., in June secured an order with the U.S. Armed Forces Contracting Division for 85 Bobcat S330 skid-steer loaders and attachment packages. The order was handled through a strategic partnership with Kipper Tool.

Mike Melroe, Government Sales Manager, says the machines are being staged in Lisbon, N.D., where they’re being prepared for delivery to U.S. military units in Afghanistan. Some of the machines could be sent overseas immediately. “Twenty-five of them are considered a high-priority requirement,” Melroe says. “They will be put on planes. The remaining 60 will be sent on ships.”

The attachment package includes a trencher, snow v-blades, pallet fork and frame and bucket for each of the 85 loaders. According to Melroe, the loaders and attachment packages will be used by U.S. military units based in Afghanistan.

The S330s are a step up from the Army’s previous orders, according to Bobcat, which said that, typically, the Army has bought Bobcat S150s.

SavATree merges with Shearer/Penn, opens New York office

SavATree in April announced a merger with New Jersey based Shearer/Penn, expanding their efforts in the Central/Southern New Jersey and Eastern Pennsylvania area. Merging with Shearer/Penn further promotes SavATree’s strategy to provide environmentally-sensitive tree, shrub and lawn care.

SavATree has been providing local residents with quality and reliable tree and lawn care since 1932.

“Our growth is largely a reflection of SavATree’s reputation in the communities we serve and inside our industry,” said Daniel van Starrenburg, president of SavATree, adding that SavATree was “delighted to partner with a company with such a rich history and commitment to environmental excellence.”

Also this spring, SavATree opened an office in Buchanan, N.Y., servicing Dutchess County and the Hudson Valley area.

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Weaver Leather’s Has New Saddle

The newest lightweight saddle from Weaver, the Cougar Rope Bridge Positioning Saddle, offers the perfect combination of comfortable memory foam, adjustability and thoughtful design. The saddle’s 4-inch-wide leg pads and extra wide 7-inch back are constructed from memory foam that conforms to the body, reduces pressure points, wicks away moisture and does not retain heat for cool, comfortable performance. The leg straps and the straps attached to the bridge are adjustable to provide a comfortable fit for a variety of body types. In addition, this saddle features quick-connect buckles on the leg straps, a rope bridge with rubber bumpers, a training/rescue belay loop, fixed position side D rings and removable leg pads and bridge. Contact Weaver Leather at 1-800-932-8371 or via www.weaverleather.com.

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Beaver Squeezer’s Skid-Steer Grapple

Beaver Squeezer’s largest universal skid-steer grapple opens to 62 inches and has 360-degree continuous rotation. Models are available for large skid-steers, compact loaders, tractors and material handlers. Additional features include universal quick connect, standard hydraulic flow and hydraulic winch options. Its patented frame design gives the unit ability to secure logs or brush for stability and control while moving. Logs can be carried horizontally or perpendicular and easily loaded over side-bodies, log bolsters or from the end of a truck. Brush and tops can be crushed and fed into a chipper or loaded for disposal. Contact Beaver Squeezer Grapple LLC at 1-800-457-4613 or via www.getbsg.com.

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New Generation Fecon Mulchers

Fecon’s next generation of Bull Hog mulchers for skid steers feature a patented HDT (heavy duty tooling) rotor system. Offering 20 percent more production, lower fuel consumption, reduced maintenance and better sizing, its rounded skid shoes help to reduce material build up on the ground and two new push bar options give versatility for handling material. Additional flexibility is derived from four tool options: single carbide, double carbide, chipper knives and stone teeth. It is available in three models: 77the BH62SS, with 24 tools and a 50-inch cut; the BH74SS, with 30 tools and a 60-inch cut; and the BH85SS, with 36 tools and a 70-inch cut. All Bull Hog Skid Steer models are compatible with carriers that provide 27-45gpm. Contact Fecon Inc. at 1-800-528-3113 or via www.fecon.com.

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New Bobcat Spade Attachments

Bobcat Company’s new line of tree spade attachments are available in five sizes – 24, 28, 32, 36 and 44 inches – and in truncated, modified and cone blade configurations, giving contractors the ability to select the right attachment for their machine and application. All sizes are available in all blade configurations, except the 44-inch tree spade, which is available in the modified and cone configurations. The truncated blade configuration has a 22-degree tower angle that provides a better stand of the tree when placed in a basket. Truncated blades are best for use in loamy soils. On loamy to sandy soils, the modified blade configuration works best. Bobcat modified blades have a tower angle of 25 degrees, which allows the tree to be placed in baskets. The cone blade configuration is most often used to pick trees up and then transport and place them. This blade configuration can also be used to place trees in baskets. This blade configuration works best in sandy soils. Bobcat offers two valve options for the tree spade attachments, 7-pin or convertible. Contact Bobcat via www.bobcat.com.

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The OtterBox 7030 laptop carrying case protects expensive laptop computers from bumps, drops, dust, mud, dirt and even water. The virtually indestructible high-impact, polypropylene construction case is ideal for arborists and tree service operations now relying on laptops for scheduling, site planning, contacts, bids and billing on-the-go. It fits devices up to 15 inches wide and can be used for slates, tablets, ultra mobile PCs and convertible tablet PCs. Customize the shock-absorbing, Velcro rubber bumpers to fit any device. Case includes a shoulder strap and a removable file folder accessory to store files, pens and business cards. Contact Otterbox, LLC via www.otterbox.com.

Bandit’s New Drum Chipper

Bandit’s new Model 1090XP is a compact, 12-inch capacity drum-style chipper featuring a 15 3/8-inch by 17-inch chipper opening and a 37-inch diameter drum. Weighing in between 5,300 and 6,300 pounds on a single 7,000-pound Nev-R-Lube Torflex axle, the 1090XP can be equipped with engines ranging from 65 hp to 140 hp. It upstages competitors with an oversized diameter drum, a feature common on Bandit drum chippers. This drum is a full 15-inches larger than many of its competitors, maximizing its chipping and fuel efficiency. Contact Bandit Industries, Inc. via www.banditchippers.com.
Events & Seminars

July 16, 2008
Fertilizer School
Northeast Shade Tree, Portsmouth, NH
Contact: (603) 436-4804

July 17, 2008
Connecticut Tree Protective Association (CTPA) Summer Meeting
Farmington Club; Farmington, CT
Contact: (203) 484-2512; www.ctpa.org

July 18, 2008
2008 Woody Plant Conference
Swarthmore, PA
Contact: (610) 388-1000 x507; www.woodyplantconference.org

July 19, 2008
2008 summer ISA-Certified Arborist Recert. Course
U-Georgia Center for Continuing Ed., Athens, Georgia
Contact: 1-800-811-6640; www.georgiacenter.uga.edu/ppd/ppdregform.phtml

July 24-25, 2008
Certified Treecare Safety Professional-CTSP Workshop*
St. Louis, MO
The Stupp Center at Tower Grove Park
Contact: (800) 733-2622; www.tcia.org

July 25, 2008
Fertilizer School
St. Louis, MO
The Stupp Center at Tower Grove Park
Contact: (800) 733-2622; www.tcia.org

July 26-30, 2008
84th Annual ISA Conference and Trade Show
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By Zack French

“Everything looks yellow.”

These were the words a fellow tree worker said to me recently during a particularly hot day. He seemed disoriented, and his motor ability seemed to be impaired. It was obvious that it wouldn’t be a good idea to send him up another tree. After careful consideration, he was sent home to rest and recover in the refrigerated atmosphere of his home. It was very apparent that he was suffering from an all-too-common ailment during for tree workers during the summer – heat exhaustion, one form of heat stress.

What is heat stress?

Heat stress is defined by the National Institute for Occupational Safety and Health (NIOSH) as heat-induced occupational illnesses, injuries and reduced productivity that occur with excessive exposure to a hot work environment. During summer, we tree people are certainly exposed to these conditions. Usually what little shade we might be under is constantly being cut down around us and by the afternoon, when the sun is highest, we are in the full extent of it, cleaning up what we did in the morning. After a long day in the heat, it’s hard not to be affected. If you don’t take care of yourself out there, you will likely suffer from some form of heat stress.

Heat stress is grouped into three basic categories: heat cramps, heat exhaustion and heat stroke.

Heat cramps: Heat cramps are muscular pains and spasms due to heavy exertion. They are the least severe form of heat stress; however, they are an early indicator that the body is having trouble dealing with the heat.

Heat exhaustion: Heat exhaustion typically occurs when people exercise heavily or work in hot, humid conditions. Body fluids are lost due to perspiration, and blood flow to the skin increases, which decreases flow to vital organs. This results in a mild form of shock that, if not treated, could eventually lead to heat stroke.

Heat stroke: Heat stroke is LIFE THREATENING! The body’s temperature control system stops working, and body temperature rises sharply, often in excess of 103 degrees Fahrenheit. At these temperatures, brain damage is likely and death may occur if medical care is not received.

When does heat stress occur?

The answer to this question is easy – when it’s hot! More specifically, however, the chances of suffering from heat stress increase as both the temperature and the humidity in the atmosphere increase. Most people have heard of humidity’s relation to heat as the heat index. The heat index is the number in degrees Fahrenheit of how hot it actually feels like outside when relative humidity is added to air temperatures.

Adding humidity to hot air makes it harder to cool down. Sweat or perspiration cools the body through evaporative cooling. As the liquid evaporates, energy is absorbed from the skin. But high humidity decreases evaporation, minimizing the cooling effect of our perspiration. Instead, the sweat acts as a pressure cooker and can actually raise our body temperatures to dangerous levels. The Oregon Chapter of the Occupation Safety and Health Administration (OSHA) has produced a chart illustrating how humidity affects the heat index and increases the likelihood for workers to suffer from heat exhaustion.

What to do for heat stress?

If you suspect that you or someone on your crew is suffering from heat stress, the first thing to do is to put him or her somewhere cool.

First, remove or loosen tight clothing and have the victim water at one-half cup every 15 minutes. Apply cool, moist cloths. Continue to give the victim water at one-half cup every 15 minutes.

If you suspect heat exhaustion or heat stroke, further measures should be taken. First, remove or loosen tight clothing and apply cool, moist cloths. Continue to give the victim water at one-half cup every 15 minutes.

A visual inspection of the victim could tell some critical information. If the victim is still trying to cool itself and therefore you can rule out heat stroke. Also, if the victim’s skin is pale, clammy to the touch and flushed, chances are good that you’re dealing with heat exhaustion.

However, if the victim is not sweating, his or her skin is hot and dry to the touch and has a hot, red complexion, heat stroke is definitely a possibility. To be sure, take the victim’s temperature as soon as heat exhaustion or heat stroke is suspected. If temperatures are normal, they might have heat exhaustion, but they likely aren’t in immediate danger. If they have significantly high body temperatures (102 degrees or above), heat stroke is likely and immediate medical attention is required.
What can I do to prevent heat stress?

The easy answer, again, is stay out of the heat. Unfortunately, as tree workers we aren’t afforded the luxury of air-conditioned offices, and regularly scheduled breaks are often hindered by a push to get things done. That said, there are several things we can do to make the summer less difficult – and dangerous – than it might be.

The first thing to remember is to always have plenty of water available. Companies should provide crews with water, or at least a container to fill in the morning. If there isn’t one on your truck, urge your employer to provide one. Drinking water is the most important factor in staving off heat stress. It is how we cool ourselves and it is important in our biological functions. Without it, just like the trees and shrubs we care for, we shrivel and die.

Second, take frequent breaks. We have a very physically demanding job. It is important to find shade and cool down for five to 10 minutes every few hours. In the heat of the summer, frequent breaks relieve the body between climbs or trips to the chipper.

Another suggestion is to work fewer hours or fewer days. I know some company owners are groaning at this suggestion. “It’s the busiest time of the year! We’d lose too much production!” Those who doubt me, consider this: a rested worker is a productive worker while an exhausted worker may well be next to useless. You might find you get better production out of your workers in fewer man-hours during the summer if you push long and hard for an extended period of time.

Also, try working earlier in the day. Early to rise makes a man wise and also keeps him cool by letting him work a full day and quit before the heat gets unbearable in the afternoon. The earlier the start the better, though this is somewhat limited by the fact that you can’t get out too early and start the chain saws without someone complaining.

Another thing to consider are lightweight, light colored clothes. Company colors notwithstanding, it is important to wear something that will breathe and reflect some of the sun’s heat. Also, remember to keep this clothing on! It may seem like a good way to cool off by shedding a shirt in the hot sun, but the resulting sunburn is only going to make you more susceptible to heat stress.

On that topic, let’s briefly consider PPE in summer. Hardhats and chaps are the biggest complaint in my area for being hot in the summer. However, it is critical that we wear them anyway. Some ways to make hardhats more bearable are to keep them clean and fitted properly. Wearing hair shorter in the summer also allows air to better circulate underneath the hardhats, keeping heads cooler.

