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Hard Times Make for Hard Choices

S
igns that the recession is ending are starting to appear around the country. Unemployment levels have stabilized, housing sales are on the rise, and tree care businesses are reporting a pickup in spring business over last year.

Before we get too euphoric about what could be the end of two very painful years, now may be a good time to pause and consider how employers, business colleagues, employees and vendors reacted to the trials and tribulations of the past 24 months.

Before coming to TCIA almost two decades ago, I worked for a magazine that slowly and painfully went out of business as a result of the last burst bubble in the housing market. It wasn’t a pretty scene. The owner of the magazine tried everything he could think of to stay afloat as red ink mounted in his business. He lied, he robbed Peter to pay Paul, he treated vendors like enemies and employees like chattel. I’m sure he thought of himself as a good person when he founded his publishing company, but I suspect he found it harder and harder to look himself in the mirror as the business spiraled toward closure.

Many in the tree care industry have faced similar choices in this recession. A family business is more than a job. People come and go from jobs. A business may begin with a second mortgage on your home. It may include employment for multiple family members who depend on you. Growing your business in the early years took sacrifice, often for years, to create a lasting legacy with your name on it. It’s not easy to let that go, and people are tempted to do anything to save it – including taking actions that they may not be proud of upon reflection.

Hard times can bring out the worst in people, but they can also bring out the best. As we seem to be emerging from the worst depths of the recession, let’s take a moment to think about all of those who helped us through it. I’ve talked to company owners who kept their health care plans for employees, maybe with a few modifications, when it might have made financial sense to get rid of it completely. I’ve talked to owners who laid off one crew when they probably should have laid off three. I’ve talked to vendors who went the extra mile for good past customers that were having trouble paying the bills. I’ve also talked to owners who made the painful decision to cut wages and benefits as a last resort. And I’ve talked to company owners who stared into the financial abyss and decided to close their doors rather than try to continue in business in a less than honorable way. We’ve all had to make some hard choices recently.

As the days get longer and business gets better, take a moment to remember the employees, bosses, suppliers and friends who stuck with you during the recession. In an era when loyalty to family, employers and business associates seems to matter less and less, think about where you would be today without loyal customers, suppliers and employees who stuck with you. Try to reward that loyalty when conditions finally improve for you. And don’t think too badly of those who were driven to desperation by desperate times.

Mark Garvin
Publisher
Dispose of waste wood without breaking the bank! RAYCO’s new line of compact, horizontal grinders creates an affordable solution to your waste-wood needs. The highly productive RH1754 introduces a new class of compact horizontal grinders that are truly mobile, compact machines designed to grind pallets, green-waste, lumber scraps, construction debris, and sawmill waste while minimizing the expense and hassle of large units. At only 14,500 lbs, the RH1754 can be easily moved with lighter trucking equipment and operated on smaller job sites, inaccessible to larger machines. Its low fuel consumption keeps operating costs at a minimum yet its high productivity rate will match that of machines costing nearly twice as much. Finally… there is a horizontal grinder within reach of the small contractor. Contact your authorized RAYCO dealer for more information or call 800.392.2686 for a dealer near you.
THE BEST DEFENSE IS A GOOD OFFENSE

Mauget insecticides – Abacide 2, Imicide, Inject-A-Cide, Inject-A-Cide B, Abasol, and Imisol – have defended trees against pests like Emerald Ash Borer, leafminers and caterpillars for more than 50 years. Abacide 2 Hp and Imicide Hp are now available in 1 liter Liquid Loadable containers.

Mauget's new insecticide, TreeAzin, is an OMRI-listed bioinsecticide formulated with azadirachtin, a natural neem seed extract. Like its product line, Mauget's legacy of proven, innovative chemistry continues to grow.
By David Rattigan

There are moments that Bob Murray feels a one-to-one connection with the spectacular landscape that surrounds him.

“Being one of the first people to arrive in the morning, when everything else is quiet and it’s just you and the resource, you can just take it all in,” says Murray, who has a moment of similar experience at the end of the workday. “I don’t know how best to describe it, but it’s an exhilarating experience.”

Murray is superintendent of Castle Hill in Ipswich, Massachusetts, part of the historical Crane Estate property, owned and managed by a non-profit organization called The Trustees of Reservations. The trustees own and manage “special places” around the state, significant for their history, architecture, habitat or open space benefits. Embodying all of those qualities, the Crane Estate – claimed in 1637 by John Winthrop Jr., son of the first governor of the Massachusetts Bay Colony, and turned into glorious splendor three centuries later by plumbing magnate Richard T. Crane, Jr. – may be the most special of those “special places.”

“The Crane Estate, with its 25,000-plus acres, in complexity and importance, is unmatched by the other properties we hold,” says Andy Kendall, executive director for The Trustees of Reservations. As a nationally significant historic landmark surrounded by conservation land (and endangered species habitat) and used by beach-goers, campers and for public and private events, he says, “It encompasses the full scope of our mission. As an organization, it is a pretty tall order (for us) to ensure that it continues for generations.”

A signature feature of the estate is the 59-room Stuart-style mansion atop the hill, and the Grand Allee that rolls out from the house all the way to the Atlantic Ocean.

The allee (pronounced “al-lay”) may be the most striking feature of the property. Created by landscape architect Arthur Shurtleff, who modeled it after Italian and French gardens of Renaissance Europe, the mall stretches for 1,600 feet of rolling lawn, adorned by statues and lined by more than 300 trees on either side.

Three-year project will employ modern methods to restore a landmark landscape, removing and replanting 600 trees

Prior to the restoration, trees can be seen crowding the allee from both sides, blocking the views.
“When (people) come here, that’s the iconic image everyone will remember,” says Murray, who says that no landscape in North America has a similar feature of the same scale.

This spring, Murray is overseeing the beginning of a major restoration of that feature – as Norway spruce and Eastern white pine are being removed and replanted. The three-phase, $500,000 historical restoration project will not only repair the damage done by recent storms, but intends to bring the Grand Allee back to its peak beauty.

Ravages of age

The hard storms of New England’s winter and early spring left their mark on the Crane Estate. Most of it came with the eastern winds that roared through the region on February 25. The winds blew down an estimated 500 trees on the 165-acre property, including 110 Norway spruce and Eastern white pines on the allee.

“There was an area there that was flattened right out,” says Murray, though even with those trees missing, the damage was not apparent from the mansion.

The damage from the windstorm reinforced a lesson from 2007. As spectacular as it is, the landscape is showing its age.

“It’s approaching 100 years old at this point. The lifecycle of the trees is nearing its end,” Murray says. “The tipping point came in 2007, the Patriots Day nor’easter that came through here, (with) heavy rain and sustained winds. We lost more than two dozen trees, creating large gaps, and really beginning to erode the integrity of the feature. It was at that point that we realized that we needed a thoughtful plan, so we could preserve this for future generations.”

It would likely have been worse had Mayer Tree Service, Inc., the Essex, Mass.-based, TCIA-member tree care company that works on the property, not already removed the trees from the top portion of the allee. More than 130 Norway spruce and Eastern white pine were taken from the allee in early February as part of the first phase of the historical landscape restoration.

New trees were scheduled to be planted later in March, but historically heavy New England rains soaked the ground and pushed the planting into April.

As part of the first phase of the three-phase project, the trees were removed from the top portion of the allee, covering the 375-foot distance from the great mansion to the “casino” area. A new crop of trees, 104 Norway spruce and 26 white pine, will be planted as weather conditions allow. Scattered “buffer” plantings of white pine, Eastern red cedar, and Austrian pine will fill in the outside edges – 21 more trees in all.

More trees will be removed and replanted next year, and – in the final phase – the remainder will be replaced in a third year, (including 82 Eastern red cedar trees in the final 500 feet of the allee). In total, about 603 trees will go in over the next three years, although there has been discussion of planting more trees following the damaging storms.

“Breathing new life” into the landscape

Kennebunk, Maine-based landscape architect Lucinda Brockway, whose company is called Past Designs, specializes in landscape preservation projects such as this one.

“We’re trying to preserve historic landscapes just as we’re trying to preserve historic buildings,” Brockway says.

“Sometimes they get re-used in new forms, and other times they get revitalized and rejuvenated in the same form that they’ve always had historically. In this case, that’s exactly what’s happening. I call it landscape rejuvenation, because we’re just breathing new life into this landscape that’s 100 years old.”

There was discussion of making changes to the tree species and other alterations, but Brockway says the restoration will seek to recreate the original allee by using the same trees and same design.

“We’ve talked a lot about the long-term maintenance of all of this, because we’re
trying to be as cost-effective for the long term as possible for the trustees, as far as the main (line) of hedges go,” Brockway says. “We looked at substituting dwarf species and other kinds of trees in there, but what we found is that there’s no better alternative to what they decided to plant in 1913.”

The Crane Estate trees were originally planted in 1913 through 1915, and while the replanting will stay true to Shurcliff’s vision and design, it will do so with some modern techniques applied to conserve water and assure sustainability, and the trees will be planted further apart than the original to allow more room for the root system. It is estimated that the trees will take 15 years of growth to produce the intended look.

Brockway first got involved with the Crane Estate when she put together a cultural landscape report of the entire property in 1992.

“We wanted to understand the history of the entire site and what the importance was, and how it evolved,” Brockway says. “Back then, the allee was considered fragile, because it was aging and the trees were getting older, but by 2007 when the storm hit and a number of trees came down, it became obvious that it was time to address this whole process. Then we really went into detail and developed plans to do the restoration.”

In the past 60-plus years, the trees have been allowed to grow taller, but as part of the research, Brockway tried to determine why Shurcliff used Norway spruce — “…meant to be a tree that wants to grow 80
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feet tall and 40-feet wide” – as a hedge.

“Everybody today thinks of it as a big evergreen tree rather than as hedge material,” Brockway says. “When I went back to the literature from 1910 to 1920, it turns out that it was always recommended as a hedge, along with some other trees that could take shearing and pruning really well. It was a popular hedge plant. It’s interesting to see how use of trees changes based on the style of landscaping that’s going on.

“Now we’re very much into natives, and natural habitats and natural forms of things, rather than things that are clipped and sheared and heavily topiary, but back in 1910 to ’20 that’s what they were looking for. It’s an interesting use, and this dark green Norway spruce, compared to the really soft bluish-green needles of the white pines that were behind it, makes a really nice contrast in evergreen foliage. That helps contribute to the overall beauty of what this design was.”

**Sustainable practices**

The project also incorporates modern, sustainable landscaping practices aimed at better efficiency, long-term cost savings, carbon consciousness and resource re-use.

Because old trees absorb CO₂ and hold onto it like a “carbon sink,” the planners opted to re-use them without burning. Some were milled into lumber, including some lumber that will be used by a wooden boat builder in nearby Essex, Mass. Workers also eliminated “green waste” by chipping the remaining material for use in a compost operation. Some of that compost and mulch will be returned to the property for the planting of new trees. Where possible, any products used on the estate will be provided locally, to cut down on the emissions that come with shipping.

