THE PROS CHOICE

- 18 HP Honda GX OHV
- Hydraulic log-lift
- 28 tons of splitting force
- 8 second cycle time
- Built in the USA

And there’s a good reason for that. Rugged and dependable—Timberwolf log splitters and firewood processors are designed to perform day in and day out. Whether you’re splitting 10 cords or 500, Timberwolf has the right machine for you.

800-340-4386
www.timberwolfcorp.com/tci

Shown here—TW-6 with optional hydraulic log lift, 6-way wedge and table grate.

Please circle 54 on Reader Service Card
**Outlook**

**Parting the Veil...**

How many times have we heard in our community, “people don’t even know what an arborist is!” I know it’s frustrating to have your profession misstated in public, whether it’s being called a “tree guy” (not so popular with female arborists), a “tree doctor” or far less appealing names than either of those.

I caught a segment on a popular talk show on a summer holiday that was featuring one of our member companies taking care of a celebrity’s home. I was all excited about the focus on safety and hiring credentialed arborists and not endorsing home owners using chain saws, etc. until the very end when the host then said something along the lines of “you need to get a good tree guy.” AARRRGGHHHHHHH!!! It’s like saying of a brain surgeon, “you need to get a good skull guy” (with apologies to female brain surgeons).

As your trade association, part of our responsibility is to part the veil — to take the variety of audiences that we all need to communicate with, behind the myths and mistaken assumptions about arboriculture. We must continue to educate the consumer, the media, the government, academic institutions and students about our profession and quality tree care companies. This may remain the largest unaccomplished task that we have at hand as a segment of the green community.

Over the last year, conversations continue to surface among the various niches of the green industry about educating the public and reducing their confusion on a number of fronts — the maze of company and personal credentials and what they mean; the difference between landscaping and arboriculture; the difference between service provisions and consulting; and of course, the difference between qualified companies and competent arborists and the fly-by-nighters.

While each of you may look to your professional and trade organizations for these efforts, you are also on the front lines every single day interacting with your customers, local schools, civic groups, garden clubs, local media, various branches of local and state government, and future employees. Many of you engage in a variety of educational activities, provide TCIA’s Better Business Bureau brochure, and put on programs throughout the year. Keep it up! It takes all of us working together to plant a new professional image and let others part it instead. The global dialogue that has developed on the environment is your chance to position your work and let others part it instead. The green industry is a widely diverse segment, and we need to be just as visible, if not more so, than our peers and partners so that we are not seen simply as a small element within the conversation.

I have no doubt that the green community will continue to have a conversation about appropriate ways to partner on messages that will increase understanding and support the work you do every day. The more of us who communicate the importance of the work of arboriculture and your professional contributions, the louder our Voice will be.

We must move out from behind the veil and part it so others can see...

Cynthia Mills, CAE, CMC
Publisher

TCI’s mission is to engage and enlighten readers with the latest industry news and information on regulations, standards, practices, safety, innovations, products and equipment. We strive to serve as the definitive resource for commercial, residential, municipal and utility arborists, as well as for others involved in the care and maintenance of trees. The official publication of the non-profit Tree Care Industry Association, we vow to sustain the same uncompromising standards of excellence as our members in the field, who adhere to the highest professional practices worldwide.

2 TREE CARE INDUSTRY – AUGUST 2007
INTRODUCING YOUR NEXT MACHINE

- 140 HP JD Engine
- Steel Tracks

Call 1-800-528-3113 for a Free Product Video
Lebanon, Ohio • www.fecon.com

Please circle 18 on Reader Service Card
AUGUST

Features

8 Cleaning Up After a Powerful Storm Starts Long Before the First Forecast  
By Rick Howland

26 A Team Approach to Avoiding and Mitigating Construction Damage to Trees  
By Nelda Matheny

34 Taming the Tiger – Wildfire Prevention and Mitigation  
By Tracy Powell

46 Boarding the Biodiesel Boom Band Wagon  
By Tracy Powell

66 Defeating the Scourge of Hemlock – Hemlock Woolly Adelgid, Adelges tsugae  
By Michael Raupp

Departments

2 Outlook  
By Cynthia Mills  
Educating others as to what an arborist does is the best way to get them to appreciate and value your work and skills.

16 Cutting Edge  
New products and services, and news in the tree care industry.

20 Industry Almanac  
Important regional and national meetings and activities.  
(Continued on page 6)
What makes the **RAYCO RC 16.5** the smart choice for your business?

- Planetary drive motor provides more pull-in force and less wear items
- Fuel saver system automatically decelerates engine saving you $$$
- Patented **PULSE** hydraulic system applies crushing down pressure automatically
- Hydraulic self-adjusting clutch never needs adjustment, activates with the push of a button

**Smart  ■  Simple  ■  Reliable**

**RAYCO...Smart Solutions for Smart Buyers**

**800.392.2686**  
www.raycomfg.com

Please circle 39 on Reader Service Card
AUGUST

Departments

22 Letters & E-mails

24 Safety
By Tchukki Andersen
Tree workers won’t melt wearing chain saw chaps, or other required PPE, in hot weather.

32 Member Forum
By John O’Shea
A good hedge should be a foil for the plants it surrounds, not a showcase for the fastidious nature of the owner.