As far as chaps go, we are required to use them any time we are using a saw on the ground (and for good reason). It’s well worth the extra 10 seconds to put them on and take them off before and after using the saw, and if regular breaks are used to relieve operators, heat stress shouldn’t be a problem, even in the hottest climates.

Conclusion

Summer is tough. Every year I wonder how it came to pass that I chose to spend the hot days hauling and loading hundreds of pounds of wood into a truck after hauling hundreds of pounds of me up and down a tree for hours on end in unrelenting heat. Somehow I make it through it and by fall I’m preparing for the other end of the mercury scale. Knowing how to deal with heat stress took a long time for me to learn but, hopefully, after reading this article you should have a good idea how to keep you and your crews safe during the hot summer.

Zack French is a Certified Treecare Safety Professional, Board Certified Master Arborist and Registered Consulting Arborist working as an independent contractor and operations consultant in Nashville, Tennessee.

References:
American Red Cross Web page topic: “Heat Waves” www.redcross.org/services/prepare/0,1082,0_243_,00.html
Feazell, P. 2008. Personal communication with Pam Feazell, registered nurse, retired.
The call

In my business as a certified safety professional and management consultant, I work with electric utility companies across the nation. I enjoy my work until the phone rings and I hear someone in my office say “Oh no, not again.” On the other end of the line someone has called to let us know about a fatality in the industry. Sometimes the call is about a tree trimmer who has been fatally injured.

Prior to starting my business 16 years ago, I spent 17 years as a journeyman lineman and substation technician and worked with a lot of tree crews. During numerous storm recoveries, I worked with crews to clear and re-energize a zone. We’d clear the trees, get the lines up and the lights on – and it was my job to keep all of those guys safe.

The decision

What I learned through those experiences, and have confirmed in my research since that time, is that we all make a decision every day – we decide if we’re going to work safely. I watched workers determine how they were going to do the job of clearing electric lines covered with tree branches and other debris. Sometimes I had to tell the contract tree trimming crews they were breaking one of our company rules or doing work in an unsafe manner. When the response was, “Too bad, that’s the way we do it in our company,” I had to walk them through the process and have a little “attitude adjustment” time. Usually a safer decision was made.

Most injuries or fatalities happen not because of bad equipment, or the company doesn’t care, or the industry doesn’t have the best work practices, but because a worker made a poor decision. He or she used the “just this once” philosophy. When we get away with breaking the rules once, it encourages us to try and get away with it again. We never know when it’s our last chance. That’s why we’ve got to work toward creating a zero-injury environment.

Targeting zero

When I get involved in an investigation, one of the first things I ask is, “What else could have been done to prevent the incident?” When someone is fatally injured on the job, it isn’t just the company that is affected; family and friends also suffer.

The bottom line is that we need to make the decision to work safely so we can do every task and trim every tree without an injury – even the scrapes, cuts and bruises that aren’t OSHA recordables.

These minor injuries don’t have to happen – if you accept that they do, they become part of your business. When you don’t put on the long sleeves and the gloves and when you don’t wear what you need to in order to protect your body, it makes a big difference in the safety culture of your company. When we make it a practice to not follow the rules or “do it just this once,” we build a culture of mistrust and misunderstanding about safety responsibility. Then everyone starts blaming one another for the problems.

The blame game

Too often I hear management ask, “Why won’t they work safely?” “Why do our workers take shortcuts?” “Why won’t they take responsibility?” Meanwhile, workers ask, “Why doesn’t management support safety?” “Why is it that all I hear from my supervisor is get it done!” “Why won’t they take responsibility?” Far too often executives, managers, supervisors and even on-site safety professionals point to the workforce as the problem. The truth is that everybody is responsible, from the owners and executives to the visiting college intern.

Do you believe that you can go out and do tree work without getting injured? Jobs are designed so that we can do them safely and we probably have all the rules we need to do the work without injury. The biggest issue is that we fail to follow the procedures and to wear personal protection equipment (PPE).

After a severe ice storm in December 2007, a tree crew was cleaning up an area near my home. They pulled up in their
trucks and went to work without putting out cones or wearing vests. They didn’t attempt to stop the traffic on the busy two-lane road. I noticed what was going on so I stopped my truck to block traffic, hoping that any minute the crew was going to set up traffic barriers and use other safety equipment, but they didn’t. I know these guys were just trying to get the work done. They apparently didn’t give a thought to not having an injury or damaging any equipment – they made the decision to work unsafely. They chose not to use the cones and vests that were on their trucks.

Targeting zero injuries takes effort. The job is going to get done, but are you going to decide to get it done without injury to yourself, co-workers and the general public? We have to take individual responsibility for our safety first and the people around us to have a successful job. Writer Michael Korda said it this way: “Success on any major scale requires you to take responsibility and, in the final analysis, the one quality that all successful people have is the ability to take responsibility.”

Taking responsibility
There is more to taking personal responsibility for workplace safety than you might think. (See Figure 1: Responsibility Model Diagram.)

First recognize that safety responsibility is a personal choice. You act on that responsibility because you feel you “have to” or you “choose to.” You will see in the Responsibility Model the two ways to take responsibility: “other-directed” or “self-directed.” These terms refer to states of mind about authority. Either one “has to” do something, (the authority is directed by others) or one “chooses to” (the authority is directed by self).

The “I have to” person
At the top left hand side of the model is the term “authority.” This authority comes from believing that someone is making you do something. This thinking leads one to comply or rebel against the perceived authority. To “comply” means that you do whatever you are told to without a sign of resistance. To “rebel” reflects open or observable resistance.

A compliant person is passive in his or her reactions. Although the person may seem to be happy to do it, deep down they resent being told to act by the authority. “Rebels” are more open and observable in their resistance. The results are the same whether the person complies or rebels – the person usually seeks revenge.

Ultimately, those who think of their job as something they have to do see themselves as the “victim” of, or “persecuted” by, a perceived authority. This way of thinking does nothing to help anyone – especially the victim. If employees consistently view the company, senior executives, supervisors or safety professionals as authority figures, they will find it difficult to deal with conflict, which in turn will affect their careers.

Obviously, the “I have to” model is not a desired state of mind. Conversely, the “I choose to” side of the model reflects a person who is autonomous.

The “I choose to” person
Autonomous people have an “I choose to” mindset when it comes to doing their jobs or behaving safely. Think back to when you were a teenager and your parents and teachers “made you” go to school, pick up your room and so forth. When you got older, you probably looked back and realized that they were only trying to help you become a mature, responsible adult. “I choose to” is a powerful state of mind.

In an “I choose to” state of mind, we either agree or disagree with the prescribed way of doing something – it’s our choice. By studying the facts of a situation or request, we say “yea” or “nay” to what is asked of us. To say “nay” is to disagree with what we are told and what we believe are the facts of the matter. The decision is not emotional because everyone knows where you stand. The choice to agree or disagree has consequences. To accept consequences – either positive or negative – of a decision is a mature act. Consequences that are positive tend to be repeated. The person with the “I choose to” state of mind accepts the negative consequences as correction and moves on. For this reason, people who follow the “I choose to” state of mind tend to get more responsibility over time.

Now some may say, “Oh, more responsibility? Sure, they will give me more, and with no more money!” I believe in most cases when an employee is trusted and begins to handle more responsibility, either money or job security is the reward. As trust builds, freedom follows. Freedom is earned by building trust.

Let me put this in perspective. Say a customer called and said that you forgot a limb. You go out to the site, park your pick-up and get the cones out. You grab a hand saw and head to the backyard where the tree is and the customer follows you. You
Injuries cost everyone. Targeting a zero injury culture and taking personal responsibility for safety means that we have to be willing to speak up when we observe people working unsafely.

Personal observation

When we observe co-workers behaving unsafely, we take responsibility when we are willing to point it out. Conversely it also means allowing others to point out our own unsafe behavior so we avoid injury. What typically keeps us from taking such responsibility? Embarrassment. Most people don’t want to be considered unsafe. It’s like saying, “Hey! You don’t know what you’re doing!”

During incident investigations, I’ve heard someone say, “I started to say something to you but was afraid to do so.” Why would someone be afraid? Let’s face it, no one wants to be thought of as not knowing their job. However, when it comes to safety we should all be able to speak up or be spoken to.

When I worked in the high-risk, high-voltage business, we had a communication process that created a work environment that supported taking personal responsibility for safety. This process raised our awareness and helped us stay focused. It gave us a way to communicate without saying, “Hey you don’t know what you’re doing!”

Remember where you’re at

We used a process that if you saw me without my safety glasses now and you said, “Hey, Carl, remember where you are at,” and you gave the sign for safety glasses, there was only one acceptable response: “thank you.” That is the only response that I could have because “remember where you are at” is intended to provide a system of communication so people appreciate and understand that it’s about raising awareness and preventing injury. (Yeah, I know! You’re not supposed to end a sentence with a preposition. Well, in this case you do.)

We have to remember where we are at all times because in this business a person can be seriously injured or die if he or she is not highly aware. You have to be keenly aware of what is going on and not drop your guard from start to finish because you are in a hazardous area.

Raising safety awareness through a communication process lowers incident rates, prevents injuries, and increases your chances of going home every day without an injury. When people start talking to each other and looking out for each other, they aren’t afraid anymore to say something.

The bottom line

The bottom line is that you have a decision to make every day. You are trained how to work safely, what equipment to wear and when to wear it, and what equipment to use and how to use it. It is your decision whether you wear it, use it and follow procedures.

Develop an “I choose to” attitude about safety because you want to be the best in the business. The best in the business doesn’t necessarily trim the tree the fastest. They do it correctly and in a quality way so that the tree is going to remain healthy. Most of all, they do it so they can trim many, many trees after that because they do it safely, following procedures. They look at the best practices and find out all the newest, greatest techniques and procedures so that they can put those things in place. Learn to look out for each other and you’ll have a workplace where nobody gets hurt – and that’s something we can all live with.

Carl Potter, CSP, CMC works with organizations that want to create an environment where nobody gets hurt. As an advocate for zero-injury workplaces, he is a nationally renowned safety speaker, author and advisor to industry. This article was adapted from his presentation on the same topic at TCI EXPO 2007 in Hartford.
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Please circle 48 on Reader Service Card
Letters & E-mails

Liability insurance

I thoroughly enjoyed the article “Do you Carry Enough Liability Insurance” by David Rattigan in your June 2008 edition. There are some good lessons in there.

Tree contractors can often find themselves involved in tree law cases whether they want to or not. A portion of my practice is as a consulting arborist expert for both plaintiff and defendant attorneys, and one of the first questions I ask is who was the last tree contractor to work on the tree that caused the injury or death, or possibly what company cleaned up the fallen tree. This is not necessarily to bring the contractor into the suit for possible negligence (though that could be the case), but to find out from a tree expert what the condition of the tree was before the incident or the condition at the time of the failure.

Tree contractors are considered to be experts in arboriculture, but they can also be subpoenaed as a fact witness or even as an expert witness. These cases are always about negligence or lack of negligence. And, be careful what you write or say in an estimate for tree services, particularly regarding whether a client’s tree is safe or not. Trees can be made safer, but there is no such thing as a safe tree.

Lew Bloch
Registered Consulting Arborist, Licensed Landscape Architect
Potomac, MD

Use two hands on the saw!

If the climber is so far out on the limb that there is only one hand available, the climber should probably defer to a good sharp hand saw. That’s what climbers did before chain saws were invented. And besides, how big can the branch you need to cut be if you’re that far out, assuming you’ve tied in high enough? This is ridiculous (articles and/or letters in every TCI from November 2007 through June 2008). Use two hands on the chain saw!

Bill Hascher
Arborist Department Manager
Biltmore Estate
Asheville, North Carolina

Call backs...

Don’t follow the money

In the article “Follow the Money: From Tree Care to Mulch Magnate,” in the May 2008 issue of TCI, the selling price of a Morbark Model 950 Tub Grinder was quoted inaccurately. Please contact your Morbark representative at 1-800-831-0042 or your local dealer for current pricing.

Wrong info in lightning protection article

I was a contributor to Guy Meilleur’s lightning protection article (“Providing Lightning Protection”) published in the June 2008 TCI magazine. I would like to get some clarification on a paragraph that was added in through editing. It appears near the end and states that, “NFPA and LPI standards are for buildings. If you use the LPI standard for trees, you will probably kill the tree.”

I am not aware of any procedure that we do when we install lightning protection that would even remotely harm a tree, much less outright kill it. I have had numerous comments sent to me by colleagues both local and around the country asking me to explain myself, thinking that they were my words. Could someone at TCIA shed some light onto the source of this statement and explain its relevance?