The Trustees also plan to protect the biodiversity of the resource by managing invasive species, which (according to a project fact sheet) “represent a direct threat to the designed landscape, but also threaten to diminish the ecological integrity of the surrounding natural areas… A concerted effort to manage populations and control seed
One of the most interesting parts of the plan – and one that could yield great cost savings – is the repair of the valve system for two large cisterns that will hold rainwater and feed the irrigation system. The cisterns are near the top of the hill, near the mansion, underneath what was once a tennis court. The two cisterns hold 135,000 gallons of water combined, and it is estimated that more than 190,000 gallons will come into the cisterns off of the mansion roof.

A gravity-fed irrigation system will use water from the cisterns to keep the new trees irrigated, with special emitters on the irrigation heads that will adjust for the pressure and change in grade. Once the 635 new trees in the allee are established, the cisterns should be able to supply water for other uses.

As it grows in, the allee will look more like it did in 1930 than that it has in recent decades. The Norway spruce will be trimmed at 12 feet. As originally designed, the Norway spruce was trimmed lower and set further away from the several statues that stand on both sides of the lawn.

“The spruce hedgerow was intended to be a hedge, and it was maintained as a hedge for some time,” Murray says. “We’re speculating that it was around World War II, sometime in the ’40s, when labor was hard to come by, that it was released.”

The trees grew both taller and broader, crowding the statues and narrowing the space.

“It grew out of scale and changed the whole spatial dynamic,” Murray says. “The grandeur of the feature was diminished.”

While the entire project – which includes the continued restoration of the casino – will cost $1.5 million, Kendall noted that one of the methods used to manage historic properties is to try as best you can to stay ahead of the maintenance needs – which means that projects follow projects.

“With a property like this, it’s not hard to conclude that the work is never done. When we finish this, the next one will be ready to go.”

Circle 32 on RS Card or visit www.tcia.org
By Christina Wells, Ph.D.

Should you be offering soil compaction testing as part of your tree care service? More and more arborists are using compaction testing to educate their clients about root and soil health. For a relatively small initial investment, it's possible to measure soil bulk density and determine whether compaction may be playing a role in tree decline at a specific site.

Having data to share with your clients can help you make the case for soil decompaction and amendment treatments (Wells et al. 2009). Here we'll review the basics of making and interpreting soil bulk density measurements. We'll also provide facts on soil compaction to share with your customers.

**Bulk density: what is it?**

An ideal soil is made up of 50 percent solids (sand, silt, clay and organic matter) and 50 percent pores. Pore space should be divided evenly between large aeration pores and smaller water-filled pores. Unfortunately, few urban and landscape soils fit this profile.

During land use and development, foot and vehicle traffic causes soil particles to pack closely together, destroying pore space and resulting in soil compaction. Tree roots have difficulty generating enough force to push their way through this compacted soil, and root system development suffers as a result. Reduced air-filled pore space can leave the root system starved of the oxygen it needs to grow and function. And water-filled pores may become so small that roots can no longer extract water from them.

Soil compaction can be quantified by measuring bulk density: the dry mass of soil per unit volume. Bulk densities of 1.2 to 1.4 g/cm³ (grams per cubic centimeter) are typical for undisturbed forest soils. Urban soil bulk densities are generally much higher. Smiley et al (1990) reported bulk densities of 1.75 g/cm³ in a highway median planting near Charlotte, N.C., and Patterson (1977) measured bulk densities as high as 2.2 g/cm³ beneath shade trees in Washington, D.C. For comparison, the average bulk densities of cinder blocks and bricks are 1.7 g/cm³ and 1.75 g/cm³, respectively (Patterson et al. 1980)!

**Table 1: Growth limiting bulk densities for soils of different textures, after Daddow and Warrington (1983)**

<table>
<thead>
<tr>
<th>Soil Texture</th>
<th>Approximate growth-limiting bulk density (g/cm³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clay, Silt</td>
<td>1.35-1.40</td>
</tr>
<tr>
<td>Silt clay, Silt clay loam</td>
<td>1.40-1.45</td>
</tr>
<tr>
<td>Silt loam</td>
<td>1.40-1.55</td>
</tr>
<tr>
<td>Clay loam</td>
<td>1.45-1.55</td>
</tr>
<tr>
<td>Loam</td>
<td>1.45-1.6</td>
</tr>
<tr>
<td>Sandy clay</td>
<td>1.55-1.65</td>
</tr>
<tr>
<td>Sandy clay loam</td>
<td>1.55-1.75</td>
</tr>
<tr>
<td>Sandy loam</td>
<td>1.65-1.75</td>
</tr>
<tr>
<td>Sand</td>
<td>1.80</td>
</tr>
</tbody>
</table>

**Measuring bulk density**

So how can you tell if your soil is more compacted than the aver-
How high is too high?

A quick rule of thumb is that bulk densities above 1.6 g/cm³ are usually limiting to root growth. But a more accurate interpretation of bulk density also takes into account the soil type. The growth limiting bulk density (above which roots cannot penetrate the soil) is lower for fine-textured soils than for coarse-textured soils (Table 1, facing page). For example, root growth will be severely limited in clay soil with a bulk density of 1.45 g/cm³ but will not be severely limited in a sandy soil until bulk density reaches 1.7 g/cm³.

To determine whether your soil is likely to limit root growth, compare its bulk density and soil type with those in Table 1. Bulk densities within 0.2 g/cm³ of the growth-limiting bulk density (and higher) are considered restrictive to root growth (Daddow and Warrington 1983).

Soil decompaction and amendment

Until recently, arborists have had few options to offer clients whose established trees appear to be declining in response to compacted soil. Wholesale removal or tillage of compacted root zone soil only causes more damage to an already-stressed root system. However, recent advances in air tillage and hydraulic excavation allow arborists to loosen or remove soil with far less damage to the tree’s structural roots.

Soil replacement and amendment programs that use these technologies show promise for improving tree performance in urban soils.

Watson and colleagues (1996) used high pressure water jets to remove root zone soil from numerous small holes or larger pits around established *Tilia* and *Platanus* trees with minimal root system damage. Soil from the pits was replaced with a mixture of coarse sand, compost and fertilizer, resulting in greater trunk growth in the years following treatment. While similar in concept to earlier methods of vertical mulching, this technique causes far less damage to structural roots than would occur if the soil were removed by coring or digging.

Wells et al. (2009) recently reported that a combination of air tillage, organic matter amendment, fertilizer and mulching reduced soil compaction for at least three years after treatment at four urban sites. This study made use of the Air Spade (Guardair Corporation, Chicopee, Mass.), a tool that loosens the soil with a stream of high pressure air.
compressed air channeled through a specialized tip. A similar tool is marketed as the Air Knife by Supersonic Air Knife, Inc. (Allison Park, Pa.). Long-term benefits of air tillage were only achieved when organic matter incorporation and surface mulching were also performed. Air tillage alone provided only a transient improvement in soil physical properties.

Keep your eye out for more research on soil decompaction and amendment practices; they are one of the most exciting frontiers in arboriculture today. By adding bulk density measurements to your diagnostic arsenal, you can determine whether a site is likely to benefit from these techniques.

Christina Wells, Ph.D., is an associate professor in the Department of Environmental Horticulture at Clemson University in Clemson, South Carolina. This article was based on her presentation at TCI EXPO 2009 in Baltimore on the same subject.

References


One Day One School and one Little League partner

One Day One School, a New Jersey-based volunteer school grounds clean-up initiative co-founded by TCIA-member Tom “Ace” Gallagher of Ace Gallagher Stump Grinding Services of Whippany, N.J., has partnered with the local Little League, a move Gallagher says he hopes will help the program grow.

One Day One School events typically begin with area tree care companies donating their time, equipment and services to prune and remove dangerous trees and branches. Next, crews of volunteers complete a cleanup of the area. The experts then supervise the planting of new trees and shrubs. The day ends with the organizers inviting all of the participants to join them for a barbecue.

Participants at prior events have typically included up to 50 parents, 100 students and 15 professional tree care and landscaping crews. While Rick Close of the Davey Tree Expert Company in Morris Plains, N.J., has been involved from the start, an “environmental makeover” initiative has steadily expanded to include the participation of several additional tree services, school officials, town representatives, public works departments and community organizations along with other local partnering companies. Thanks to media coverage, including in TCI Magazine, the program has caught the attention of municipalities and organizations as far away as Virginia and Montana.

The group’s latest partnerships with the Hanover (N.J.) Township Little League and “Friends4Hanover,” a not-for-profit township organization, means that “we have several hundred new members that will affect our schools and fields almost right away,” says Gallagher.

The focus of the next scheduled One Day One School event will be on Hanover Township’s school grounds, which include the baseball fields used by the League. The players will not only be taking part in the volunteer event itself but will also be assuming a role on an ongoing basis throughout the season.

Terex takes Work Truck Show Green Award

Terex Utilities won The Work Truck Show Green Award for its HyPower Hybrid system at the Work Truck Show 2010. A panel of trade media editors selected the HyPower Hybrid system as the best new product that advances fuel utilization displayed at the Work Truck Show in St. Louis in March.

The HyPower Hybrid is a plug-in hybrid electric vehicle system that allows utility truck operators to save up to 1.5 gallons of fuel per hour. The system operates the truck’s aerial lift without running the engine to save fuel, reduce emissions and eliminate noise. Terex estimates that the HyPower Hybrid system can reduce diesel fuel usage by up to six gallons every work day.

“Winning The Work Truck Show Green Award is truly meaningful for us at Terex,” says Terry VanConant, Terex marketing communications and promotions coordinator. “Chosen from a field of 20 other entries, the industry recognizes that our HyPower system is a practical way for our customers to save energy and reduce emissions.”

Arborwell Earns Diamond Certification – again

Arborwell, based in Hayward, California, has been awarded Diamond Certification by American Ratings Corporation for the third year in a row after being rated highest in quality in ongoing customer satisfaction.

A company must apply to be rated by ARC and pass each part of a 12-step rating and certification process. ARC pulls a random sample of past customers from the applicant company’s files and surveys 100 customers by telephone. Not only do the customers rate the applicant company on a 1-to-10 scale for quality, but they also indicate their willingness to return or refer other consumers to the company. A customer satisfaction survey score of greater than 90 on a 100 scale is required.