Michael P. Murphy, CA
Preservation Tree Care, Inc.
Beaufort, South Carolina

Editor’s note: Due to an editing error, the statement Mr. Murphy refers to was a notation on an editing proof and was included in error. Here is an explanation from Bob Rouse, TCIA’s director of Accreditation and ANSI A300 secretary:

The statement Mr. Murphy refers to was not intended for print; it was a note I placed on the article during technical review for purposes of internal discussion. It was a little exaggerated, although it may be accurate in some situations.

It also was not meant to be attributed to Mr. Murphy.

The LPI standard, if applied to trees, could require more roots to be cut for installation of the ground system, especially on larger trees, which in turn may be less able to absorb the damage and may create a possible liability for the arborist.

The A300 standard was written so that the arborist designing the system has the flexibility to specify and install a system on a large tree without causing major damage to the root system of that tree. The arborist may specify a system under A300 that is comparable to LPI or may specify a different system based on the individual tree and site.

In all applications there are variables that need to be addressed, so the statement should not have been printed.

Taking credit ... 

The article “Arborist Electrical Work: Providing Lightning Protection” by Guy Meilleur, in the June 2008 issue of TCI, included a graphic representation of a worksheet created by Dr. Kim Coder, but it ran so small in the issue that his credit was illegible.

Meilleur writes, “I regret not contacting him (Dr. Coder) in advance, and would like you to print a proper attribution. By just reading the caption, one might think I was taking credit for it.”

... and giving credit where credit is due

The May 2008 TCI cover photo and the photos illustrating the article “Preserving History Sometimes Means Removing the Tree,” in the June 2008 issue of TCI, were, unless otherwise noted, taken by Tyler Sharp.

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By Rick Howland

It’s a political year, so the time seems quite right for us to be stumping – for stump grinders.

You’re probably thinking, “What can be new in stump grinders?”

Well, it’s the same thing that’s been happening to pretty much all power equipment in the past decade or so. Interestingly enough, a lot of the equipment now in the pipeline – stumpers included – were designed and built long before the current fuel cost spike. Ironically, they are exceedingly well positioned to actually HELP the tree care pro meet the challenges of the new economy.

If we had to boil down the trends in user demand and purchasing practices, they would be that buyers are, one, opting for larger machines and, two, making their selections based on purpose.

In the case of larger machines, that translates largely to horsepower. Tree care pros are always looking for more power. In the face of the fuel crunch, though, this might seem to be counterintuitive. Wouldn’t you want something that is fuel-efficient? And doesn’t that translate to lower horsepower that demands less fuel – even though it may take more time? On the face of it – maybe.

Manufacturers we spoke with pretty much agreed that the professional arborist looking for a more powerful machine recognizes immediately that the job gets done faster and more efficiently with less labor time. More horses less cost in the long run.

Next, there is an inherent savings with more powerful machines in that they don’t have to work as hard to get the job done; that means, in turn, that their lifespan (or interval between purchases) is extended.

And, ironically, the federally mandated move to the new Tier 3 engines with lower emissions requirements has had an unanticipated effect of generally increasing horsepower, though not always. The reason? Technology needed to improve emissions has resulted in better burning of fuel, which has produced a higher punch per gallon with better economy. Go figure!

Ultimately, what we find is that business

Vermeer’s SC852 is an 85-horsepower unit designed with the power to tackle large stumps, but at only 35 inches wide with outer dual tires removed, fits through the backyard gate.
owners are looking at the entire operating cost of their stump grinders, including labor rates, when they make their decisions.

A corollary to this is that buyers also are making selections based on their business needs. Do they need a larger machine? Do they need more machines of different capacities and throughput? Do they just need one that can handle small jobs if that’s what their business is, or would one bigger grinder make more sense in getting every possible job done?

Jerry Morey, president of Bandit Industries says, “Trends in efficiencies we’re seeing are away from the real small grinders to those with more horsepower. Even though diesel prices are going up, users recognize that diesel is more efficient in fuel consumption, and engines are engineered with a greater lifespan. We are finding that the better companies are putting money into that because of better, long-term returns.”

Virtually every manufacturer is looking for every little edge in gaining efficiency. According to Morey, “We have been experimenting on (cutting) tooth patterns and styles to increase efficiencies of the grinding wheel, which will use less energy and fuel overall.”

Another trend he is seeing is an increased interest in tracked units. “We are selling a lot of our 2900 series, more of those than the wheeled equipment. Tracks get to the stump better, even in unstable terrain, and offer more surface contact with the ground during operation.”

He did point out that Bandit does offer an “unusual little, little machine” to do the occasional stump if that is the need. Morey says that instead of having to swing the entire machine to grind a stump, only the head and handlebars pivot.

Vermeer Corporation talks to customers continuously to develop feedback instrumental in the development of new machines and modifications to existing units.

“As customer needs change, so will our machines change to align with their demands,” says Todd Roorda, an environmental solutions specialist with Vermeer. “Any time we develop a new machine or modify an existing model, we talk with customers about what their wants and needs are.”

Vermeer concurs with the trend for wanting high horsepower units, especially getting them into backyards. This requires machines that are maneuverable, compact and productive. Responding to industry input, Vermeer recently introduced the SC852 stump cutter.

“The 85-horsepower unit has the power to tackle large stumps, but is only 35 inches wide (with outer dual tires removed), which allows it to retain a compact footprint for maneuverability on confined job sites,” Roorda says. This unit also features a four-position linkage design that allows the cutter wheel to move away from the machine as the boom drops down toward the stump. This reduces the need to reposition the entire unit while achieving cutting heights of 31 inches above ground and 25 inches below grade, he adds.

In response to demands for greater oper-
ator safety, Vermeer recently introduced an operator presence system on one of its most popular stump cutters.

“The control handles are equipped with sensors that recognize the operator’s touch,” says Roorda. “The operator presence system will apply the cutter wheel brake, which disengages the cutter wheel when the operator’s hands are no longer in contact with the handles.”

With increasing fuel costs and fuel efficiency a major concern, Vermeer is working to compliment the needs for fuel efficiency with horsepower demands. Engineers are looking at a variety of engine manufacturers for the right balance of power, torque and fuel efficiency needed for each application.

“Every new machine developed is initially designed to meet the Tier standards that are in place at the time,” says Roorda. “In some cases, we may slow down the development of a machine until the engine manufactures are able to supply us with the appropriate engine.”

John Marchionda, director of marketing for Husqvarna’s Forest and Garden Division, confirms the trends. “Because fuel efficiency is so important, some tree care companies want to do more with less with stump grinders that are more versatile and simple,” he says.

Selection of the stump grinder will depend largely on application or need, “and that holds true regardless of whether it is a tree care company focusing on commercial, municipal or residential customers.” With the small, portable stump grinder Husqvarna offers, users get economical versatility, whether they’re doing traditional tree work, picking up landscaping or land clearing contracts, need to get in to a tight space or right next to a house, or whether the need is regular or occasional. Husky’s unit is powered by a 13 hp Honda and features a 14-inch-diameter cutting head capable of a 12-inch depth cut.

“We are working to meet the need to increase the life of the product, meet the trend for fuel efficiency, and the need for highly versatile equipment that can get into places where older, larger equipment cannot. Some tree care professionals may be able to get away with purchasing only one stump grinder,” he says.

J.R. Bowling, vice president of marketing and sales at Rayco, notes that the biggest thing they have been working on is to change to Tier 3 engines that meet the net emission demands for diesel fuels.

“Sure, these engines are a lot more expensive,” Bowling stresses, “but you have to factor in fuel efficiencies of diesel and the fact that Tier 3 also became a more efficient engine. When engine manufacturers changed from a Tier 1 engine, they usually also see an increase of horsepower. We went from Tier 1 to 2 and got a bit of an advantage in horsepower. And now that we’ve gone to Tier 3, we get more horsepower – maybe a 65-horsepower model in the past will now be 68 to 70.”
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The challenge with the new Tier 3 engines is to include more cooling, but the electronics needed to achieve the emissions efficiencies may also be adding unintended positive consequences -- fuel efficiency and horsepower. As marginal as the economies are, they add up over time.

The consensus from manufacturers seems to indicate that, in addition to the marginal horsepower increase, manufacturers are able to get more usable power to the cutting head. A double whammy. So, the added horsepower (even using less fuel!) along with the added cutting head power gets the job done faster, using less fuel, taking less operator time and putting fewer hours on a machine, which is now intended to last longer than its ancestors.

Bowling says, “With the newest emissions engines just taking hold, we will see if we get added life as the engine manufacturers predict. For Rayco’s part, our guys here try to get longer life with every unit.”

“The newest stump cutter, and we are very excited about it, is the Rayco RG1645, utilizing a 44 horse Kubota diesel, (versus 48 hp on predecessor models),” says Bowling. “We have packaged this machine with added performance in a compact package. Self-propelled with 4-wheel drive (on wheels), the new machine also will not cost a lot to transport, will cut better than the previous closely similar prior model, even with four fewer horsepower, and do it for about $8,000 less, even with the updated engine.”

“You have to understand that this is an entirely new design and a complete departure from the past. Rayco makes a half dozen stumpers models. The new one just hit the market in the late spring, he adds.

Jason Showers is commercial sales manager at Morbark, a brand relatively new to the stump grinder arena. He says, “We are seeing a trend toward larger machines for not only their increased cutting width, but increased horsepower as well. We are also seeing a trend toward more powerful, compact machines. It depends on the customer, but they seem to be either combining smaller machines in exchange for a single larger machine, or they are getting rid of their larger machines in exchange for smaller machines. The case can be argued either way,” he cautions.

“In the example of the larger machine, it takes less time on the job and therefore uses less fuel overall, with relatively the same capital investment of (two) smaller grinders. Or, in the case of the smaller machines, they are less capital investment up front, and take a little longer to complete the job, but are smaller horsepower and more fuel efficient,” Showers says.

Morbark recently unveiled (at TCI EXPO 2007 in Hartford) the D52SPH Stump Grinder. This is the second generation of the former D52SP model. Several improvements were made to this unit including belt-drive to hydrostatic-drive, a 4 x 4 option, additional remote control features, two new cutting system options, new Kubota 35-hp diesel engine option, and an all new, no-tools-required dual wheel option.

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resulted in fewer moving parts, which in turn reduces maintenance time on the end customer,” Showers explains. “We were able to incorporate some new options into the equipment to better suit our end-customer’s needs. From a manufacturing standpoint, we were able to combine machine resources and standardize several components, which is helpful during the manufacturing process and to the end customer, who may own a larger model as well that utilizes the same componentry.”

According to Showers, the D52SPH features a 52-inch boom arc swing and a cutting depth of 19 inches, combined with being, in his words, the only compact, hydrostatic unit in its class. “This unit combines the perfect amount of power and functionality that are typically only found on larger horsepower machines.” If you’re not looking for a completely new piece of equipment, Miller Machine makes a stump grinder attachment for skid steers and tractors. One of the keys to its efficiency and operability is a new cutter wheel technology that delivers up to twice the throughput, according to Jeff Craft, company president. Miller last year introduced a tooth system that eliminates pockets and holders and in turn, minimizes drag. A four-point tooth design features eight cutting edges, with each tooth rotatable to present one of four new edges three times.

Miller attachment lifts, swings and telescopes. The swing is up to 6½ feet. The reach allows for a 24-inch cutting depth. There are some 15 models in various sizes.

John Bird at J.P. Carlton is very enthused about a recent development that brings greater long-term value to the company’s line of stump cutters. “We have partnered with Sandvik on the Dura Disk II cutting system, which has been shown to increase productivity by up to 60 percent,” Bird says.

Sandvik, one of the world’s leading carbide cutting toolmakers, applied its cutting technical know how to wood being processed by stump cutters. The materials used, together with sophisticated cutting-edge geometries (e.g., varying the amount of cobalt in the carbide and changing the thickness of the carbide for an extremely durable tool) have resulted in five major advantages over other systems, according to Bird: higher cutting efficiency, longer life, less chip spread, lower maintenance and lower overall costs.

Designs such as a patented low profile result in increased production throughput and extended tool life, Bird says.

“We’ve had great success in the marketplace with the Dura Disk II,” he says, noting that the interest increases with the cost of fuel.

So, in an economy in which every news report and every water cooler conversation begs the question, “Should I buy new? Should I spend the money?” you have to ask yourself “What do I need?” and “What will it get me in the short and long run?”

There is an old saying that it takes money to make money. Sometimes, you have to spend money to save money and to make it as well.

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STUMP GRINDERS AVAILABLE WITH THE FOLLOWING WHEELS

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Russell Hodge isn’t sure of the exact age of the massive burr oak that has stood sentinel by West 57th Ave. in Lake County’s Merrillville, Indiana, for centuries. He does know, however, that the 18-inch-long core sampler reportedly used in 1969 to measure its age wasn’t nearly long enough.

“They took their 18-inch core sample and then guessed on the rest of it,” says Hodge, an arborist with Erwin Tree Care, a TCIA member based in Hobart, Indiana. “I don’t doubt at all that this tree is 400-plus years old. I wouldn’t even argue if someone wants to swear up and down that it’s 500-plus. But there’s no number that can be verified.”

The truth will have to remain a mystery at least a little longer.

Taking a new core sample of the legendary landmark - whose trunk diameter currently measures 6 feet, 9½ inches - could damage the tree in its old age, Hodge says. And it would be ultimately counter-productive to his primary goal and current project: ensuring the tree has many, many years ahead of it.

Erwin Tree Care has appointed itself voluntary caretaker of the ailing tree, donating its skills, labor and resources to nurse the historic giant back to health. Before the company began pruning and fertilizing, the burr oak, Quercus macrocarpa (also called bur oak), was showing signs of decline, with some branches failing to sprout new leaves and others threatening to come crashing down without warning due to decay.

Working on the landmark is an honor for Gary Erwin, company president, who views the tree as one of the most rewarding projects he could undertake.

“I’ve always envisioned my company getting to the point where we would be qualified to do work on this tree,” says Erwin, who drives past frequently. “The tree has been kind of a goal of ours. And that came true for us.”

Hodge considers the community service a small tradeoff to preserve the tree to which so many - including himself - have sentimental attachment.

“Going way back, my dad had told me he worked on the tree back in the ’60s or ’70s,” says Hodge, who started helping his father in the tree business at the age of 10. “My grandfather had worked on this tree before that, even. Rather than sit back and wait and...
hope (that someone else would take action), I decided to be a bit proactive on this one. To me, this is the type of tree that deserves proper attention, and I wanted to make sure that it got the proper attention."

Those thoughts led the arborist to wedge his business card in the door frame of Noel Zemaitis, who had bought the property four years before. Hodge’s outreach was a welcome surprise to Zemaitis, who was starting to wonder what to do about the huge oak.

“The south side of the tree stopped producing leaves,” Zemaitis recalls. “It kept dying back slowly. Even mowing (the lawn) under it was kind of scary with the branches as huge as they are. Everyone was able to tell it needed some pruning. It needed help. It needed something.”

It is unclear what triggered the tree’s slow decline. The trunk stands approximately 40 feet from the road, and could be suffering from salt thrown on the pavement during inclimate weather, Hodge says. It is also possible that the burr oak, which thrives in wetter soils, is feeling the effects of recent drought years.

But the tree is also living on borrowed time. Burr oaks typically have a life span of 200 to 400 years, Hodge says. Its extended life is partially due to the fact this tree has never suffered severe storm damage and has never lost major limbs. And all those extra decades have allowed the 62-foot-tall tree to grow to massive proportions. The trunk’s base stretches to 8 feet in diameter; the trunk’s circumference measures 21 feet, 7 inches long; and the widest span from limb to limb is 108 feet. “Trees don’t get that gigantic in northwest Indiana,” says Hodge.

The tree’s great size has earned it a reputation. In addition to being featured in local newspapers multiple times, Hodge has been told the tree was featured in National Geographic. Zemaitis, who grew up in a nearby community, knew about the tree long before he purchased the property.

“The tree is on a road that’s well traveled,” he says. “Everyone knows of it. Wedding parties stop to take pictures in front of it. It’s a landmark for the area.”

But as much as owning the tree is a novelty, it was also turning into a massive worry. Finding Hodge’s card in his door that day was “a blessing,” Zemaitis says, adding, “It’s pretty expensive to maintain a monster tree like that.”

Planning to conduct between $2,000 and $3,000 worth of work, Erwin Tree Care opened a fund at a local bank and invited the community to make donations for the project, to which local landscapers, small businesses, the local power company and residents responded. “I was heartbroken that in the last few years the tree had suffered some decline,” says Tom Allen, owner of Allen’s Landscape Center in Highland, who donated to the project. “It’s just a gorgeous tree. I’ve watched this thing grow since I was 16 years old.”

Erwin Tree Care first arrived on the property April 2, 2008, with a crew of five, a bucket truck and a plan to prune the tree of deadwood. Hodge estimates the tree had not been pruned in more than a decade.

“Trees don’t get that gigantic in northwest Indiana,” says Hodge.

Until recently, the burr oak had probably not been pruned in a decade. Some dead limbs were 12 inches in diameter. While Erwin Tree set up to work on the burr oak, often members of the media were setting up to cover the work being done. All images courtesy of Russell Hodge and Erwin Tree Service.

Gary Erwin does some deep-root feeding. In addition to pruning, the crew fertilized the soil and added a biosimulant to replace lost microbes and nutrients.
crew worked throughout the morning, stopping traffic occasionally to reach branches that stretched over the road.

“We took one limb off that was almost 24 inches in diameter,” Hodge says. “We did a ring count and that limb was 180 years old.”

Zemaitis, who does not have experience in tree care, watched the work from the ground. “Everyone was bouncing all over the tree,” he says. “It was crazy.”

Workers chipped most of the waste on site, but saved a few of the bigger sections for Zemaitis and companies who donated to make the work possible.

“All the supporting companies are going to get a slice of it,” Hodge says.

After cleaning up the crown, the crew returned April 24 to apply an onyx borer prevention treatment. The treatment was doused on the trunk, to be absorbed into the bark and move into the tree’s vascular system.

“It helps prevent borers, which is often the thing that gets older oaks over time,” Hodge says.

“As long as nothing catastrophic happens, there’s no reason it can’t live another 50 to 100 years.”

Russell Hodge

The crew also fertilized the soil and added a biosimulant to replace lost microbes and nutrients in the soil. Hodge expects the crew will return in the fall for more fertilization and possibly another borer prevention treatment.

“Everything that we can figure out the tree may need, we’re going to do,” he says.

Thanks to Erwin Tree Care’s just-in-time intervention, Hodge says, the burr oak that has already lived longer than it should have is likely to last another generation – or several.

“We’re going to wait and see here, but the core fundamentals of this tree are still in good condition,” says Hodge. “As long as nothing catastrophic happens, there’s no reason it can’t live another 50 to 100 years.”

At left, in addition to fertilizing, Erwin’s crews applied an onyx borer prevention treatment.
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Effective nutrient management for trees begins with an understanding of their natural habitat and how they obtain their mineral nutrients. This includes understanding differences between the natural habitat and the landscapes into which trees are planted.

Of course, woodlands are the natural habitat for most if not all of the tree species that are used as street trees, ornamental trees and shade trees. In a woodland habitat, two features stand out: the existence of an organic layer on the soil surface; the other is the limited competition between trees and ground flora.

The surface layer of organic matter plays a vital role in the natural recycling of essential nutrients. Through decomposition and mineralization of this organic matter, many essential nutrients, especially nitrogen, are made available for plant uptake. The amount of nitrogen made available on an annual basis may range between ¼- and ½-pound-per-1,000-square-feet per 1 percent soil organic matter (SOM), depending upon climate and soil pH. A typical northeast forest, for example, has a SOM level of around 4 percent. Doing the math, that means that between 1 and 2 percent of nitrogen is made available per 1,000 square feet annually.

Street tree and landscape plantings represent, for the most part, an artificial habitat. Soils may be vastly different from those of the native habitat of a given plant, and nutrient recycling systems may be altered or diminished as a result of planting schemes (planting in turf areas) or maintenance practices (collection of fallen leaves). In addition, trees planted in turfgrass areas face intense competition from grass for water and nutrients. For these reasons, periodic applications of fertilizer to soil beneath ornamental and shade trees are sometimes needed to replenish essential mineral elements and to promote healthy growth.

However, fertilizer application should be viewed as one part of a nutrient management program for trees, and within the context of a plant health care (PHC) program. For example, in landscapes and urban settings, it is important to select tree species that are best suited to the site. A program of cultural practices that sustains or replenishes soil organic matter and nutrients should also be established to maintain soil fertility. These practices might include incorporating compost into soils at the pre-plant stage and applying organic mulches. Proper maintenance of soil fertility and attention to plant nutritional needs is at the heart of an effective PHC program. Furthermore, it should be remembered that rarely is the goal of a nutrient management program to have trees grow as fast as possible. There exists considerable research data supporting the notion that rapid growth results in weak plants that are pest & disease prone.

Fig. 1. Trees in their natural habitat receive the bulk of their nutrients from the mineralization of organic matter.

Fig. 2. Trees in artificial habitats often require fertilizer applications to offset the disruption of natural nutrient recycling processes.
Nutrient management program

There are two key components in a nutrient management program for trees: soil management and fertility management.

Good soil management is primarily about increasing soil organic matter. This can be done in the pre-plant stage by incorporating organic matter into soil at the time of soil preparation. The easiest means of accomplishing this is by working finished compost into a widespread area, several times the diameter of the root ball of the tree, and to a depth of at least six inches.

While this technique is not always possible in the post-plant stage, soil organic matter can be increased by maintaining organic mulches on the soil surface. This simulates the surface organic layer in forest habitats.

The goals of sustaining significant levels of SOM relative to a nutrient management program are: improve soil structure, which enhances drainage and soil oxygen levels, increase biological activity and mineralization, and increase the nutrient holding ability and cation exchange capacity of the soil.

Fertility management involves monitoring soil pH and managing levels of mineral nutrients.

Soil pH

A fertility program for trees begins with an analysis of soil pH, or level of acidity. Acidity reflects the concentration of hydrogen ions in the soil. Soil pH is measured on a scale of 1 to 14. Soils with a pH below 7 are acidic while those above 7 are alkaline. Adjusting pH levels is important not only because specific plants grow best within a certain range of pH, but soil pH enhances optimal availability of all essential nutrients for plant existence, and the binding of some elements that may be toxic to plants. At extremes in pH, many nutrients occur in forms unavailable for uptake by plant roots. Figure 3 shows the relationship between pH and the availability of elements essential to plant growth.

Soil pH also influences the level of microbial activity in soils. Microbes involved in mineralization of organic matter are most active between a pH of 6 and 7. Mineralization is the decomposition of organic matter by soil microbes with the subsequent release of mineral nutrients, including nitrogen. Sustaining a large microbial population in soils can help reduce disease problems due to antagonism between beneficial microbes and pathogenic fungi and bacteria. From a PHC perspective, reducing disease problems decreases the number of pesticide applications during the growing season.

Where soils are generally acidic, lime would be a primary amendment to improve soil and plant health. Analysis of soil pH levels should be routinely made prior to any tree planting. Typically, lime in the form of pulverized limestone is required to adjust pH upward while sulfur is used to lower pH. It is best if these materials are incorporated into soils prior to planting, since surface applications are slow to affect pH levels. Most liming and sulfur recommendations are based on the assumption that the material is worked in to a depth of 8 inches. Deeper incorporation of either limestone or sulfur will require adjustments in rates to accommodate larger volumes of soil.

The rate at which limestone affects change in pH is largely a factor of the fineness of the limestone, i.e., the finer the limestone particles, the faster is the liming reaction. The fineness of pulverized limestone is measured by the percentage of crushed limestone that passes a mesh screening. A mesh screen with 100 small openings in one square inch would be considered a 100 mesh screen. Almost all pulverized limestone will pass a 10 mesh screen and at least 50 percent will pass a 100 mesh screen. To facilitate ease of application, fine limestone particles are bound into pellets and sold as pelletized limestone.

Testing of soil pH is the only way to accurately determine the amount of limestone needed to bring pH to desired levels. Most soil testing laboratories measure liming needs in terms of liming index or buffer pH. Buffer pH differs from soil pH in that buffer pH takes into account the reserve acidity in a given soil, that is, the hydrogen ions that are held in reserve on clay and humus particles in the soil. Soil pH is simply a measure of the free hydrogen ions in the soil solution. The buffer pH indicates how much lime is needed to change the pH.
of a given volume of soil.

What to Use?

Basic plant nutrition involves the uptake of 16 mineral elements essential to plant growth. In addition to carbon, hydrogen and oxygen, which are obtained from air and water, the elements nitrogen (N), phosphorus (P) and potassium (K) are required in greatest abundance. Research in woody plant nutrition has shown however that nitrogen is the element that yields the greatest growth response in trees and shrubs. For this reason, high nitrogen fertilizers with N-P-K ratios of 4-1-1, 3-1-1 or 3-1-2 are generally recommended for feeding woody plants. These include fertilizers with analyses such as 8-2-2, 15-5-5, 24-8-16, and similar formulations. The analysis refers to percent nitrogen, percent phosphorus (as P2O5) and percent potassium (as K2O) in the fertilizer (Figure 5).