ACRT Reaches Milestone

Independently operated and 100-percent employee-owned ACRT, Inc. reached a major milestone in 2010. ACRT first opened its doors 25 years ago, on February 11, 1985, with fewer than 50 employees. Today, Akron, Ohio-based, ACRT employs more than 400 professionals throughout the United States and is a leader in utility vegetation management.
ReachMaster LightLift LL76

ReachMaster’s new LightLift LL76 reaches 76 feet high with a horizontal reach of 38 feet. It comes standard with dual power sources, so it can be used for both indoor and outdoor jobs. The standard automatic safety and stability system lets the operator achieve optimum outreach without extending beyond safe boundaries. The LL76 can maneuver through doors 3.2 feet wide and 6.7 feet high. Since the machine operates on a track chassis, it is capable of traversing rough terrain and achieving a zero turn radius, while exerting a low pressure of 5.8 psi under the tracks. The automatic stabilization feature lets the lift operate on gradients up to 13 degrees, and when the machine is set, each outrigger exerts only 43.5 psi to the floor or ground. The turret rotates 360 degrees, and the jib allows 85-degree articulation. The LL76 comes standard with the capability to supply air, water and 110V power to the basket. Options include one- and two-person baskets, non-marking tracks and customized color schemes.

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Jarraff Geo-Boy Brush Cutter

The new, state-of-the-art Geo-Boy Brush Cutter from Jarraff Industries features a design that allows it to operate in a variety of conditions including remote access sites and challenging terrain. With the ability to lift the cutter head approximately 11 feet high, the Geo-Boy can quickly and effectively clear brush and trees up to 12 inches in diameter. With two tier III engine options, 220 hp and 260 hp, the Geo-Boy is more powerful, maneuverable and fuel efficient than other brush cutters in its class. A low center of gravity provides a smoother ride and keeps the cutter head properly positioned in uneven terrain. Safety features include full Lexan, No Mar windows and a rearview camera. The ergonomically designed cab is pressurized to keep dust and debris from entering the cab during operation. Heating and air conditioning are also standard, providing a comfortable working environment. Thoughtfully designed to allow for easy access and maintenance, the Geo-Boy includes onboard compressed air for removing dirt and debris as well as powering pneumatic tools.

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Scaffidi Serco 4500 Loader

The NEW Serco 4500 hydraulic loader from Scaffidi, introduced at TCI EXPO in Baltimore, makes single-axle (including under CDL) trucks more versatile in your tree care operation. The loader lifts 4,500 pounds at 10 feet, with a boom reach of 20 feet (includes 3 foot extension), and provides a choice of continuous rotation butt/bypass grapple (52.25-inch opening) or continuous rotation material handling grapple (53.25-inch opening). The loader has true operating weight of 4,500 pounds – including grapple, tank and oil – for payload maximization.

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Ommé 3700 RBDJ tracked lift

The new Ommé Lift 3700 RBDJ tracked lift is compact, telescopic platform lift with a 37-meter (121-foot) working height, moveable jib and 180-degree basket turn, mounted on a fast moving crawler chassis. With a diesel and battery bi-energy power pack, the lift is equally efficient outdoors and indoors. The standard Kubota diesel engine is the natural choice outdoors. The rapid two-gear undercarriage is quickly in position and the boom system takes the operator to maximum height in two minutes and 50 seconds. The 3700 RBDJ is designed to traverse soft, muddy or hilly terrain, but the chassis also disperses the machine’s weight widely when traveling on delicate surfaces such as pavement or lawns. It can set up on inclines up to 40 degrees. Compact dimensions allow access into tight areas: height 1.98 m (6.5 feet); length 7.78 m (25.52 feet), and the detachable basket can reduce the length further. The 1.5 m (4.92 feet) width retracts to 1.1 m (3.6 feet). Standard features include two electronic motors powered by a 400 Ah battery pack; a 250 kg (551.2 pound) basket load; and 130 degree fly-jib.

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North Country Organics’ Stress-X biostimulant is a natural source of both essential trace elements and valuable plant growth hormones that help trees increase stress resilience, promote growth and development, retard senescence, and develop new healthy roots. It also contains natural chelating agents that make micronutrients – essential for trees to produce catalytic enzymes – more readily available. Trees treated with Stress-X exhibit increased resistance to insects and pathogens. It can be applied as a foliar, a soak or injected into the root zone. Stress-X is biologically active and when introduced into the soil it stimulates the procreation of beneficial microorganisms. The result is accelerated growth, increased fruiting and flowering, intensified coloration and significantly less need for pest and disease controls. It is available in 1.5 kg (3.3 pound) or 20 kg (44 pound) containers, is completely soluble and won’t (if diluted correctly) clog nozzles or filters.

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Don’t be fooled by “copy-cat” products claiming to be “just as good.”

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Events & Seminars

May 2-8, 2010
North American Occupational Safety and Health Week (NAOSH) 2010
May 5: Occupational Safety & Health Professional Day
Contact: www.asse.org/naosh

May 4-5, 2010
Level 1 Tree Climbing Methods & Best Practice
Taylor, MI
Contact: (860) 429-5028 x 701; www.ArborMaster.com

May 6-7, 2010
Level 1 Precision Felling, Chain Saw Handling, Safety & Ergonomics
Taylor, MI
Contact: (860) 429-5028 x 701; www.ArborMaster.com

May 12, 2010
Do Street Trees Have a Future?
University College, London, UK
Contact: www.ukmaburbanforum.co.uk

June 13-15, 2010
Trees Florida 2010
Casa Marina, Key West, FL
Contact: www.treesflorida.com

June 22-23, 2010
Lev. 1 Prec. Felling, Saw Handling, Safety & Ergonomics
Haddam, CT
Contact: (860) 429-5028 x 701; www.ArborMaster.com

June 24-26, 2010
Lev. 1 Tree Climb Methods, Work Position & Best Practice
Haddam, CT
Contact: (860) 429-5028 x 701; www.ArborMaster.com

June 28-29, 2010
Level 1 Tree Climbing Methods & Best Practice
Indianapolis, IN
Contact: (860) 429-5028 x 701; www.ArborMaster.com

June 30-July 1, 2010
Lev. 1 Prec. Felling, Saw Handling, Safety & Ergonomics
Indianapolis, IN
Contact: (860) 429-5028 x 701; www.ArborMaster.com

July 7-8, 2010
Level 1 Arborist Rigging Applications
Haddam, CT
Contact: (860) 429-5028 x 701; www.ArborMaster.com

July 9-10, 2010
Level 2 Tree Climb Methods/Best Practice
Haddam, CT
Contact: (860) 429-5028 x 701; www.ArborMaster.com

July 22-23, 2010*
Certified Treecare Safety Professional (CTSP) Workshop
Navy Pier; Chicago, IL
Contact: 1-800-733-2622; ctsp@tcia.org; www.tcia.org

July 23-28, 2010*
ISA Annual Conference & Trade Show
Chicago, IL
Contact: www.isa-arbor.com

August 11-12, 2010
Lev. 1 Prec. Felling, Saw Handling, Safety & Ergonomics
Attleboro, MA
Contact: (860) 429-5028 x 701; www.ArborMaster.com

August 18-19, 2010*
Certified Treecare Safety Professional (CTSP) Workshop
Arcadia (Los Angeles), CA at Mauget offices
Contact: 1-800-733-2622; ctsp@tcia.org; www.tcia.org

October 3-5, 2010
MidAtlantic Chapter ISA Annual Conference
Morgantown, WV
Contact: mac-isa.org

October 24-27, 2010
New England Chapter ISA Annual Meeting
Plymouth, MA
Contact: newenglandisa.org

November 9-10, 2010*
Certified Treecare Safety Professional (CTSP) Workshop
Pittsburgh, PA (in conjunction with TCI EXPO)
Contact: 1-800-733-2622; ctsp@tcia.org; www.tcia.org

November 11-13, 2010*
TCI EXPO 2010 Conference & Trade Show
Pittsburgh, PA
Contact: 1-800-733-2622; cyr@tcia.org; ctsp@tcia.org; www.tcia.org

2011
January 9-10, 2011
National Green Centre
Formerly WESTERN Annual Meeting and Trade Show
St. Louis, MO
Contact: www.wnla.org; 1-888-233-1876

February 6-10, 2011*
Winter Management Conference 2011
Grand Cayman
Contact: Deb Cyr cyr@tcia.org; 1-800-733-2622; www.tcia.org

* Indicates that TCIA staff will be in attendance.
High-visibility warning garments are required safety attire for highway and road construction workers according to a letter of interpretation recently released by OSHA. While the interpretation was addressed to construction and issued by the acting director of OSHA’s Construction Directorate, tree care employers should not assume that the same guidance would not or could not be applied to their crews.

Road and construction traffic poses an obvious and well-recognized hazard to highway/road construction work zone employees. OSHA standards require such employees to wear high visibility garments in two specific circumstances:

- when they work as flaggers, and
- when they are exposed to public vehicular traffic in the vicinity of excavations.

However, other construction workers in highway/road construction work zones are also exposed to the danger of being struck by the vehicles operating near them. The Bureau of Labor Statistics reinforced the need for using safety apparel when data from 2003 to 2007 showed there were 425 road construction work zone fatalities.

The new interpretation simply stipulates that for workers not covered by a specific OSHA standard, section 5(a)(1) of the OSH Act, also known as the General Duty Clause, requires equivalent protection.

The Federal Highway Administration’s (FHWA) recent issuance of a final rule (Worker Visibility, 23 CFR Part 634) demonstrates the need for all workers who are exposed either to public traffic or to construction vehicles and equipment to wear high-visibility apparel. Section 634.3 of the Worker Visibility Rule states:

All workers within the right-of-way of a Federal-aid highway who are exposed either to traffic (vehicles using the highway for purposes of travel) or to construction equipment within the work area shall wear high-visibility safety apparel.

The purpose of this requirement is to decrease the likelihood of worker fatalities or injuries caused by motor vehicles and construction vehicles and equipment. In the preamble to the Worker Visibility Rule (Volume 71 of the Federal Register, page 67792), the FHWA stated:

High visibility is one of the most prominent needs for workers who must perform tasks near moving vehicles or equipment. The need to be seen by those who drive or operate vehicles or equipment is recognized as a critical issue for worker safety. The sooner a worker in or near the path of travel is seen, the more time the operator has to avoid an accident. The FHWA recognized this fact and included language in the 2000 Edition of the Manual on Uniform Traffic Control Devices (MUTCD) to address this issue.

The FHWA’s rationale underlying the rule well illustrates that the industry recognizes that construction workers in highway/road construction work zones need protection against the hazard posed by moving traffic. The FHWA’s recent mandatory standard for workers on federal-aid highways shows that struck-by hazards in highway/road construction work zones are well recognized by the construction industry. Furthermore, the standard indicates that a feasible means of addressing that hazard is the wearing of high-visibility apparel. OSHA’s General Duty Clause is intended to address areas not covered by OSHA standards where there is nevertheless common knowledge of a hazard and the means to control it.

In 2004, OSHA issued a letter of interpretation about the use of high-visibility apparel in highway construction. The letter emphasized that section 5(a)(1) of the OSH Act requires workers in highway work zones to wear high-visibility apparel. However, the Occupational Safety and Health Review Commission ruled at that time that OSHA’s letter indicated a more limited position: high-visibility garments were only required where the Federal Highway Administration’s Manual on Uniform Traffic Control Devices (MUTCD) mandated their use.