Phosphorus, potassium and essential elements other than nitrogen are slow to be depleted from soils. Provided these nutrients are at recommended levels, a fertilizer program for established trees can consist of applications of nitrogen sources alone. Under normal conditions, complete fertilizers as mentioned above may be used every four or five years to ensure a supply of the other essential nutrients.

Application of slow-release forms of nitrogen provide the most efficient use of this nutrient because root growth and nutrient absorption generally occur anytime soil temperatures are at least 40 degrees F. On fertilizer labels, slow-release nitrogen is represented as water insoluble nitrogen, or WIN. Isobutylidene diurea (IBDU), urea-formaldehyde, sulfur-coated fertilizers (e.g. sulfur coated urea) and resin-coated fertilizer (e.g. Osmocote) are commonly used sources of slow-release nitrogen or WIN.

Nitrogen in slow-release form may also be obtained from natural organic fertilizers. Because of a lack of industry standards for the definition of “organic” and “natural,” a great deal of variability exists among these products in terms of their composition and analysis. For those adhering strictly to “organic” methods, the label of a given product should be examined for organic certification either by the state agriculture department or organizations such as NOFA (National Organic Farmers Association). The term “natural” is used here to indicate fertilizers that are not synthesized but are derived from naturally occurring materials, whether they are organic or inorganic, in the chemical sense.

Before applying natural fertilizers, the user must be aware of the nutrient analysis, i.e. the amount (by percent) of N, P and K, and the rate of release of the nutrients. Often mineral elements in natural materials, whether organic or inorganic, are released very slowly. This can benefit plants if nutrient release is steady and continuous over a long period of time.

However, these materials may be of little immediate value in correcting nutrient deficiencies. Generally, slow release materials must be applied in large amounts so that a balance exists between the rate of release and amount of nutrients available at a given time for absorption by plant roots. Unfortunately, objective information on rates of release of mineral elements from natural materials is often lacking, in part because rate of release is a function of highly variable environmental factors.

Commercial fertilizer labels do contain general information on how fast the nitrogen will be released. The WIN number will list the percent of nitrogen that is insoluble or slow-release (Figure 6). The WIN number is compared to the percent of total nitrogen in the fertilizer. As an example, a fertilizer with a total of 30 percent nitrogen and a WIN percent of 15 (50 percent of the total nitrogen) would be considered slow-release. That is, when the WIN is equal to or more than 50 percent of the total nitrogen, the nitrogen is considered to be slow-release. If WIN is less than 50 percent of total nitrogen, the nitrogen is considered to be fast-release. A natural organic fertilizer would be almost 100 percent slow-release.

Commercial fertilizer labels do contain general information on how fast the nitrogen will be released. The WIN number will list the percent of nitrogen that is insoluble or slow-release (Figure 6). The WIN number is compared to the percent of total nitrogen in the fertilizer. As an example, a fertilizer with a total of 30 percent nitrogen and a WIN percent of 15 (50 percent of the total nitrogen) would be considered slow-release. That is, when the WIN is equal to or more than 50 percent of the total nitrogen, the nitrogen is considered to be slow-release. If WIN is less than 50 percent of total nitrogen, the nitrogen is considered to be fast-release. A natural organic fertilizer would be almost 100 percent slow-release.

Compost, well rotted manures and sewage sludge may be used to fertilize trees, although their nutrient composition is quite variable. Those forms of compost, manure or sludge that are sold commercially as fertilizers will have nutrient analyses listed on the product package. However, that is not always true when buying bulk quantities of compost. As such, always request a nutrient analysis of the product. These types of materials can supply some nutrients and contribute significant
amounts of organic matter to improve soil structure and fertility and should be a part of a soil fertility management program.

Rates of application
Pre-plant application
Pre-plant incorporation of phosphorous and potassium into soils should be based on soil test results. It is advisable to incorporate these nutrients so that they will be in the root zone when trees are planted. This is especially important for those mineral elements that are not very mobile in soils.

Phosphorus, for example, moves very slowly, as little as one inch per year from the site of application. Superphosphate (0-20-0), triple superphosphate (0-40-0), ammonium and potassium phosphates are commonly used forms of phosphorus fertilizer. Rock phosphate is a natural source of phosphorus but rates of application should be adjusted to accommodate the very slow rate of release of the nutrient. Particular attention should be paid to phosphorus levels in soils planted to needled evergreens, since their growth response to nitrogen is greatest when phosphorus levels are high.

Pre-plant incorporation of potassium can provide sufficient reserves to support plant growth for five years in soils high in organic matter or clay content. When dissolved in soil water, potassium is a positively charged chemical (cation) and binds to particles of clay and organic matter. With high levels of clay and organic matter, potassium can be added in a single application. More frequent applications of this nutrient are necessary in sandy soils because they have less ability to bind potassium. Common fertilizer forms of potassium include potassium chloride (muriate of potash), potassium sulfate, potassium nitrate and natural materials such as kelp meal, greensand and alfalfa meal.

Rates of application of phosphorus, potassium and nutrients other than nitrogen should always be based upon soil test results. Any nitrogen applied as a pre-plant nutrient should be in a slow-release form or natural organic form.

Postplanting applications
Rates of fertilizer application are typically based upon the amount of nitrogen in the fertilizer since nitrogen is the mineral element most responsible for vegetative growth. For annual maintenance in New England, for example, it is recommended that a tree receive one to three pounds of actual N per 1,000 sq. ft. of surface area.

Reduce the amount of fertilizer applied at any one time to trees on sites with shallow or coarse soils so as not to burn the plant’s roots. Using fertilizers with slow-release forms of nitrogen will also help reduce the possibilities of root injury in such situations. Rates of nitrogen application should be also adjusted on sites where there is a high potential for ground water contamination from nitrate leaching. On such sites, nitrogen application rates of 1 pound N/1,000 sq. ft. or less would be advisable. Several applications at these reduced rates may be made during the growing season if needed for improving plant health. Again, use of slow-release forms of nitrogen can reduce potential for leaching.

Rates of nitrogen application should be adjusted according to levels of soil organic matter. Applying high rates of nitrogen on soils low in organic matter will accelerate depletion of the organic matter and in the long run reduce the fertility and structural integrity of the soil. Analysis of organic matter levels may be requested when submitting soil samples for testing. Soil organic matter levels of 4 percent or greater are desirable. In coastal areas where organic matter content of sandy soils is often in the range of 1 to 2 percent, use fertilizers with at least 50 percent of the nitrogen in water-insoluble (WIN) or slow-release form. In general, at a pH between 6 and 7, it can be assumed that 1/4 to 1/2 pound of nitrogen per 1,000 square feet is being made available per year for each 1 percent of organic matter in the soil. Therefore, a soil with 4 percent organic matter can contribute from 1 to 2 pounds of nitrogen per 1,000 square feet per year. That is typically enough nitrogen to support healthy growth of established trees.

Area method
In the past, determination of the correct amount of fertilizer to apply was based on the DBH (diameter at breast height) of the tree or on the root area measured in square feet. Today, only the square foot method is recommended, since this reduces the risk of over-fertilization. When calculating the area of a tree or shrub bed, only measure the area where fertilizer can actually be applied. Do not include areas such as the driveway or sidewalk.

Methods of application
There are several methods of applying fertilizers to trees and shrubs. The method selected depends upon soil characteristics, site factors, cost and type of nutrients to be applied.

Liquid soil injection. This is the method most often used by professional arborists today because it is quick, easy and also leads to rapid uptake of nutrients. It utilizes high pressure injection of liquid fertilizer into the soil. Injection points should be 2 to
3 feet apart, depending upon pressure, and about 6 inches deep. Slow-release forms of liquid injection fertilizers are also available.

Drill hole. Rarely used on a commercial scale, this technique requires drilling holes into the soil and distributing granular fertilizer evenly among the holes. Holes are drilled to depths of 6 to 8 inches and are spaced 2 to 3 feet apart in concentric circles around the tree, beginning at a point about one third the distance from the trunk to the drip line and extending 1 to 3 feet beyond the drip line. Only fertilizers with a high percentage of water insoluble nitrogen should be applied to the holes in order to prevent injury to roots wounded during the drilling. The holes may be left open or filled with compost, peat or other organic material. These porous materials should be firmly packed to reduce potential for leaching of fertilizer to ground water. The drill hole method should be used where high fertilizer rates create a potential for injury to fine turf.

Surface application. Granular forms of fertilizer may be spread by hand or mechanical spreader over the surface of soil around trees. This method is quick, easy and inexpensive, and recent studies have shown it to be as effective in supplying nutrients to plant roots as other techniques. It is particularly appropriate for applying fertilizers to mulched areas and shrub borders. A tree growing in a lawn area will utilize nutrients from surface applications of fertilizer made to the lawn and may not need additional fertilizer.

Foliar fertilization. This technique entails spraying liquid fertilizers onto the foliage of plants. It is used primarily as a quick fix for minor nutrient element deficiencies. Foliar feeding is not effective in supplying essential nutrients in quantities necessary for satisfactory growth. The most effective time to spray foliage with micronutrient solutions is just before or during the growth period.

Trunk injections. Injections of nutrients directly into a tree is used almost exclusively to correct minor element deficiencies, e.g. iron, manganese and zinc. This technique may also be used in urban settings where root or surface applications of fertilizers are not practical.

Frequency of application

Frequency of application depends on the general vigor and growth of the plant, with the exception of newly planted trees. Woody plants growing in rich soils with continual replenishment of nutrients from decomposition of organic matter may not need regular fertilizing. However, trees that show abnormal leaf size and color, little or no annual growth, or significant amounts of dead wood within the plant, should be fertilized annually until growth and appearance of the tree appears normal.

Time of application

Recent studies have shown that nitrogen uptake by trees increases after flushes of shoot growth are completed. During shoot growth, more energy in the form of carbohydrates is directed to shoots rather than roots. When shoot growth slows, carbohydrates are redirected to plant roots to support root development and uptake of nitrogen. Furthermore, nitrogen uptake is least when trees are leafless.

This latter observation would argue against early spring and late fall applications of nitrogen. Almost all of spring growth is supported by nitrogen that was taken up during the previous growing season and stored by the tree. Based on the results of these studies, it can be concluded that nitrogen fertilizers are best applied after flushes of growth and before leaf drop. Interestingly, this pattern of nitrogen uptake corresponds with the maximum levels of nitrogen release via mineralization in forest habitats.

Summary:

When developing a nutrient management program for trees, think of natural systems where trees exist and try to simulate that habitat in artificial landscapes by such means as maintaining a grass-free zone around trees and by applying mulches. Remember that nutrient management is not just fertilizer application. It involves soil management, i.e. maintaining good levels of soil organic matter, and fertility management by monitoring soil pH and soil nutrient levels.

Fertilizers are not the beginning and end of nutrient management. Rather they should be viewed as supplements to existing nutrients.

Finally, good healthy growth is NOT equivalent to fast growth.

Ronald Kujawski, Ph.D., is a consulting horticulturist in Great Barrington, Massachusetts, and a retired nursery specialist, UMass Extension.
### Vermeer

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USA
Tree contractor dies after being pinned

A Somerset, Ohio, man who was pinned under a tree in April from a work-related accident died May 25, 2008, from his injuries. Jeffrey Van Sickle, 50, who worked for a Baltimore, Ohio-based tree care and landscaping company, spent seven weeks in serious condition at Grant Medical Center in Columbus until his death, according to a report on CentralOhio.com.

Van Sickle was injured April 8 while he and another man were either cutting or pulling down a tree, which came down on him, pinning him under the top branches. When the fire department and medics arrived on the scene, Van Sickle had been removed from beneath the tree by his co-worker. Van Sickle leaves behind a wife, a stepson and a grandson.

Tree-trimmer falls to death

A 41-year-old Edinburg, New York, man was killed June 5, 2008, after he was hit by a limb from a tree he was trimming and then fell to his death.

Jeffrey B. Edwards was part of a group of people trimming tree limbs at a residence just before 8 p.m. when one of the limbs the group had not intended to cut fell. He was working in the tree when the branch struck him in the forehead, causing him to fall about 20 feet and strike his head on rocks below, according to a report in the Times Union of Albany, N.Y. Edwards was pronounced dead at the scene.

Tree trimmer struck by car

A 45-year-old Fon du Lac, Wisconsin, tree care worker was injured when he was struck by a car while removing a tree that had fallen on the road.

Anthony L. Muhle was cutting up a tree that had fallen on the road in the town of Burnett May 17, 2008, when he was hit by a car driven by an 80-year-old woman resident, according to the Fon du Lac Reporter.