To reiterate, the new OSHA letter states that all highway and road construction workers must wear high-visibility apparel regardless of whether the MUTCD requires them.

Peter Gerstenberger is senior advisor for safety, compliance & standards for the Tree Care Industry Association.
Armillaria root rot is a disease caused by the soil-borne pathogen Armillaria mellea (Photograph 1). This disease has a worldwide distribution and attacks many species of fruit, ornamental and forest trees and shrubs.

Severe losses have occurred in orchards or vineyards planted in infected soils. However, most losses from this disease are inconspicuous, appearing as a slow decline and death of the occasional tree. Infected trees exhibit symptoms that include reduced growth, smaller chlorotic leaves, dieback of twigs and branches followed by gradual or sudden death. Some trees exhibit no outward symptoms, but simply blow over due to rotted roots. Resin, gum or watery liquid may bleed from the lower stem of affected plants (Photograph 2). In the autumn, clumps of honey-brown toadstools, similar in appearance to the cultivated mushroom, appear near or at the base of infected plants. Affected trees appear as scattered individuals at first, but may develop into circular areas of diseased trees as the pathogen spreads from its initial infection point.

Whitish fan-like fungal mats (mycelium) are often found under the bark of Armillaria-infected trees. Rhizomorphs, which resemble black shoelaces, may also be present. These rhizomorphs function to carry water and nutrients to the mycelium under the bark being attacked. These rhizomorphs extend back to previously rotted roots and stumps, leaves or even the soil.

Control: Existing Techniques

In landscape situations, all sources of infection such as infected stumps and
major roots, are generally removed from site to reduce the level of the Armillaria fungus. If wood chips from a ground stump are left in the soil, replanting is generally delayed for a season. If infected stumps and roots cannot be removed, the use of a physical barrier to prevent the spread of the fungus has been successful providing it is possible to separate the source of infection from healthy plants. Barriers should extend from just above the soil to at least 18 inches (45 cm) below ground, as rhizomorphs can grow under a shallower barrier. Soil sterilization with steam (6kg pressure for 30 minutes at 120 C) is used in some European countries, but this treatment has to be applied annually and suffers from the drawback that this process kills all soil borne organisms as well as Armillaria. The phenolic emulsion Armillatox, once labeled for Armillaria control in the UK and Europe, is no longer available for chemical control of this disease.

New Control Techniques
Root Invigoration is a technique that cultivates the soil to a depth of 6-8 inches (15-20 cm) using high-speed compressed air to cultivate the soil with minimal disturbance or damage to the roots. (Photograph 3) This procedure is mainly used as a means of soil de-compaction. There are other uses of compressed-air tools, including trenching during utility installation, tree root exploratory and root-collar excavation. Root collar excavation (RCX; Photograph 4) involves the permanent removal of soil from the base of the tree trunk to the depth of the buttress roots. Recent research has shown that a link exists between root collar burial and Armillaria root collar infection.

Basically root collar infection is a critical step in the infection process of trees by Armillaria. This involves the formation of mycelium under the bark at the root collar, decomposition of the underlying cambium tissue and decay of secondary xylem. This process girdles the trunk preventing vascular tissue from functioning. Consequently, in an effort to protect this important part of the root system from vascular decay, RCX may offer a cultural means of preventing root collar infection by Armillaria.

In support of this theory, Baumgartner (2004) investigated the use of RCX for control of Armillaria root disease of grapevine in two commercial vineyards in Napa County California where grapevines were growing in heavily Armillaria-infected soil. One hundred Armillaria infected grapevines at each vineyard were identified with similar stages of Armillaria infection. RCX was then performed on 50 infected vines, i.e. vines that had mycelial fans observed at the root collars, and 50 non-RCX plants acted as controls. Disease severity and plant condition was then monitored over the growing season. They concluded that RCX significantly increased yield and fruit weight of infected vines to levels comparable with healthy non-infected grapevines. Additionally they found that mycelial fans receded from the base of the trunk and sections of main root exposed by RCX in both vineyards. So RCX appears to be an effective cultural control of Armillaria collar rot disease in grapes. Similar research has been published by Munnecke et al (1976) and Bliss (1944).

Bio-Control
Fungi in the genus Trichoderma have been recognized since the 1920s for their ability to act as bio-control agents against root and foliar plant pathogens. When in contact with tree roots, Trichoderma rapidly colonize the root surface or cortex. In addition to colonizing roots, Trichoderma spp. attack, parasitize and gain nutrition from other fungi. Since Trichoderma grows best when there are abundant healthy roots, they have evolved numerous mechanisms for both attacking other fungi and for enhancing plant and root growth, including:
- Mycoparasitism
- Synthesis of fungitoxic antibodies (Antibiosis)
- Competition for nutrients or space
- Tolerance to stress through enhanced root and plant development
- Solubilization and sequestration of inorganic nutrients
- Induced resistance
- Inactivation of a plant pathogen’s root/leaf tissue degrading enzymes

Work at the University of Reading (UK) under laboratory conditions and using containerized pot trials has consistently shown Trichoderma isolates to be highly antagonistic against Armillaria mellea with the conclusion that these fungi would make a useful addition to Armillaria mellea control strategies.

Trianum is a commercially available Trichoderma developed in the Netherlands. According to the manufacturers, this strain of Trichoderma protects crops from soil-borne diseases such as Fusarium, Pythium, Rhizoctonia and Sclerotinia. The potential of Trichoderma
againts Armillaria mellea remains unknown; however, the use of root invigoration in combination with Trichoderma may provide a useful cultural/bio-control combination for long term Armillaria mellea control.

Bartlett research

Unlike the work of Baumgartner, who had access to hundreds of infected plants at similar ages and stages of Armillaria infection, identifying and locating an appropriate number of trees of the same species, age and infection level was impossible. Consequently a number of raised beds (Photograph 5) were constructed at the University of Reading Shinfield Experimental Site and filled with a medium suitable for Armillaria growth and development (soil, organic matter and wood chips). Pure cultures of Armillaria mellea were then added to each raised bed, except those left un-infected for control purposes. Treated beds were left for one year to allow Armillaria colonization of the wood chips.

The Armillaria-infected raised beds were treated as follows:
2. Armillaria only, no additional treatment or disturbance.
3. Root Invigoration of the infected soil
4. Root Invigoration + Trianum
5. Trianum drench treatment

To determine the effectiveness and longevity of each Armillaria treatment, at months 6, 12, 18 and 24, media from each treated bed was used to grow strawberry plants. Plant condition was assessed on a visual 0-5 scale (0 = No symptoms of infection, 5 = dead plant) at 90 days after planting (Table 1).

As results of Table 1 indicate, Root Invigoration alone or in combination with Trianum provided two years of protection against re-infection by Armillaria (Photograph 6). Ongoing research is trying to re-isolate Armillaria from these treated beds to determine if the presence of Armillaria exists or whether these two treatments have successfully eradicated Armillaria from the raised bed. Use of Trianum alone has provided one average 40-60 percent protection (Photo 7).

Armillaria Management – suggested guidelines

When replanting sites where Armillaria contributed to tree mortality, incorporating Trichoderma into the backfill and surrounding soil is recommended to help prevent root and lower stem disease on the
new transplant. Proper planting procedures that ensure the root collar or first major root is exposed are also critical to successful tree establishment.

Results of our experiments should also be interpreted with some degree of caution when adapting research from grapes and strawberries to large trees with respect to structural aspects. Although Armillaria can directly infect root collar tissue that is buried, it also commonly progresses into the lower stem and collar from root infections distal to the flare. Consequently, it is important to assess structure of the tree before determining to treat. If the tree does not represent an unacceptable risk of failure, then assess health. If the tree is seriously declining and is infected with Armillaria, then it is not likely to respond.

If it is decided to treat therapeutically, then ensuring the root collar is exposed is essential, as previous work on grape shows that root collar excavation alone was effective in arresting development of Armillaria and salvaging vines.

Another consideration with trees is the depth of the root system compared to grape and strawberry. Root invigoration will cultivate the soil to 8 inches very effectively, which is ideal when dealing with Armillaria on strawberry or grape, but tree roots that are subject to Armillaria can be much deeper. Root invigoration also has the benefit of increasing host vitality by stimulating root growth that allows declining trees and shrubs to revive and recover their health and aesthetics. Root health drives all other tree functions, such as trunk growth, leaf/fruit/seed production and branching, and defense against pests and diseases that help defend against further damage by Armillaria. It is at this stage, i.e. just after root invigoration, that Trichoderma should be added to the process.

Aftercare is always critical to success. This should include:

- Frequent inspections for health and structural issues.
- Monitoring of soil moisture to protect against over and under irrigation.
- Prescription fertilization for optimal tree nutrition.
- Mulching the critical root zone.
- Monitoring and treatment of other pests.

Likewise results of our experiments were not conducted using typical urban soil, which may influence the efficacy of Trichoderma root colonization. However, results do strongly indicate that root invigoration followed by inoculation with Trianum does offer promise as a joint cultural/bio-control strategy for the
management of *Armillaria mellea*, especially as a preventative treatment in establishing trees on replant sites.

**Conclusions**

*Armillaria* root rot is a notoriously difficult disease to manage. Traditional management systems of *Armillaria* through the removal of tree stumps and major roots are an expensive, time consuming process. There are no chemical controls for the management of this pathogen. Where chemical controls have been field tested for the eradication of this pathogen, both systemic and non-systemic fungicides failed to fully eradicate the rhizomorphs. Consequently there is a need for an alternative approach to the problem. Root invigoration does not rely on fungicides, nor does it require expensive equipment. In combination with the application of a *Trichoderma*-based bio-control agent, long term efficacy against *Armillaria* infection may be possible, especially when applied as a preventative measure. As a therapeutic treatment against *Armillaria*, root invigoration and *Trichoderma* applications are recommended as part of a total program that consists of:

- Structural and health evaluations;
- Root collar excavation as needed;
- Root invigoration plus *Trichoderma* to improve health and suppress disease;
- Monitoring and care after treatment.

**Relevant literature**


http://ceventura.ucdavis.edu/newsletterfiles/Landscape_Notes4445.pdf


Thanks for the chuckle

I was reading the March 2010 issue of TCI Magazine and on page 56, in Tree News, “Purcell Fills void behind Holt and McKenzie at Purdue,” the end of the first paragraph mentions “…TCIA’s Student Career Days.”

And I thought, Mark Garvin (former TCI Magazine editor, now TCIA interim president and CEO) has a sense of humor enough that this could be a deliberate funny, to see if the readership is paying attention. I think that is absolutely hilarious, might I say, comic genius. Nicely done, whichever of you is behind this.

Jim Clark
president, The Tree Machine, Inc.
Indianapolis, Indiana

Editor’s note: Jim gives us far too much credit. The typo on “Career” was simply an editing error.

Send letters and e-mails to:
editor@tcia.org

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Since 1938, TCIA has been working with our members to advance their commercial tree care businesses. Together, we are transforming the industry. We’re working to increase consumer awareness and appreciation for quality tree care; to improve worker safety overall; to shape legislation and regulation through our voice in Washington; to and we’re partnering with industry suppliers to build stronger relationships for member companies.

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TREE CARE INDUSTRY – MAY 2010

27
Postal truck crushed by tree

A postal carrier escaped serious injury when a tree fell onto his delivery vehicle in Westport, Connecticut, March 1, 2010. The tree destroyed the vehicle and took down power lines. The driver was able to get out of his crushed vehicle and walk to waiting medics, who treated him and transported him to a hospital with minor injuries. Once the downed wires were de-energized, Westport firefighters found the mail truck engine was still running and it was in gear, according to The Hartford Courant.

Fall from tree kills firefighter

An off-duty firefighter died March 2, 2010, after falling out of a tree he was trimming in Durham, North Carolina. Brad Roberts, 26, was pronounced dead at Duke Hospital. He had been working for a private tree company at a home when he fell, according to The News & Observer. Another report, from www.abclocal.go.com, said he was working in his own yard when the accident occurred.

Submitted by Chris Baley, owner of CS Tree Services, Inc. in Apex, North Carolina, and Paul M. Mautz, CTSP, urban forester, City of Southfield, Michigan.

Homeowner electrocuted trimming tree

A 49-year-old, Grand Prairie, Texas, homeowner was electrocuted March 5, 2010, while trimming a tree. Family members called firefighters after they saw the man unconscious 30 feet up on an aluminum ladder. Nemias Saucedo, 49, was cutting a branch with a pole saw when a limb came in contact with a power line and then hit the ladder he was standing on. The man died at the scene. Power company workers had to shut off power in the neighborhood so firefighters could remove the body, according to The Dallas Morning News and www.myfoxdfw.com reports.

Homeowner killed by felled tree

A 47-year-old man died March 6, 2010, in Bainbridge, Washington, from injuries suffered when a maple tree he was cutting fell on him. The teenage children of Tad James Reid called police that evening saying he’d been cutting down trees on their property and they couldn’t find him. Police found Reid pinned under a tree and freed him. Bainbridge Island firefighters tried unsuccessfully to resuscitate him, according to the Kitsap Sun.

Worker injured in struck-by

A tree worker was injured by a falling tree in Lowell, Massachusetts, March 8, 2010. The victim was taken by medical helicopter to a local hospital, according to a www.thebostonchannel.com report.*

Train hits tree truck, killing driver

A man was critically injured after an Amtrak passenger train hit a tree service truck March 9, 2010, in White County, Indiana. John E. Wilson, 36, of Monon, who was driving trimming truck, was thrown from the vehicle after the collision. Wilson was unconscious but breathing, and was taken to White County Memorial Hospital with unknown injuries and later transferred to Methodist Hospital in Indianapolis, where he later died.

The train came to a stop more than a mile north of the crash scene. Limited visibility because of fog may have been a factor in a crash, according to the www.jconline.com report.

Woman killed by felled tree

A falling tree hit and killed a 60-year-old woman March 9, 2010, in Stuart’s Draft, Virginia, while she and her husband were cutting the tree down. The couple was cutting down a 35-foot-tall and 12- to

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**March 2010**

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**Accidents in the tree care industry that occurred during the month of March 2010. Graphic compiled from reports gathered by, or submitted to, TCIA staff.**
14-inch-diameter oak tree in their backyard. As the tree fell, the woman ran and ducked behind another nearby oak tree for shelter. The felled tree bounced off another tree and toward the woman, striking her in the head, according to a www.newsleader.com report.

Submitted by Joseph Williams V, CTSP, of Williams Brothers Tree & Lawn Service in Staunton, Va.

Branch falls on worker’s head
A tree worker was in stable condition after a falling branch hit him in the head in Marblehead, Massachusetts, March 13, 2010. Crews were cutting a tree when the branch fell. The worker was conscious when emergency crews arrived, but they took him to Mass General Hospital as a precaution, according to a www.necn.com report.

Man dies after being struck by tree
A Linwood Township, Minnesota, man in his mid-40s died March 15, 2010, after being struck by a tree he was helping cut down in Anoka County, Minn., according to a www.twincities.com report.*

Worker rescued after chain saw accident
Firefighters rescued a tree worker stuck in a tree after he partially severed his hand with a chain saw March 16, 2010, in Greenwich, Connecticut. The worker was in the crotch of the tree more than 50 feet above ground. He had apparently been prunning with a chain saw at a private residence when he cut nearly all the way through his left wrist. A firefighter using climbing equipment and a ladder was able to reach the man in the tree to stop his bleeding and bring him down to be treated before being taken to the hospital. The victim’s condition was not known at the time of the www.greenwichtime.com report.*

Cut trimmer keeps working, dies
An experienced tree trimmer who slashed himself with a chain saw while 40 feet up a pine tree in New Port Richey, Florida, March 19, 2010, died after refusing to come down for medical attention. Daniel Antrobus, 48, was straddling a branch when he accidentally carved a 4-inch cut into the back of his right leg, exposing the bone. Antrobus, a co-owner of the tree service, yelled out that he had cut himself, according to one of his employees quoted in a www.tampabay.com report. The employee told him to come down, but Antrobus wanted to finish the job. Another employee asked a neighbor to call 911. Antrobus apparently was then overcome by the loss of blood. Fire rescue crews arrived and within a half-hour Antrobus was strapped to the top of an extended ladder and guided to the ground. By that time he had gone limp and did not respond to CPR. He was flown to Bayfront Medical Center and pronounced dead about an hour later. A co-worker said Antrobus had never injured himself during his 13 years of tree work.

* Submitted by Paul M. Mautz, CTSP, urban forester, City of Southfield, Michigan.

More March accident briefs can be found online at www.tcia.org under the Safety tab.
Send local accident reports to editor@tcia.org.
I
n 1998, when Bill Davis started his company, Only Trees, LLC, it was the
only tree care company in Jupiter, Florida, says Steve Vecchio, co-owner of
the company. The business thrived, and in 2001 Davis asked his friend, Vecchio, who
had done tree pruning when he worked during college, to join him. Vecchio then
began talking with one of the few certified arborists in the area and realized they needed
to know more about tree care.

“Once we realized that, we started studying to make sure the business would be successful,” Vecchio says. Both became active with TCIA (Davis has been a member since 1999) and Vecchio became an ISA-Certified Arborist. They’re both on track to becoming Certified Treecare Safety Professionals (CTSPs) through TCIA.

The company expanded from strictly residential work into commercial properties
and home owner associations as the two continued to learn. Their business mix is now
roughly 53 percent commercial and 44 percent residential. Approximately 75 percent of their work is pruning, 20 percent hazardous removals and five percent stump grinding.

They’re one of the few tree care companies that trim mangrove trees, Vecchio says. Most arborists find it too overwhelming. The trees are protected by the State of Florida Department of Environmental Protection, the terminology is very technical, the permits require drawings and measurements – and the fines for making a mistake start at $5,000. He began because they have a large number of customers who live on the water. He learned about the permitting process and the very specific pruning requirements, and developed a rapport with Florida’s Department of Environmental Protection. They now have four State of Florida Certified Professional Mangrove Trimmers (PMTs) on staff.

Only Trees also does tree restoration, including palms. “We didn’t know anything about it because we didn’t have to,” he says. “Then two hurricanes hit within three months and a third hit the next year.” They learned restoration techniques from University of Florida literature, and although at first they weren’t sure the trees would survive, they’ve had success righting trees with roots that were completely out of the ground – including a ficus with a root system two stories high.

They also do free tree diagnosis. “If I don’t know what’s wrong, I call a consulting arborist,” Vecchio says. “One of the great things about TCIA and ISA is the networking. You can always get the answer to something. It’s a constant learning process. On a day I learn something new, it’s been a good day.”

The company now has 17 full-time employees and a part-time stump grinder. Most of the year they have three crews, but in the slower winter months they consolidate them into two, which keeps their employees working year round. “We take care of our employees,” he says. “If they’re doing their jobs, it makes my job so much easier. They’re the reason we’re successful.”

In return, he says, “Seniority isn’t a big deal here. That keeps everybody working hard. We all have to do our jobs well because we have to compete with other tree care companies.” The formula works – most of their employees are long term, which means the company doesn’t have to keep training new employees.

Having more members in each crew during the slow months also allows them to give their customers’ trees more detailed attention. It’s part of the company’s focus...
on customer service, which also distinguishes them from their competitors, Vecchio says.

Instead of advertising, they rely on customer relations, exposure and creating a good impression. “It all gets back to word of mouth,” he says. “We’re spending less and doing more business than ever before.”

When their crews clean up, they even dust off customers’ window screens. They leave T-shirts and reusable grocery bags with the company name with their invoices. They give away firewood. The man who grinds stumps spreads extra mulch around the flower beds when customers request it. On Arbor Day, they offer 50 percent off their usual rates. They’re very active in the community. They sponsor local sports and schools, and a few years ago they turned one of their trucks into a pirate ship float for a community parade to support the Toys for Tots program.

Vecchio also believes in educating his customers. “I grew up in the restaurant business, where the customer is always right, but I’m not going to do anything that’s wrong,” he says. “I’ve learned my craft. I explain to people in layman’s terms what I’m doing and why. They listen to me.”

One of the company’s goals is continued sales growth. “If we’re going to grow, we have to have the right people,” he says. “It’s okay to grow slowly. Every day I look at what’s the next step.”

Their latest step was to become accredited. In December 2009, they became the one of only a few accredited companies in South Florida. “My motivating factor was to learn something,” Vecchio says, “and I thought it was important to confirm that we were doing things the way they should be done.”

His wife, Shannon Vecchio, the company’s business manager, handled the whole process, which only took about six months. She had the business practices in place, and they were already holding safety meetings and using ANSI A300 (Part I) pruning standards. About the only thing they had to do was to buy additional chocks for the trucks and the chippers to comply with the safety practices.

The hardest part was retrieving and organizing all the information they had. “We already had everything in place,” Vecchio says. “Now it’s just in a more organized manner.”

He recommends Accreditation to all tree care company owners. Although Only Trees didn’t have any problems before they became accredited, he believes it will prevent any that might come up in the future. For example, he says, it’s made them aware of equipment that’s inferior, so they know what to look for when they’re in the market to buy new equipment. This is also one of the ways that Accreditation lets their employees know the company is doing everything they can to keep them safe.

As for customers, he says, “Our customers already love us,” but Accreditation reaches potential customers as well. “It lets them know we’re using best business practices, we’re licensed and insured, and we keep our company up to date with the latest arbor care. We do everything we can to make them say, ‘Let’s give those guys a try.’”

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For 2,500 years, men have tried to find ways to turn common metals to gold. If you remember any of your eighth grade history, you’ll recall that was called alchemy. Given enough time and money, today’s physicists might be able to turn lead into gold. But why put up with all that when you can turn what used to be wood waste to gold?