A county crew was trying to remove a dead tree when the branch snapped and fell onto James T. Corcoran Jr., killing him instantly, according to a Community News report. Corcoran, 45, of New Castle, had been with the county nearly five years, but had been an arborist much longer, according to the report. Corcoran was recently named 2007 employee of the year for his department.

Worker rescued after being stuck in aerial lift bucket

Fire rescue crews in Clarksville, Tennessee, had to retrieve a tree trimming worker after the hydraulics in his bucket truck locked up around 6:45 p.m. May 12, 2008. The man was left suspended about 50 feet in the air for nearly an hour. The fire rescue crew used its aerial platform truck to get the worker down.

Muhle was transported by ambulance to Beaver Dam Community Hospital. The extent of his injuries was not known.

Tree worker hit by car

A man with a crew trimming trees along a road in Gloucester, Massachusetts, received minor injuries when he was struck by a passing car May 27, 2008.

The 28-year-old man was bringing some equipment around to the front of his truck when a car operated by an 89-year-old local resident hit him with the side mirror of his 2002 Honda Civic, pushing the worker’s arm against the windshield, according to the Gloucester Daily Times.

The man was held in the hospital overnight for observation, but his injuries did not appear to be serious.

The driver will face a charge of speeding in a construction zone and will be issued a fine.

Struck-by kills tree worker

A Wilmington, Delaware, tree worker died June 18, 2008, after a tree branch snapped and struck him in the head.

Accidents in the tree care industry that occurred during the month of May 2008.

Graphic compiled from reports gathered by, or submitted to, TCIA staff.

Send local accident briefs to or staruk@tcia.org
The TREE Fund Board recently voted to award 10 John Duling grants totaling $68,195. It also approved increasing the maximum award to Duling grantees from $7,500 each to $10,000 each.

Projects that received the 2008 John Z. Duling Grants and the recipients are:

1. Can Biostimulants Enhance Disease Resistance in Urban Trees?
   Glynn Percival and C. Payne, University of Reading, UK
   Investigate the effectiveness and feasibility of commercially available biostimulants singly and in combination on enhancing resistance of urban trees to apple scab and phytophthora root rot.

2. Best Management for Deeply Planted Trees with Adventitious Roots
   Roger Harris and Susan Day, Virginia Tech.
   Determine 1) if the ability to form adventitious improves tree growth and health of deeply planted trees, 2) the effectiveness of root collar excavation, and 3) the effects of remediation treatments on tree stability.

3. A Soil Quality Index for Arboriculture
   Bryant Scharenbroch, Morton Arboretum
   Develop a temporal gradient system relating to the time since major site disturbance in residential landscapes using standard soil quality evaluation tools.

4. Breaking Strength of Rigging Knots
   Brian Kane, University of Massachusetts
   Test the strength of rigging knot configurations during peak loads.

   P. Eric Wiseman, Virginia Tech
   Continue an ongoing investigation to quantify the response of fine root development to standard pruning treatments.

   Thayne Montague and Cynthia McKenney, Texas Tech University
   Monitor and compare gas exchange and growth of established trees which have and do not have mulch placed on the soil surface.

7. Water Use by Mixed – and Single-Species Urban Landscapes
   Kurt Steinke, Texas A&M
   Determine whether the relationship between actual water use and potential evapotranspiration is the same for turf grass, turf grass/woody plant and woody plant landscapes across diverse climatic regions.

8. Modeling Tree Growth to Better Predict Canopy Coverage in Urban Environments
   P. Eric Wiseman, Virginia Tech
   Empirically derive urban tree growth rates and develop measurement protocols that municipal arborists can use to predict canopy growth rates in their own localities.

9. Impact of Root Severance and Root Regeneration Potential of Large Diameter, Mature Woody Roots
   Dustin Meador and Ed Gilman, University of Florida
   Determine the regeneration potential of severed, woody roots on mature live oak trees with a diameter of more than 2 feet dbh.

10. Investigations into Pine Wilt Resistant Pinus sylvestris
    Jason Griffin, Kansas State University
    Propagate trees with apparent pine wilt resistance by grafting and challenge them the pine wilt nematode to determine their resistance.
Washington in Review

By Peter Gerstenberger

Affirmative defenses for OSHA citations

One would hope never to have to deal with an OSHA citation; nevertheless, being prepared for that eventuality can help you avoid a penalty or avoid the citation altogether.

Compliance Officers (CSHOs) are responsible for documenting all apparent violations they detect when conducting inspections in the workplace. Although the scope of their visits may at first be limited to investigation of a specific complaint or accident event, CSHOs are not allowed to overlook or ignore hazards that come to their attention during inspections. Under current OSHA procedures, tree care and landscaping employers should expect that any jobsite visit will be broadened to a comprehensive inspection because the green industry is viewed collectively as a “high hazard industry.” For this reason alone, tree care and landscape employers face a significantly greater likelihood of being inspected than in other sectors of “general industry.”

There are several recognized “affirmative defenses” one may employ for contesting an OSHA citation. Each of these defenses identifies where the root cause of the non-compliance with an OSHA standard occurred. By establishing the root cause of the non-compliance, the employer can demonstrate through supporting documentation that they are not responsible for the action that led to the non-compliance with the OSHA standard.

The most common affirmative defense is “Unpreventable Employee Misconduct or “Isolated Event.” In this scenario, the violative condition was unknown to the employer and in violation of an adequate work rule that was effectively communicated and uniformly enforced. More on that in a minute...

Example: An employee is observed not wearing his/her personal protective equipment (PPE). The PPE, which was on the truck front seat, is donned while the CSHO watches. Facts which the CSHO shall document may include: Why did the employee choose not to wear the PPE? Was the employer aware that the PPE had been removed? How long or how often had the PPE policy been violated? Did the employer have a clearly communicated work rule that PPE be worn? How was the work rule communicated? Was the work rule enforced?

The second affirmative defense is “Impossibility (Infeasibility).” Compliance with the requirements of a standard is:

(a) Functionally impossible or would prevent performances of required work; and
(b) There are no alternative means of employee protection.

Example from another trade: During the course of the inspection, an unguarded table saw is observed. The employer states that the nature of its work makes a guard unworkable. Facts that the CSHO shall document may include: Would a guard make performance of the work impossible or merely more difficult? Could a guard be used part of the time? Has the employer attempted to use guards? Has the employer considered alternative means or methods of avoiding or reducing the hazard?

The “Greater Hazard” affirmative defense asserts that compliance with a standard would result in greater hazards to employees than noncompliance, there are no alternative means of employee protection, and an application of a variance would be inappropriate.

Example from another trade: The employer indicates that a saw guard had been removed because it caused particles to be thrown into the operator’s face. Facts that the CSHO considers may include: Was the guard used properly? Would a different type of guard eliminate the problem? How often was the operator struck by particles and what kind of injuries resulted? Would safety glasses, a face mask, or a transparent shelf attached to the saw prevent injury? Was operator technique at fault and did the employer attempt to correct it? Was a variance sought?

Being proactive about employee behaviors

Unsafe acts are largely the result of inadequate training or enforcement; unsafe conditions very often the result of an employer’s failure to inspect and initiate prompt corrective action. Employer arguments such as “carelessness” or “failure to use common sense” don’t carry much weight in front of a judge because they fail to identify the root causes of hazards.

One cannot assume that employees are knowledgeable about even the most common safety hazards associated with their kind of work unless:

» employee competency is assured through careful supervision and inspection
» employers issue specific instructions that address the hazards of the work, and;
» employers reinforce instructions through documented disciplinary actions

OSHA and the courts place the burden of safety training and enforcement on employers. Isolated employee misconduct cannot be raised when a supervisor has knowledge of or participates in an unsafe act or condition.

If you have an established safety and health program, regularly conduct training in hazard recognition for employees, and uniformly enforce safe work rules, you may be in a position to argue that unsafe acts or conditions are the result of isolated employee misconduct. Thoroughness, consistency and corroboration are critical in raising this defense. OSHA will expect you to substantiate uniform enforcement through written records. Documentation of enforcement may be simple notations on a daily log. They can be corroborated by both the super-
visor’s and worker’s signatures.

Follow these steps when implementing a progressive disciplinary action program:

- Look at your injury experience and those of colleagues. Make a list of the kinds of hazards that caused them;
- Make a list of specific work rules that address those hazards. Make sure to consult the ANSI Z133.1-2006 Standard;
- Give your employees those rules and have them acknowledge receipt in writing;
- Train employees about the rules and enforce them through a progressive disciplinary procedure (i.e., verbal warning, written warning, suspension or dismissal);
- Do not make exceptions in the uniformity of your enforcement;
- Keep a record of your warnings and require employees to sign-off on their receipt;
- Update your rules when new hazards are discovered.

Being proactive about infeasibility/greater hazard situations

Although OSHA does not consider the expense of correcting a hazard to be justification for not addressing it, operations in tree care cannot always be made completely safe. Notwithstanding the possibility that an employer or his industry is unable to devise protection methods at a given time, advancements of technology and construction methodology dictate that employers exercise ongoing diligence in exploring alternative methods to safeguard workers. An employer has not discharged his/her safety responsibility to provide a safe workplace by arguing about what is practical.

Infeasibility can be argued only when it is shown that the employer has recognized and evaluated a hazardous condition or operation and short of simply not performing the work, he/she has determined from available knowledge that no less hazardous, alternative method of accomplishing the task exists.

Of all the affirmative defenses against OSHA citations, infeasibility is probably the most difficult to prove. It is always advisable to ask an OSHA Compliance Officer how he or she would correct a hazard. Although they are not allowed to specify a particular method of abatement, they are hardly worth their salt if they can't tell you what they’ve seen in the past.

If you have questions about hazard abatement methods, contact TCIA, your local OSHA consultation office or trusted colleagues in the industry. In the scheme of things, OSHA is a small part of the safety equation. The Agency’s penalties are certainly significant, but so are the costs of workers’ compensation and loss of productive hours. Of course, all those considerations take a back seat to the prospect of losing a valuable employee.

Remember that the true success of your safety program doesn’t hinge on written procedures in an attractive binder. Success depends on the investment in training in safety hazard recognition and the time and resources you give your employees to inspect and correct unsafe acts and conditions. Train your employees and involve them in safety planning. They are your other sets of eyes and ears. Quality of the work will increase in the bargain.

Develop a reputation among workers in your industry and your market as an employer with strictly enforced safety rules but one with an eye on an important objective - getting everyone home to their families, free from harm.
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Wether it’s deemed to be a recession, a major correction or something else, there’s no question but that this is a very challenging economy and likely to continue that way. There are no easy answers or sure-fire solutions. But that doesn’t mean there’s nothing to be done.

Now, more than ever, it’s time for a hard look at business operations and plans.

Aligning plans
Are your operating and strategic plans still effective? A good plan can lose some of its effectiveness for several reasons:
- The assumptions that underlie the plan aren’t holding up. You may have assumed more status quo and less dramatic change, no changes in employees, or changing vendors and an adjustment in prices, for instance.
- The plan no longer matches the priorities of the business. A shift from an expansion mode to a no-change mode, for instance, may not be obvious for a while.
- The culture of the business has changed, and the plan doesn’t accurately reflect the “new” culture. For instance, if staffing patterns change so that there are fewer full-time employees and more part time, this change is significant for how employees are managed, utilized and paid. Or, if you’ve created a new position, or even just hired someone with a different skill set than the person he or she replaced, there’s a shift. Not every shift in personnel affects your planning, but this is an easy factor to overlook.
- Significant changes in the market and competition make certain aspects of the plan obsolete. A new competitor may have entered your market, or an existing competitor may have changed product or position.

When plans aren’t adaptable to changes, don’t clearly address the needs of your business, or simply don’t work, you need to step back and take a different approach.

Survival income
What cash flow do you need for your business to survive? How does that cash flow need to be timed to deal with income and expense patterns in your business? Survival income needs to consider not only the current bills but upcoming large bills as well. If a large insurance payment is due in January, income for that payment, perhaps set aside monthly, should be built into the plan before January.

What is the pattern of those non-routine payments? Ideally, of course, those “extraordinary” bills hit a month or two after a high income month, but we all know that timing rarely works out that way.

What changes can you make to keep your business’ survival income intact?
Planning around survival income brings both the planning process and the resulting plan into sharp focus. While it’s more enjoyable to plan around (hoped for) large profits, the concept of survival income is a much needed reality check.

Scrutinizing
Of course you know what’s going on with your business: cash flow’s tight. Customers are having tough times, and with increased pressure on their budgets, marketing and promotion can look too much like a luxury item.

Knowing the pulse of your market and customers is essential, but your knowledge of what’s going on also needs to be data driven and precise.

Liquidity
Is your business losing liquidity? To what extent?
A negative change in liquidity is indicated by a downward trend in liquidity ratios. These ratios focus on cash and liquid assets – assets such as accounts receivable that can be turned into cash quickly.

The most common monitor of liquidity is the current ratio, which is computed by dividing the total current assets by the total current liabilities. Both figures can be found on the balance sheet. The result is a ratio, such as 2:1 (2.1 to 1). Computing the ratio monthly gives you data about the trend.

Consider the changes in your business’ current ratio over the past 12 months. You may recognize that your business is becoming less liquid. The question is: how quickly is it losing liquidity? You may find that your business is holding its own on liquidity better than you realize, or the reverse, that it’s losing liquidity more quickly than expected. If that’s the case and the business is losing liquidity at an accelerated pace, that’s a strong wake-up call about potential problems in the near future.

At the current rate of losing liquidity, how soon will current liabilities exceed current assets? Three months? Five months?

The deciding question is what changes
can you put into place now, what steps can you take, to keep the business liquid?

**Percentages of expenses**

You know that expenses have been going up. You no sooner have begun to get used to the new price level when it changes yet again (think gasoline and diesel!) As far as you’re concerned, they’re all just rising exponentially.

Why bother tracking changes in expenses?

Because it’s one of the few ways to try and grapple with the changes.

Two sets of changes may be taking place. Prices obviously are changing, but your usage may be changing as well.

One way to spot changing patterns is to calculate the percentage of total expenses spent on each individual expense. For example, in April last year office expenses were 8 percent of total expenses. For April this year, that figure is 9.5 percent. What accounts for the increase?

Is all of the increase due to price increases? Are price changes in line with the increase you’re showing? Has your usage changed? In what way? Does that change correlate with the percentage increase? Are supplies walking out the door?

**Debt management**

Debt management may sound like an oxymoron, but such a thing actually exists. Keeping up with payments is certainly the most immediate consideration with debt, but there can be more.

If your business is carrying several debts, look at each individually.

Which is your most expensive debt? Can you change that in any way?

What was the purpose – or “subject matter” – of the debt? Is the debt useful? Does the “subject matter” contribute to the revenue in some way? Or, has it outlived its usefulness?

Is the lender a resource of your business – a supplier, for example, or a bank you regard as a resource?

Is there enough flexibility in your cash flow for you to focus on paying off one debt, even it means just paying a little extra each month? As a general rule, you should reduce the most costly debts first. The second priority usually is to get rid of the old debts that no longer have any utility for the business. Eliminating debt baggage not only improves your business’ financial situation, but it can provide a significant psychological boost as well.

Debt may not seem very manageable, and can, in fact, be much like trying to corral an amoeba. But the only way to really deal with debt is to confront it, in all its unpleasantness, in all its grimy details. Only then can you take steps to keep it under control.

**Strategies**

What can you change? Obviously, not the economy, and there’s probably much about your business you can’t change. But there are possibilities, if not for major change, for tweaks, restructuring and small fixes – and these add up.

Enlist your employees in the effort. They know aspects of the business you don’t, and they have a different approach to matters. Emphasize that this isn’t a matter of gloom and doom. Everyone’s first thought may be concerns about jobs and money. The approach might be “we’re not in trouble, and we want to see to it that we don’t get in trouble. Now’s the time to act.” And yes, there probably won’t be much for raises – but how about offering some more flexibility, such as two personal days a year?

Look at every aspect of the business, and not just with the sense of belt-tightening. Be open – and solicit ideas – to new structures, procedures, ways of doing things.

Extend that openness to marketing opportunities. How can you convince your customers that their investing in the health of their trees makes a difference on all sorts of levels? Your business can help them do just that.

Once you start on this track, you may be surprised at the flow of ideas…

**Conclusion**

Grappling with the economy can be tricky at best. Even boom times present challenges. In times like these, it requires digging deep into the business’ finances, looking at the details not only of the financial statements, but of the plans and strategies that drive the business.


Mary McVicker is a freelance writer in Oak Park, Illinois.
By David Rattigan

In one of the emotionally charged anecdotes that fuel an increasingly complicated national debate, an illegal immigrant, driving a car without a license and no insurance, gets into a car accident with another driver.

In one version of the story the illegal immigrant is deported, and in another he drives off before police arrive. But in every case, the accident victim is left with no one to pay for property damage or injuries because the immigrant has few funds and no insurance.

But what happens when the worker who presented legal-looking papers turns out to be an illegal immigrant?

In a worker-starved industry such as tree care, many owners employ undocumented workers who are in the country illegally. Some do so unknowingly. But if that worker is involved in a vehicle or machinery accident, a company risks significant consequences.

Gloria Cordle is an insurance broker with NRC Insurance Agency in Modesto, California, and also president of the California Association of Tree Trimmers. As such, she has had many discussions with tree care company owners and managers about the issue of liability concerns.

"Any time you have an illegal person, you should have concern," says Cordle.

Not because you won't be covered by insurance, she says, but because if your company employs an undocumented worker and that worker is involved in an accident, that incident can create a domino effect that could impact both the individual and your company.

Although immigration law is federal, many states have jumped in with their own regulations recently and employment laws vary from state to state.

Consistent with their mission, the Labor Commissioner and Employment Development Department in California are primarily concerned with the protection of employees ... that they are making minimum wage and that the employer has a workers' compensation program in place. The immigration issue is kept separate, as the agencies seek to maintain a workplace environment in their state that is not exploitative.

"They want to be sure that all employees are treated equally," Cordle says.

While some reports across multiple industries indicate a higher incidence of workers' compensation claims made by undocumented workers, Cordle notes that for many undocumented workers, the exact opposite is true.

"It depends on the employee," she says. "Some employees are here illegally, they work real hard and will never want to report an accident. They don't want to go into the hospital, and don't want somebody else reporting to immigration that they're here illegally. But if there's a major claim that occurs or an accident or something with a piece of equipment, it will get to the hospital, (and) the hospital does have certain obligations that they have to fulfill.
behind the wheel. The policy holder also
agreement by putting an unlicensed driver
carrier balking, because the policy holder
says, but the employer runs the risk of the
up and pay part or all of a claim, Cordle
accident, the district attorney’s office could
cited by the police. If it’s a really nasty
serious fines and subject themselves to los-
ing someone without a license to drive a
vehicle.

In the case of an accident, the situation
could snowball from there. The business
owner may have to answer to his insurance
company, because a non-licensed driver,
who is therefore not authorized to drive the
company vehicle, was behind the wheel.
(Employers are often required to check the
license of all employees that use their vehi-
cles, and list them with their underwriter,
often through their broker.) Ignoring these
requirements or hoping to get by can put
your entire company in jeopardy.

“There’s a domino effect, as things start
happening to that employer,” Cordle says.
 “[The employer] was just thinking, ‘the
guy’s going around the corner, he doesn’t
have a license, it’s no big deal,’ and then he
pulls out of the driveway and hits a car.
Instead, employers subject themselves to
serious fines and subject themselves to los-
ing their insurance policy, and they can be
cited by the police. If it’s a really nasty
accident, the district attorney’s office could
even come in.”

Generally, an insurance carrier will step
up and pay part or all of a claim, Cordle
says, but the employer runs the risk of the
carrier balking, because the policy holder
has not held up his end of the insurance
agreement by putting an unlicensed driver
behind the wheel. The policy holder also
runs the risk of the carrier canceling his
insurance.

“It gets convoluted with all the different
scenarios that can happen,” Cordle says,
noting that there are many types of policies
and insurance companies. “When you get
into the legal system, you have attorneys
that will create any scenario that will work
for their client, from either side of the
fence.”

Jeffrey A. Newman, a Boston-based cor-
porate attorney and litigator who acts as
outside general counsel to several compa-
nies, relates that more and more insurance
companies have sought to invoke the “neg-
ligent entrustment” clause against, policy
holders who let unlicensed drivers use their
vehicles. While the attempts thus far have
been unsuccessful, he says, it is a valid
legal claim for the insurer to make, and a
ruling in one jurisdiction could have an
impact on future rulings.

“Some of these insurers are starting to
disclaim coverage when the company was
aware or should have been aware that these
circumstances existed,” Newman says.
“It’s still not a major trend. It’s something
that some insurance carriers are looking at
more closely now than they have in the
past. So far, the cases that have come down
have supported the insured, because the
courts have determined that whether or not
someone was licensed or not wasn’t the
critical factor in why this happened. The
courts have determined that licensure was a
secondary issue, and you’ve got to live up to your contract.

"But it definitely is an issue that companies have to be concerned about, because if you get a major case – a death case or one in which somebody’s paralyzed – it can put a company out of business if they don’t have insurance," he says.

Newman notes that a company can easily find out about an employee’s driving record, because it’s all in a Department of Motor Vehicles database.

"If you get someone who comes from another country and had a really terrible driving record there, how are you going to find that out?" Newman says. "It’s very difficult to find out about a person’s background when they come from another country."

A business owner who wants to employ a foreign worker legally finds himself in a Catch-22 situation, according to Roy J. Watson, a Bedford, Mass.-based corporate and business immigration lawyer who co-chairs the Massachusetts’ Bar Association’s immigration law section. The immigration process moves slowly, with an outdated cap on low skill labor.

"The system’s broken because, assuming zero issues and zero problems, you are looking at somewhere in the order of eight to 10 years before you can employ somebody as a simple laborer," he says. "How many people are going to spend $10,000 and wait 10 years to employ somebody in a $20,000 to 30,000-a-year job."

For undocumented workers, the wait is likely to be 10 years for those who over-stayed the time on their visit or a lifetime ban for those who snuck in, he says.

Some undocumented workers will rely on forged driver’s licenses and Social Security numbers, which a business owner is likely to discover. Some will choose to look the other way.

"I’ve had employers call me and say, ‘Gloria, I’m not sure what to do. I have an (undocumented) employee and I just got called by Social Security,’" says Cordle, who recommends that they follow the law.
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Randall S. Stamen, a Riverside, Calif.-based lawyer representing tree care companies in litigation and risk management and author of *California Arboriculture Law*, reports that many of the companies that he represents will not hire undocumented workers, for all of the reasons mentioned in this piece. “They open up a host of problems,” he says. “It’s not just driving, but also when your workers are out on a job site and lose control of a limb ... I advise against it, and most of the companies I do risk management for do not hire illegals.”

Just as driving without a license does not prove negligence, there’s not necessarily negligence when an undocumented worker is involved in a worksite accident. “Simply being illegal is not the problem, but it adds fuel to the fire,” Stamen says. “Let’s say in a worst-case scenario, you wind up in trial. The contractor is going to try to keep that fact out of the trial. What bearing does it really have on whether the person was negligent or whatnot? But you can bet that the plaintiff’s attorney is absolutely going to try to get that fact in front of a judge and jury. Because, for lack of a better term, it’s a very juicy fact.”

Correct or incorrect, the workers’ illegal status might be used to support a claim that a company cuts corners in search of profit. “You don’t know if that fact is going to come into evidence or not, but you can bet someone’s going to try,” Stamen says.

Some undocumented workers will rely on forged driver’s licenses and Social Security numbers, which a business owner is likely to discover. Some will choose to look the other way.

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VFT-PAC Volunteers needed

As the fall election approaches, there are increasing signs that the Democrats will expand their majorities in the House and Senate – even as the presidential race becomes more competitive. Democrats won the last three special elections for the House, and the numbers do not look good for Republicans in the Senate. Of the 35 Senate seats up for election this fall, 23 are currently in Republican hands, while the Democrats only need to defend 12. Pollsters project the Democrats will pick up a net gain of three to six seats in the Senate, increasing their ability to move key legislation, but still leaving them shy of the 60 votes needed to break a filibuster (they currently have 51). The Democrats in the House are projected to pick up an additional five to 10 seats.

TCIA will continue to work productively with both parties in the best interests of the tree care industry. Moving forward from today until the election, VFT-PAC time, efforts and fundraising work will be directed in three ways:

- Direct contact with Democratic and Republican members by TCIA staff and lobbyists
- Campaign contributions to key members under established criteria
- Organizing a successful fund raiser at TCI EXPO in 2008 and at WMC 2009

A separate standard for arboriculture

First, we have great news to report. It is official: federal OSHA will pursue a separate OSHA standard for arboriculture. Our efforts during the past two years have succeeded!

We strongly encourage you to look for TCIA’s calls to action that will give you specific guidance on how to take an active role as we move forward. Nothing will happen overnight. As Peter Gerstenberger keeps reminding us, the last time we were involved with OSHA on the standard that today covers line-clearance operations, it took 12 years to

VFT-PAC legislative fund-raiser

On Thursday, May 15, the Voice for Trees PAC held its first fund-raiser in Washington, D.C., for Rep. Joe Wilson (R-SC). He has consistently been willing to listen to TCIA’s concerns on ways to improve worker safety in the industry. TCIA members Gary Mullane and Erich Schneider met with him earlier this year in his Hilton Head district.