That’s what’s happening in the recycling business.

In this article we will focus largely on grinders, but chippers should not be ignored for their production potential. Either way you look at it and regardless of who you talk with, there is a gold rush on! That’s what’s happening in the recycling business.

In this article we will focus largely on grinders, but chippers should not be ignored for their production potential. Either way you look at it and regardless of who you talk with, there is a gold rush on! The demand for biomass fuels and different grades of mulch is heating up.

We have but to look back a decade ago when the objective of recycling was to put unwanted trees and limbs into a machine and reduce the mass for dumping or composting. Then demand spiked for natural mulches, including varieties of chipped and shredded, produced to a size and quality spec, and also colorized.

With the recent focus on energy needs, conservation and the “green” movement away from fossil fuels, tree waste is no longer “waste” – not when you can purchase or tweak a macro factory such as a grinder to turn out chips that meet designated specs for targeted biomass energy facilities or makers of pellets for wood stoves and furnaces, all at attractive prices.

(To get a feel for how the cost of wood chips for biomass energy use has grown and how its price and profit vary even over relatively short distances, go online and Google “Marginal Cost of Delivered Wood Chips from Energy Crops: A Case Study of the State of Tennessee.” It’s academic and on the dry side, but the report reveals typical pricing scenarios and costs that can be leveraged for the benefit of a shrewd tree care pro. Far beyond the equipment you purchase and the product you make, such are the considerations to factor in to any biomass product you’re thinking of marketing in your market.)

The initial challenge, of course, is to be able to turn out ton after ton of extremely consistent output, be it for biofuel or mulch.

“The demand for the material from various markets will shape what guys will do to create their end product,” says Jerry Morey, Bandit Industries Inc. president. “Right now, the big push is the biomass energy market, where customers will want more of a chip than a grind for two reasons.” In addition to its Beast line of horizontal grinders, Bandit manufactures a line of whole tree chippers for large diameter material. Many of these units are being used for biomass operations converting whole trees, tops and diseased wood into chips for fuel.

“First, the chip must flow uniformly thru biofuel systems. It is denser than ground or hammered material (meaning it has more energy potential per cubic foot). Furthermore, if material is cut, it will compact better, which I see as a big thing in transportation. Biomass plants probably won’t be located in urban areas, so shippers will look to truck and rail transport.”

Put another way, they’ll favor products with the highest energy potential per cubic foot.

(Morey has a prediction. “For the guy getting into recycling, because of the strong and growing biomass market, we’ll probably begin to see less material going into the mulch market from traditional

Vermeer’s HG6000E electric horizontal grinder uses two 300 hp mill motors that help save energy and reduce operating costs. The drum features reversible hammers and cutter blocks for longer life and enhanced cutting performance.
markets such as urban areas and land clearing.” While that sounds like spot-shortages in some areas for materials going into some markets, it also spells potential — an opportunity — for enterprising tree care professionals to uncover new sources of material that can be ground or chipped on a mass scale. That’s one reason why whole houses and shipping pallets are finding their way to the grinder. Let’s not forget the ancillary grinding-for-profit markets, such as asphalt shingles — which, it turns out, are ideal for mixing with pure asphalt compounds for roadway construction.)

Morey says, “I think having versatility in the grinding apparatus, essentially having the ability to change different configurations and tooling for the market one is going after, means we will have the ability to grind and chip a perfect product, which, ultimately, will lead to more dollars per ton for the product.”

“So,” he says, “tree guys in recycling who have a demand for either biomass or mulch products should be looking right now for new and additional sources of material, such as pallets and sawmill bark and slabs.”

“For the biofuel side, within the past year or so, we’ve made it easy to shift the Bandit horizontal grinder into a chipper to make material for biofuel and to exactly size the output, from sawdust size (at a quarter inch) to one inch. The importance here is that there is ongoing testing by coal-fired plants to mix fine sawdust type product with coal, and there will be huge contracts coming this year for that.” (Some states are actually beginning to require the sawdust-coal mix to reduce certain emissions from burning coal.)

One now can see how the uniformity of product is so critical.

“We are constantly developing new teeth for the Beast line to improve cutting performance (versus the hammer mill style) and output as interest in turning wood waste into pellets increases,” Morey says.

Ed Dodak, assistant regional manager for Morbark’s midwest sales, says Morbark has developed a capability, called the Morbark Quick Switch Conversion Kit, to install a chipper drum into its horizontal grinders, turning the grinder into a whole-tree chipper.

“For guys with one of our grinders, this is an opportunity to diversify their product offerings without having to purchase another machine,” Dodak says. “You can make mulch, then convert to chip or sawdust production in about three and a half hours.”

Dodak explains that Morbark’s is a setup comprising screens, chipper knives and an anvil to first pulverize and then cut material against the screen, separated according to screen size.

“The hot market for chips is the ‘quarter-inch-minus’ size chip. We call it Morbark sawdust,” says Dodak. “Wood pellet companies are looking for this sawdust as are coal fired plants to make electricity,” he says, reiterating what Morey discussed, and adding that this mixing of coal and biomass, including wood, means that neither the owner of recycled product nor the coal...
burners need to change their basic infrastructure to keep working. Dodak also talked of the wood pellet market.

"Normally, pellet manufacturers have gotten raw materials from sawmills, but supplies are getting scarce with the demand for recycled wood up and sawmills not in business or not running due to the downturn in the housing market," he says. Another market opportunity presents itself.

Dodak says there is an increase in wood waste conversion to other markets, too, such as animal bedding. "We’re finding people buying horizontal grinders (versus tub grinders) nine out of 10 times." The horizontal machine is more versatile, “and feed speed can be adjusted: faster results in larger cut material, slower much smaller, according to end product need,” Dodak says.

At Rotochopper, Monte Hight, marketing manager says, "In terms of the mulch market, we’ve been working in that area since 1997 with our color grinding processes. Our process is simultaneous, adding water and color as the grinding process occurs. Rotochoppers use the force of the grinding process to thoroughly mix color. Water and liquid colorants are injected into the grinding chamber as the rotor spins and grinds wood size."

Rotochopper continues to make refinements to the process with its new models, Hight says, largely to improve efficiencies and quality and to make its process more user friendly and scalable to the unique and often differing needs of companies.

According to Hight, the unit catering to the tree care industry and the average tree care pro is the CP118, towallable with a pick-up truck. “It’s designed to reprocess pre-ground material and color chips,” he says, adding that Rotochopper also carries larger models that can take pallets and large limbs, such as the MP2 for smaller limbs to 18-inch diameter, and the B66, which can process up to 32-inch material consistently.

“One of our most important features to be able to get exact particle size is a screen-change system that allows operators to quickly and easily change screens to accommodate materials or to fine-tune the end-products. We also offer different screen styles – square, round and baffled screen, the latter with a louver behind the openings to keep over-length (material) from passing through. Round-hole screens make for a slightly more uniform particle size and fewer jagged edges, preferred, for example, in playground cushioning and animal bedding,” Hight says, adding that, “square screening is used for biofuel and commonly used for mulch.”

Todd Roorda, solutions specialist for the environmental group at Vermeer, says the company offers a complete lineup of small, medium and large grinders, both tub and horizontal.

"Basically what we are seeing in the market is being driven by demand for biofuels. Lots more people are gaining interest. Vermeer is reacting quickly to this growing market segment; it’s established, but still in its infancy,” he says, “so it’s growing and changing quickly. Everyone needs to pay particular attention if they are to be in the game to supply customers with the kind of biofuel end product they are looking for.”
Roorda explains that on medium-size horizontal grinders, for example, Vermeer has come out with a device, which attaches to the HG6000 grinder and the HG6000TX track model, that essentially converts the grinder to a chipper. “In the past, we’ve been very successful in being able to grind material into a valuable mulch. And some end-use mulch users can use this product in biofuel facilities. But what we are seeing more and more of is the demand for very specific chips for very specific reasons. I would like to say there is a specification for biomass chip product, but it varies according to user. You can have facilities across the street from one another and they’ll likely require very different products.”

Rather than see the situation as a problem, it is viewed, as Roorda says, as “an opportunity for Vermeer to create a system to yield different-sized chip products.”

On a typical, traditional grinder, there is a duplex drum, a cutting mechanism that takes the wood and grinds it, usually resulting in mulch for different purposes. Vermeer makes a fuel chip attachment (FCA) that bolts on to the duplex drum, presenting a knife setup. Instead of grinding or pounding material into shredded mulch, a chip is created as the end product.

Next, there are several ways to determine a specified size.

First, there’s a screen to separate chips, much like screens in a traditional mulch grinder, which separates by size and quality, Roorda says. “We took it a step further and added a snag baffle. It’s essentially a hook on the back of the screen that snags materials of the wrong spec and holds it until the knives come around again, cutting wood to the desired size. It then passes through the screen and into the hopper.”

Another thing Vermeer has taken into consideration with regard to chip size on its grinders, and which is especially effective in making biomass chips using the HG6000 and TX models, is an infeed control setting. This controls the speed of the table pulling material into the drum and assesses how the machine reacts once material is introduced to the drum. For example, if a large log slows the rpm of the drum, a variance in the size, uniformity and quality of the chip can occur. Controls will back up the infeed and wait for the rpms to get back up to speed to maintain uniformity.

“What this means is that users can really come up with very uniform cuts to meet any need, and product can go to several end users all out of the same machine,” Roorda concludes.

Just about all the proven brands have something to offer in terms of a grinder that can be applied to the biomass and mulch markets. For example Rayco’s RH1754 horizontal grinder, is an easily transportable, 14,500-pound machine suitable for grinding waste ranging from limbs and brush to sawmill waste to dimensional lumber scraps to pallets, and for re-grinding chips.

“We make two very similar grinders, one featuring 140 horsepower, the other 240. Both are horizontal grinders, available as towable units or on self-propelled tracks,” says J.R. Bowling, Rayco vice president.
"The nature of our machines is that they are aimed at small to mid-scale tree or pallet contractors looking to reduce material, or for loggers looking to eliminate slash material using a machine that is not going to cost a quarter million dollars. Ours are not expensive to own or operate and do not require high volumes of material to make economic sense."

While a solution for the tree care operator who just wants to bring material back to the yard to grind down to avoid tipping or dumping costs, the results of the grind make good starter material for mulch or biofuels, Bowling says, noting, "These grinders have various teeth and screen setups resulting in the ability to dial-in chip size and appearance."

Bowling adds that Rayco right now has several chippers in R&D poised for announcement that are intended specifically to address chip production to feed the mulch and biofuel markets.

Another brand to look at would be Fecon, and its RTC-22 Mobile Biomass Chipping System. According to the company, the Fecon RTC-22 provides for in-woods chipping and biomass collection at 20-30 tons per hour. It’s touted as a high production forestry chipper with a 22-inch infeed and 365 horsepower rating and ability to chip over an open-top chip van or into a towable biomass collection wagon.

While the messages for reduce, reuse and recycle have been around for 30 years, the whole process remains in its infancy. You’ll be hearing a lot more about the technology and opportunities as the rest of 2010 rolls out. When was the last time you heard your business and your industry were perfectly suited for a coming trend?

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New Hiring Incentives in a Troubled Economy

By Mark E. Battersby

The 2010 Hiring Incentives to Restore Employment (HIRE) Act recently signed into law includes a whopping $17.6 billion in tax breaks for businesses while pumping $20 billion into highway and transit programs. Two of the new law’s provisions will be especially helpful to employers who are adding positions to the payrolls of their tree care operations and businesses.

A tree care business that hires anyone who has been without a job at least 60 days will be exempt from paying the 6.2 percent Social Security payroll tax between now and the end of the year. Employers will get an additional $1,000 tax credit, a direct reduction of their tax bill, if new workers remain on the job for a full year.

In addition to the hiring tax incentives, the new law also extends a tax break for small businesses buying new equipment, while another section of the bill expands an initiative that helps state and local governments finance infrastructure programs just in time for the spring construction season.

Job creation

At the heart of the HIRE Act are $13 billion in tax breaks for tree care businesses, among others, to boost hiring of unemployed workers in 2010. The “Hire Now Tax Cut” combines payroll forgiveness for Social Security Taxes paid on qualified new hires, along with a tax credit for then keeping the new hire on the payroll for at least 52 consecutive weeks.

In essence, the HIRE Act contains an exemption from Social Security payroll taxes for every worker hired after February 3, 2010, and before January 1, 2011, who has been unemployed for at least 60 days. However, only wages paid after the March 19 enactment date qualify for the payroll tax exemption.

While there is no minimum weekly number of hours that the new employee must work for the employer to be eligible and there is no maximum on the dollar amount of payroll taxes per employer that may be forgiven, in reality, the maximum value of the credit would be equal to 6.2 percent of wages up to $106,800, which is the Federal Insurance Contributions Act (FICA) wage cap, generating a maximum value of the incentive of $6,621 for any “qualified employee.”

Remember, however, the payroll tax holiday applies only to the 6.2 percent Social Security portion of the employer’s tax. It doesn’t apply to the 1.45 percent Medicare portion of the employer’s tax, nor to any part of the employee’s tax. It also doesn’t affect the self-employment tax paid by self-employed arborists and other tree care professionals.

Seasonal & part time: A qualified individual may be hired for any number of hours full-time or part-time, since the benefits to the employer are tied only to 6.2 percent of any salary paid. No minimum or maximum number of hours is required, although some coordination with employees with multiple jobs is required since prior unemployment must be shown.

The IRS is revising Form 941, Employer’s Quarterly Federal Tax Return, for the second quarter return due on August 2, 2010. However, the exemption earned for the period from March 19, 2010, to March 31, 2010, may not be claimed on the first quarter Form 941. It will be claimed on the second quarter Form 941 instead.

Tax bill-reducing credits

There is also an additional $1,000 income tax credit for every new employee retained for 52 weeks, to be taken on the employer’s 2011 income tax return. The new retention incentive is provided via an increased business tax credit for each qualified worker, by the lesser of:

► $1,000 or
► 6.2 percent of wages paid by the taxpayer to the qualified retained worker during a 52-consecutive week period.

The “6.2 percent of wages paid by the taxpayer” language was added to the HIRE Act to prevent qualification for the full $1,000 credit for only minimal part-time work. Based upon the 6.2 percent cap, any newly-hired employee who earns more than $16,129 during the 52 consecutive week period would qualify his or her employer for the full $1,000 retained worker credit.

The retained worker credit will generally be taken on the employer’s 2011 income tax return.
The newly-passed HIRE Act extends the retained worker business credit, effectively ruling out seasonal workers. If, for example, the new hire voluntarily leaves after 50 consecutive weeks for a better job, the employer is not entitled to any portion of the credit for that employee.

According to the IRS, the payroll tax holiday and up-to-$1,000 credit will be especially helpful to employers who are adding positions to their payrolls. New hires filling existing positions also qualify but only if the workers they are replacing left voluntarily or for cause. Family members and other relatives do not, of course, qualify.

Caveat

Two potential trouble-spots immediately leap to the surface. First, only payments to employees qualify. Thus, wrongly qualifying workers as independent contractors, as well as “converting” independent contractors into “new employees,” are issues the IRS will be looking at. Second, a qualifying new employee may only replace an existing employee who voluntarily ends employment or is fired for cause. Employment law issues are certain to arise over this requirement.

Employers will have to get a statement from each eligible new hire certifying that he or she was unemployed during the 60 days before beginning work or, alternatively, worked fewer than 40 hours for someone else during the 60-day period. The IRS is currently developing a form employees can use to make the required statement and will, within the next few weeks, issue revised employment tax forms for the second quarter of 2010, as well as more detailed guidance on the new provisions.

First-year write-offs – one more year

The newly-passed HIRE Act extends the 2008 and 2009 expensing thresholds so that tree care professionals and businesses can write-off up to $250,000 of certain capital expenditures – subject to a phase-out once expenditures exceed $800,000 – in 2010 in lieu of depreciating those costs over time. Qualifying property is defined as depreciable tangible personal property purchased for use in the active conduct of a trade or business, including “off-the-shelf” computer software placed in service in tax years beginning before 2011.

Although limited to small businesses, thanks to the $800,000 ceiling, the so-called “Section 179” expensing is available for both new and used property. And, don’t forget that Section 179 expensing is keyed to the tree care operation’s tax year, rather than the 2010 calendar. The extension applies to purchases made in tax years beginning after December 31, 2009, and before January 1, 2011, giving some fiscal year tree care businesses well into 2011 to take advantage of the HIRE Act’s one-year expensing extension.

More, oh, so much more

The provision for payroll tax forgiveness is coordinated with the Work Opportunity Tax Credit (WOTC). The WOTC is for wages paid by employers who hire individuals from certain targeted groups of hard-to-employ individuals.

Employers who hire members of certain “targeted” groups before September 2011 may claim a WOTC equal to a percentage of up to $6,000 of first-year wages per employee, $12,000 for qualified veterans, and $3,000 for qualified summer youth employees. If the employee is a long-term family assistance recipient, the credit is a percentage of first- and second-year wages, up to $10,000 per employee.

For new hires who are eligible under the HIRE Act as well as for the WOTC, the tree care business must select one benefit or the other for 2010 – no double dipping. Fortunately, an employer may elect not to have the payroll tax holiday apply.

Since the WOTC is, in many cases, more valuable than the payroll tax holiday, especially for low-wage employees, 40 percent (generally) of “qualified first-year wages” of up to $6,000, and a maximum credit of $2,400 per worker is often more beneficial. After all, the payroll tax holiday is equal to 6.2 percent of wages, and applies only to wages paid through December 31, 2010. However, the WOTC is more difficult to qualify for because the employee must be certified by an agency as belonging to a targeted group. The main qualification for the payroll tax holiday is an employee who has been unemployed for 60 days, and the employee’s affidavit is sufficient for this purpose.

Improved cash flow

The tax benefits from the new incentives are immediate. It puts money into a tree care business’ cash flow immediately, since the tax is simply not collected in the first place. On the downside, it is predicted that the tax breaks may generate only 250,000 jobs in 2010 – just a small fraction of the 8.4 million jobs lost since the recession began.

Will you and your tree care business be among those who reap the savings under the HIRE Act?
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There’s safety in numbers – a collaborative approach to CTSP training

By Peter Gerstenberger

A group of CTSP hopefuls in California banded together this spring to prepare as a group for their certification workshop. The message we hope you’ll take away from this story is that a safety culture can flourish if given a decent chance and the commitment from management.

The story begins with Rick Shepard. Rick and his wife and business partner, Jill, founded Urban Tree Care, Inc. in Santa Clarita 10 years ago. Rick had worked with various tree care employers over the years. He credits Bill Spiewak (Bill’s Tree Care, Santa Barbara) as being his first mentor in commercial arboriculture. He went on to work for other widely known companies such as Davey Tree, Arborcare and Golden Bear Arborists. Then in 2000, he and Jill took out a second mortgage on their house and, with three employees, went into business for themselves.

Urban Tree became a TCIA member in 2001.

Fast forward to 2010. Urban Tree now has two offices, a total of 37 employees and six certified arborists on staff. They cater to a lot of commercial clientele and even a few celebrities in L.A. They are a trusted subcontractor to some even larger (TCIA member) companies.

When asked what prompted him to get involved with CTSP, Shepard says, “One day fairly recently a light bulb went on for me that as a company, we simply weren’t doing enough training… I just wanted to bring it to the next level. I wanted to carry my concern for safety to every field employee.”

Meanwhile Mark Shipp, president of Ogilvy Hill Insurance, along with his associate, Armando Ramirez, were cooperating with TCIA staff to schedule a CTSP workshop in L.A. Shepard saw this as the opportunity they needed, and soon several of his managers were enrolled in CTSP. Shepard, himself a former safety coordinator with Davey, decided that he should share the experience with his associates. A total of six people from his company will be seeking the safety credential.

“The idea for a prep session just kind of spiraled;” Shepard admits. A group of his managers from both of his offices enrolled in CTSP at the same time. They became a little nervous about getting through the critical thinking exercises in time for an April 27 workshop at the Mauget facility in Arcadia, so they came up with the idea of using a group training to propel them through the process.

Shepard reached out to some colleagues in the area. Shipp and Ramirez quickly jumped on board. Several others, including George Olekszak, owner of TCIA-member Tree Pros, Inc. in Chino, and three of his employees got involved. A few more interested individuals rounded the count to 15 participants.

Shepard rented a conference room at a nearby Hyatt. His company used the first two hours of the day for a management meeting, then friends were invited in and the professional development started. He had portions of the CTSP manual scanned so that he could project images.

For a modest per-person cost that included lunch and an afternoon snack, folks participated in a highly interactive six-hour session that culminated with them completing their homework and feeling much more confident in their understanding of the course material. At least a dozen of the prep session participants were scheduled to attend the CTSP workshop at Mauget’s headquarters in Arcadia, California, on April 27 (after this Reporter went to print).

Back at the business, movement in the direction of a safety culture among Urban Tree’s all-Hispanic workforce was progressing extremely well. Management has initiated – and employees certainly seem to have embraced – ambitious goals for revitalizing the company’s safety program. Shepard relates that when he asked for volunteers to serve on the safety committee, everyone’s hand went up.

“I had to tell them, ‘Guys, we can’t all be on this committee at the same time!’” Shepard recounts. “Therefore we’re likely going to take turns rotating on and off.”

This first-ever CTSP study group hadn’t disbanded at the start of April. Shepard volunteered that they were already planning a final “cram” session for the evening before the certification exam.
Free Hearing Conservation Compliance Guide

Are your employees exposed to hazards? Is your company exposed to OSHA citations? A recent, industry-specific field study by the University of Colorado concluded that arborists are exposed to noise levels that exceed OSHA standards and NIOSH criteria, placing them at risk for occupational hearing loss. While most employers furnish hearing protection and require employees to wear it, there are additional steps the employer must take to have an OSHA-compliant hearing conservation program.