The breakfast was a great success, raising more than $10,000 for Wilson’s campaign.

As ranking member of the House Subcommittee on Workforce Protections, Wilson personally called Secretary Foulke of OSHA in early March to discuss our petition for a separate standard, and his staff led the way on the initial letter from House members to OSHA and a recent follow up that requested immediate action. In addition, he has been a strong supporter of our position on the ongoing issue of an exemption for returning H-2B visa workers.

After the failure of comprehensive immigration reform last year, we began working for an H-2B exemption extension with our lobbyist in Washington, Josh Ulman, and the Essential Worker Immigration Coalition (EWIC), a coalition formed by the US Chamber of Commerce. We have been pushing for a renewed exemption from the visa quota for returning workers. H-2B has become a vital source of labor for those small numbers of our members who use the program.

Last year, many of our most consistent supporters of small business turned their backs on us during the debate on comprehensive immigration. This year, scared off by those who oppose “amnesty,” many of our supporters walked away on H-2B visas as well, even though legal, temporary work visas have nothing to do with immigration. Wilson has remained a steadfast supporter of TCIA’s efforts to advance safety and secure a legal workforce for our members.

(Continued on page 76)
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get from the point we are at right now to a final rule. Nevertheless, our first step has been successful, and we have much more to do.

Immigration and non-immigrant visas

In the absence of comprehensive immigration reform, throughout the fall, winter and spring we worked with allies in Washington to renew the exemption for returning H-2B workers. Various allies, from Representative Joe Wilson to Senator Barbara Mikulski, have pushed to restore the exemption. All efforts have failed. The majority of Democrats want to change the program in ways that would make it unworkable for our members, from increasing wages to prevailing union rates to adding additional costly mandates on domestic recruitment before visas can be issued. In short, “The Save Our Small and Seasonal Businesses Act” is unlikely to pass in time to save our summer. We are not optimistic that anything substantive will pass before the election.

2008 TCIA PAC Donations

Based on the considerations above, the VFT-PAC Advisory Committee voted during its spring conference call to make the following contributions to representatives for 2008. Volunteers are needed to join the TCIA delegations, so if you would like to help deliver the contributions below in your state, please contact Mark Garvin at 1-800-733-2622 or garvin@tcia.org.

Representatives

Buck McKeon (R-CA)

As ranking member of the House Education and Workforce Committee, McKeon has direct oversight over all matters dealing with relations between employers and employees. He and his staff have been among our staunchest allies in pushing OSHA for a separate standard for arboriculture.

Bill Delahunt (D-MA)

A strong supporter of H-2B, which is not surprising given the seasonal workforce needs of Cape Cod and the islands. As a Democrat, he will be a key negotiator in the shape and requirements of the final legislation.

Rosa DeLauro (D-CT)

DeLauro is not a supporter on many TCIA member issues – with one exception. As a member of the Appropriations Committee – and more importantly as chair of the Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies – she will have a great deal of control over appropriations for invasive insects such as emerald ash borer.

Tom Price (R-GA)

A respected member of the House Education and Workforce Committee, Price was one of several Representatives who met with us personally last year and pressed for a separate standard. He remains accessible to TCIA staff on this and other OSHA issues.

Senators

Johnny Isakson (R-GA)

He led the effort on Senate side to get us the bipartisan letter asking for a separate standard for arboriculture. The VFT-PAC Advisory Committee voted him TCIA’s Legislative of the Year in 2007.

Lindsey Graham (R-SC)

A consensus broker on immigration and H-2B reform among Republicans, Graham has been an adamant supporter of comprehensive immigration reform, which has led to a more conservative primary challenger. His defeat could scare off many other Republicans who might support us on this issue.

Celebrating 20th anniversary of employee ownership

TCIA had the privilege of being represented and giving a keynote address at the anniversary gala of Hartney Greymont marking 20 years of employee ownership. In the beautifully restored Wang Theater in Boston, employees gathered to celebrate their remarkable success. Founded 70 years ago, in 1938, Mike Hartney started Hartney Tree Surgeons and merged it in 1976 with Greymont Tree Specialists to form Hartney Greymont. Subsequently, Robert Greymont formed an ESOP for his employees, in 1988. Since then, and under Mark Tobin’s leadership, the company has received 14 awards in 17 years just from TCIA: contributed a TCIA Chair of the Board and an A-300 representative; and was one of the first to receive Accreditation and CTSP credentials. TCIA salutes a longtime member and congratulates all of the professional team that contributes to a successful story each day.

VFT-PAC Volunteers needed

(Continued from page 74)

(Continued from page 74)
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Tree News Digest

Tree topping banned in Tennessee town

The practice of tree topping has been banned in Farragut, Tenn. Most tree topping in Farragut will be banned or seriously restricted, according to an article in the June 11, 2008, Farragut Press.

The Farragut Municipal Planning Commission recently voted for the ban after hearing a recommendation from Mark Shipley, town development coordinator.

“Although we haven’t had a proliferation [of topping] we have had some,” said Shipley. “Probably the reason it’s not in our current landscaping requirements, I didn’t think it would ever really be a problem.”

Topping exceptions, Shipley said, would include trees under utility lines. Otherwise, if a tree deemed a hazard must be removed, Shipley said the ordinance requires it must be replaced at a nearby location.

Moreover, Shipley said ordinance language further discourages tree removal/topping: “If you had an eight-inch caliber tree that you’ve removed, you’re going to have to add back four two-inch caliber trees.”

Killer tree was flagged as a danger prior to accident

A redwood tree from which a branch fell, killing a 50-year-old San Francisco woman in early April 2008, had significant structural defects and was at risk of falling, according to an arborist’s report done long before the accident, according to an article in the San Francisco Examiner.

The arborist’s report, completed for San Francisco’s Recreation and Park Department in January 2004, had identified 603 of Stern Grove park’s 2,600 trees – including 95 redwoods – as potential hazards. The tree from which the branch fell and killed Kathleen Bolton on April 14 in a parking lot was described as “in decline, with extensive dieback of large branches and significant structural defects which cannot be abated,” according to the report, said the Examiner article.

While some Stern Grove trees with a “high” hazard rating were recommended for removal, the deadly one – and two next to it with the same rating – were recommended for an inspection of their upper limbs. City crews have been following the recommendations since they were made, according to a Recreation and Parks Department spokeswoman.

No claims had been filed with the city attorney’s office, according to the Examiner article.

Landscaper faces $163,000 bill for topping

Rochester, Washington, officials want a landscaping company to pay an estimated $163,000 to repair damage after it topped more than 450 street trees in the city’s Horizon Pointe neighborhood without permission. Workers for local landscaping firm topped trees in the public right-of-way before the city put a stop to the work Jan. 25, 2008.

Galen Wright, the city’s urban forester, said he had never seen damage to street trees on this scale and had “never even heard about a situation like that from other cities,” according to an article in The Olympian newspaper.

An investigative report by Wright says a four-man crew topped trees with a hedge trimmer and hand saws. The topping reduced the height of the trees from about 13 to 8 feet, Wright wrote.

The business’s owner said he didn’t know the trees were on public property or that there were restrictions against topping the trees.

The city required the developer to plant the trees during development of the area about four years ago. The city owns the trees, but they were maintained by the developer. The developer had hired the landscape company to do regular landscape maintenance and prune trees.

A gardener notified the city of the work done on the city trees.

The city sent a “voluntary mitigation plan” to the company that details how the company would repair the damage.

Wright concluded 265 of the damaged trees needed to be replaced, and the remaining ones need restorative pruning for up to three years. He pegged the total cost at $163,675.

A Seattle arborist hired by the landscape company’s insurer to confirm the damage, determined 95 trees need to be replaced, which would lessen the cost.

The landscape company owner said arborists and landscapers have different considerations of trees: arborists emphasize their care and maintenance, while landscapers want them to look nice, according to the article. He told the paper that the intent was to “prune for shape and looks so it looked uniform and the community had a nice look to it.”

The owner and Wright agreed there needs to be more education about caring for trees. The landscape company owner said his workers would undergo training by a certified arborist in response to this incident.

Oregon State dubs forestry prof ‘Distinguished Professor’

An Oregon State University faculty member has been awarded the title of “distinguished professor” – the highest honor that faculty can receive at OSU – for scholarship and academic achievement that has been marked by globally recognized work in biotechnology.

Steven H. Strauss, professor of genetics and molecular and cellular biology in the College of Forestry, was awarded the title at a May 22 luncheon. Strauss has earned an international reputation for his contributions to plant biotechnology, including major contributions to policy and ecological assessment of biotechnology. He has published nearly 160 scholarly papers, delivered more than 170 invited lectures and obtained more than $14 million in research funding from the National Science Foundation, the National Institutes of Health and numerous other federal agencies.

In 1994, he created (and still directs) the Tree Genomics and Biosafety Research Cooperative, composed of biotechnology companies and forest industries, which focuses on reduction of ecological risks of genetically engineered trees. Similarly, Strauss created and directed the NSF Industry/University Research Center on...
During the late 17th and early 18th century, due to cold climate, platanus (Acer pseudo-platanus) wood specimens of Norway spruce (Picea abies) and sycamore (Acer pseu-

department of Forestry Stephen Hobbs in nominating Strauss. “Dr. Strauss’ laboratory has trained more than 150 high school and undergraduate students, 21 postdoctoral scientists, 39 technical/professional employees and 23 graduate students.”

**Superior wood for violins due to cold climate**

Violins produced by Antonio Stradivari during the late 17th and early 18th centuries are reputed to have superior tonal qualities. Dendrochronological studies show that Stradivari used Norway spruce that had grown mostly during the Maunder Minimum, a period of reduced solar activity when relatively low temperatures caused trees to lay down wood with narrow annual rings, resulting in a high modulus of elasticity and low density.

The main objective of a new study was to determine whether wood can be processed using selected decay fungi so that it becomes acoustically similar to the wood of trees that have grown in a cold climate (i.e. reduced density and unchanged modulus of elasticity).

This was investigated by incubating resonance wood specimens of Norway spruce (Picea abies) and sycamore (Acer pseudo-platanus) with fungal species that can degrade the compound middle lamellae, at least in the earlier stages of decay.

Microscopic assessment of the incubated specimens and measurement of five physical properties (density, modulus of elasticity, speed of sound, radiation ratio, and the damping factor) using resonance frequency revealed that in the wood of both species there was a reduction in density, accompanied by relatively little change in the speed of sound. Thus, radiation ratio was increased from ‘poor’ to ‘good’, on a par with ‘superior’ resonance wood grown in a cold climate.


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Summer vacayrions are usually all about fun, trips, the beach and parties. My summer was a little different. All I did was work until one day something bad happened. It was what I call a miracle. The miracle was breaking my ankle. You might not think this is a miracle, but I did.

Let me tell you my story.

During my vacation, I worked for my father at his tree care company, Zimmerman Tree Service in Lake Worth, Florida. My schedule was to wake up at 5 a.m., get ready, and leave at 5:30 a.m. I would get to the office at 6 a.m. Next, I would get the trucks ready for the day. After that we would leave the office for our job sites.

Once we arrived at the site, it was work until lunch, at noon. When it was 90 to 95 degrees outside, you felt like you would die from the heat.

After the half hour lunch break, we would work until 6 p.m. Then we would go back to the office. Then I would drive home. By the time I got home, I was starving and my mom would have dinner cooking. After dinner, I would take a shower then get to bed at about 10 p.m., so I could wake up at 5 a.m. and do it all again.

Then the terrible “miracle” happened. This bittersweet incident happened during one of the days I left work early. I was playing a pick-up basketball game with some friends. The score was 10-9 and the other team was winning with the ball running down the court. I was guarding the man with the ball and he pump-faked. I jumped to block him and when I landed I landed on his foot and broke my ankle!

Now that I had broken my ankle, I could not go back to work. I did not know what was worse, working or the excruciating pain. I finally realized that the pain was better because I could sleep, party and – in general – have fun, which is what summer is supposed to be like.

The summer was full between working, breaking my ankle, and then having some time to sleep, party and have some fun. In all I think this was a fantastic summer.

Ari Zimmerman, now 18, wrote this piece about his summer job last year. He and his sister, Orli, are working for their dad again this summer, and Ari is looking at colleges for arboriculture and urban forestry programs.

TCI will pay $100 for published "From the Field" articles. Submissions become the property of TCI and are subject to editing for grammar, style and length. Entries must include the name of a company and a contact person. Send to: Tree Care Industry, 3 Perimeter Road, Unit 1, Manchester, NH 03101, or staruk@treecareindustry.org.
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