This month’s member giveaway, TCIA’s “Hearing Conservation Program Compliance Guide,” is an easy-to-understand guide to compliance with the OSHA standard, 1910.95, to help you make informed decisions about improving safety and compliance.

Be sure to check out your free copy of the Compliance Guide included with the print version of the May Reporter.

For additional copies of the Guide, contact TCIA at 1-800-733-2622, or download the PDF under the Member’s Only tab on the TCIA Web site. For additional safety and/or personal protection equipment or materials, visit our online store at www.tcia.org.
The TREE Fund recently approved 10 John Z. Duling Research grants totaling almost $94,000.

The TREE Fund’s Research and Education Committee evaluated 26 applications for the 2010 John Z. Duling Grant Program. After reviewing and discussing the practical and potentially far-reaching benefits of the research, the 10 recommended projects were approved by the TREE Fund Board.

The titles and researchers are listed here, but to get a better understanding of each new project, read the descriptions provided at www.treefund.org/archive.html.

- **Ground penetrating radar:** A new technology to locate, assess and preserve tree roots in urban development sites: $9,000; Nina Bassuk, Cornell University
- **Exploration of woody endophytes for increased tree performance:** $8,721; Taryn Bauerle, Cornell University
- **Rigging speed line forces:** $10,000; Joseph Scharf, University of Massachusetts
- **Uptake, distribution and persistence of systemic fungicides in large palms:** $9,000; Monica Elliott, University of Florida
- **Effect of tree form and branch orientation on load response:** $10,000; Ed Gilman, University of Florida
- **Does propagation method impact survival and growth of below grade planted trees?:** $9,931; Michael Arnold, Texas A&M University
- **Evaluating damage resulting from volcano mulching:** $7,000; Gary Watson, Morton Arboretum
- **Consequences and impacts of wire basket retention and removal** on establishment and root morphology of a shallow-rooted and a deep-rooted tree species: $10,000; J. Ryan Stewart, University of Illinois
- **Effects of root system configuration and partial excavation on tree stability:** $10,000; Stephen Mitchell, University of British Columbia
- **Cutting Baldcypress off at the knees:** $9,982; Michael Arnold, Texas A&M University

New trustees welcomed, veteran trustees “retire”

The TREE Fund Board bid a fond farewell to veteran trustees Dr. Bob Miller, Tim Gamma and Robb Fanno at the end of 2009. Their service, experience and contributions were gratefully acknowledged by the entire TREE Fund Board and staff.

To fill all outstanding vacancies, three new trustees have accepted three-year terms and will be adding their particular expertise to the board. They are Mark Hoenigman of Busy Bee Services Ltd. in Ohio; Anita Gambill of STIHL Inc. in Virginia, and; Randall Miller of PacifiCorp in Utah.

In addition, Jim Zwack of Rainbow Treecare Scientific Advancements in Minnesota is stepping up to the plate for a three-year term as a trustee on the board after stepping down from his position as TREE Fund Liaison Committee Chair. A new TREE Fund Liaison Chair will be named soon.

TREE Fund looks forward to Tree Biomechanics Week

A collaborative research opportunity, Tree Biomechanics Week, is being developed in conjunction with the Davey Tree Expert Company, BioCompliance Consulting, the ISA and the TREE Fund. Other industry groups and individuals are also being asked to join in to support this scientific endeavor.

The plan is to give leading researchers in the area of tree biomechanics an ideal shared environment (the Davey Research Farm in Shalersville, Ohio) where they can conduct field tests and gather data in an intensive week-long coordinated effort. They will have the opportunity to study and apply mechanical stress to a variety of mature tree species in a 40-acre section of Davey’s research arboretum that is scheduled for thinning.

The safety and effectiveness of arborists in all corners of the arboriculture industry will benefit from the quantitative and qualitative information that will be generated from the Tree Biomechanics Week. The TREE Fund is pleased to play a role in bringing this vital information to practitioners and students of arboriculture. Details on dates, researchers involved, as well as volunteer and sponsorship opportunities are all still to come and will be posted on the TREE Fund Web site.

Tree Research and Education Endowment Fund is located at 552 S. Washington St., Suite 109, Naperville, IL 60540. Contact them via (630) 369-8300 or www.treefund.org.
took me to the small private hospital emergency room that I trusted. I walked in under my own power, feeling really rough. When the intake nurse asked what happened, I told her, said I was scared and that she should immobilize me until the doctors had seen me. They promptly trussed me up tight. My office manager, Dorothy, who had seen me. They promptly trussed me up tight. My office manager, Dorothy, who has been an RN, showed up and I felt relieved to have two people with me.

Five hours later my injuries summed up as: Severe whiplash, sprained trapezius muscle, torn up ribcage on both sides, and torn up intercostal muscles. I got a prescription for a muscle relaxant and pain killers.

It took six months for me feel close to whole again. All the doctors said I made a very swift recovery – but it’s been rough. I missed the whole ski season and my stamina was slow to come back. I developed a very expressive vocabulary of groans.

Lessons learned: Don’t push it; if you are tired go home. The branch I was after was no big deal; it could just have been left alone. But if you’re not used to physical exertion, you will feel the pain.

I've been thinking of some other dicey ascents I have made – and I have resolved to be more careful in the future. Even with my 36 years’ experience as a climber I screwed up! John Ball and others tell us that experience is not necessarily going to keep you safe and that people become complacent with experience. I can say from personal experience that in the world of climbing, the more time spent in high risk environments the more likely that something unexpected will happen. In my opinion, no amount of skill can offset the constant exposure.

Scott D. Baker is owner of Tree Solutions Inc. in Seattle, Washington. He wrote this summary in January 2010, in hopes it would help others avoid suffering a similar accident.
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Flying Briefly

(Continued from page 50)

another physical inspection and was very rough with me, I think expecting I would pass out. At that point I told them that I would be going to a hospital, but not with them – if I could get out of it. I actually said something like, “well the worst case would be that my spine is hanging by a thread or I’m bleeding internally and I will take a few steps and … but, you know, I don’t think it’s that bad.”

I guess I was pretty coherent and some of my friends will remember what a talker I can be. As I said, they were not thrilled, but after taking my blood pressure, made me sign a waiver and left.

Taylor drove me to where I was to have joined my wife at a dinner party. I put the heated seat in my car on high and tried not to think about how badly I might be hurt. After Taylor busted up the party, Jenise took me to the small private hospital emergency room that I trusted. I walked in under my own power, feeling really rough. When the intake nurse asked what happened, I told her, said I was scared and that she should immobilize me until the doctors had seen me. They promptly trussed me up tight. My office manager, Dorothy, who has been an RN, showed up and I felt relieved to have two people with me.

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It took six months for me to feel close to whole again. All the doctors said I made a very swift recovery – but it’s been rough. I missed the whole ski season and my stamina was slow to come back. I developed a very expressive vocabulary of groans.

Lessons learned: Don’t push it; if you are tired go home. The branch I was after was no big deal; it could just have been left as it was. Be careful of trusting your rope set. I should not have climbed on that set! Remember, SRT means two times your weight on the branch.

I’ve been thinking of some other dicey ascents I have made – and I have resolved to be more careful in the future. Even with my 36 years’ experience as a climber I screwed up! John Ball and others tell us that experience is not necessarily going to offset the risk environments the more likely that something unexpected will happen. In my opinion, no amount of skill can offset the constant exposure.

Scott D. Baker is owner of Tree Solutions Inc. in Seattle, Washington. He wrote this summary in January 2010, in hopes it would help others avoid suffering a similar accident.
On November 3, 2007, I fell 20 feet from a willow tree to the ground and survived with no permanent damage. I broke no bones, but smashed myself up pretty good.

I had been working on a Saturday, which is unusual for me. I was tired from a busy week. I had spent three hours sitting in as a guest on a radio garden show, had a meeting with two clients at my office and then headed out for Saturday night. I stopped briefly, on the way to meet my wife, Jenise, to take care of a broken branch in a big willow that I had worked on a month earlier.

My primary work is consulting, but I climb trees all the time and, for a friend, I had personally pruned this willow. I had a very enjoyable climbing day performing a major reduction of this big tree in order to preserve it. It is an old gnarly giant that spread over five properties. The choices for management were removal or reduction in order to keep it for a decade or two more.

I was tired and it was getting dark when I got to the site. I do most of my tree entry single rope technique (SRT). Unfortunately my pruning job had reduced options for a good crotch that would allow me to reach the small hanging branch I was after. I managed to get over a limb where I planned to ascend and reach the hanger with a pole saw. My rope was set out from the crotch a bit but it looked OK – in the dusk – to my tired brain. I bounced hard on the rope and noticed that I was getting quite a bit of deflection, but decided to climb.

Once I got up the rope a bit I looked up and saw that I had made an error in deciding to use the set. The branch was fine where the rope was over it but terminated in a nasty union with included bark! I remembered dithering about whether to leave that branch while working on the tree. I decided to get off my rope and onto the tree with a lanyard. In order to get a good stance, I decided to go up one more increment on my ascenders and, as I stood up, the branch tore loose.

As best I can remember, I sucked my head in to my shoulders expecting to get clocked by the 8-inch diameter branch. I had a brief thought that this was going to suck and blew out my breath the way I have learned when crashing big on skis or a road bike. At that point I was falling in an upright position. The tree trunk was overhanging the last 10 feet or so but somehow I got flipped and landed on my back, sort of on the left side. My helmet – containing my head – bounced hard off the ground and I had a brief black moment and bright flash, but then found myself conscious and breathing with my friend, Taylor, by my side.

The first thing out of my mouth was an apology – I was so ashamed and embarrassed. Taylor and his wife, Melanie, and their two 3½-year-old boys, who call me “Uncle Scott,” saw the whole thing. Melanie ignored my request “not to call 911 just yet.”

I lay there for a minute doing the “can I feel my fingers and toes thing” and trying to breathe. Everything felt – well, it hurt, but not too bad. I lay on my back and got my harness loose, then off, and breathed some more – not able to take much of a breath but – OK, breathing.

By the time the EMT crew showed up I was sitting in a metal yard chair – which I missed – staring at a 6-inch-diameter surface root – that I missed – and wondering how bad I was hurt. I did not have obvious shock symptoms.

Now comes the part that will have you all yelling at me. I knew that the EMTs wanted to treat me as an automatic trauma patient and put me on the backboard and into a cervical collar, and I knew that I would end up at a certain big downtown hospital on Saturday night. And I talked them out of it.

They weren’t happy. The looked at the tree and where I fell from – my feet had been at about 20-foot height. They checked me out as I sat in my chair. I told them I wanted to stand up and they let me. I stood and breathed and took a few steps and wiggled my body a bit. One of them gave me

(Continued on page 49)
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