52 Branch Office
By Mary McVicker
Any business can be vulnerable to employee fraud

54 Accident Briefs
Recent accidents in the tree care industry.

56 Classified Advertising

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

78 Tree News Digest

79 Advertiser Listing

80 From the Field
By Barry Drazkowski
Arborist helps VFW and American Legion realize mutual dream.

Going green

46

Hemlock Woolly Adelgid

66
Bernd “Beddes” Strasser

6-Time ISA International Tree Climbing Champion
6-Time German Champion
Active Arborist 16 years
Seed Collector and Workshop Instructor for the German Certification System

Passions:
“Spending time with loved ones and enjoying life, especially outdoor sports like snowboarding and para-gliding and, sure enough, climbing trees – the biggest I can find around our beautiful planet.”

Recent Accomplishment:
“Involvement with tree engineers at the interface between the workers in the field and equipment producers – creating tools that allow us all to enjoy doing tree care.”

Favorite SherrillTree Tools:
“Of course the treeMotion Saddle that took us nearly 5-years to develop and refine. Oh, and I also like my Planner Stretch Air pants – I perform best when comfortable!”

Please circle 43 on Reader Service Card
Cleaning Up After a Powerful Storm Starts Long Before the First Forecast

By Rick Howland

A big storm is coming! So, you begin to think of all those downed and damaged trees. Dollar signs begin to dance in your head. You’re figuring as soon as the winds die down and the power and phone lines are back up that calls will be pouring in and you’ll be busy round the clock for days with those big unexpected bonus cleanup jobs.

Maybe so. Likely not.

As you read this, most Americans are aware that it’s now the height of the hurricane season, at least in the East. Each region has its season, whether it’s tornados, snow and ice storms, Santa Ana winds or Pacific Northwest gales. Wherever you are, bad weather is in your future. Bank on it.

Making the most of these natural occurrences is not a matter of relying on the weather, but rather more on whether or not you are prepared long in advance of the event.

Developing your teams to function independently has two effects. First, if you can’t stay in communication, they can still function on your company’s behalf. Second, the more efficient they are the more profitable they will be.

event.

It sounds so simple, and the basics, for the most part, are. If you’re a top notch tree care professional, you already have the right equipment with the right safety features. Your tools are well maintained. You have sufficient spare parts to be able to function for a week or more without worrying about service or supply lines. You and your crew are trained and certified to deal with whatever they encounter. Good. Consider that the price of admission.

Ensuring that your tree care business survives and thrives in the wake of a natural disaster is about being a good business man or woman. It’s about PLANNING for your business before a storm or other act of Mother Nature.

The consensus from some of those who have a lot of experience in this area is that there are three important things you can do to prepare to profit from a storm or other destructive natural event long before it happens.

First: Establish, if you can, contracts or relationships with key customers, for example, government agencies, businesses and repeat customers. Ensure them of your ability to get the job done, post-storm. It’s
guaranteed, repeat business

Second: Develop your team or teams to be able to function as independently as possible. This has two effects. First, if you can’t stay in communication, they can still function on your company’s behalf. Second, the more each team can complete a job on their own, the more efficient, and therefore more profitable, they will be.

Third: Cultivate partnerships with other TCIA members – maybe even from far away – who you can call on to lend support in an overwhelming situation. (This works both ways – they can call on you when the tables are turned.)

Bob Thibodeaux has a half century in the business and as much time, it seems, dealing with the aftermath of hurricanes. He’s the founder of Bob’s Tree Preservation in Church Point, Louisiana, now running five crews smack in the middle of hurricane alley.

Want to talk about making money from cleanup? Even now, his company is still doing cleanup in the wake of two headliner hurricanes, Katrina and Rita, which bracketed his marketplace and affected most if not all his customers two years ago. (For many months, Thibodeaux was host to as many as 40 people, whom he sheltered at his bed-and-breakfast cabins at his tree nursery. Some were refugees displaced by the storm; others were support tree care crews he had called in from other parts of the country to help out.)

He knows his craft, having essentially started his business while still in high school and securing his first license in 1963. “I’ve been practicing arboriculture for 50 years,” Thibodeaux will tell you. “I was 16 years old when Hurricane Audrey hit in ’57. We had 100 mile-an-hour winds and 500 deaths,” he recalls, “and I was glad to have a job cutting branches!”

Speaking from experience, Thibodeaux will tell you that the Katrina-Rita punches were brutal on people, the infrastructure and the environment. But, as bad as those storms were, especially with the number of trees that were damaged or destroyed, it didn’t have to be that way, he says.

Thibodeaux and his crews worked their way to New Orleans to help out. “Going through Hurricane Katrina was difficult. One of the things we did was to work with a professor from Tulane University who was concerned with saving historic trees. Combine that with the National Guard issues, long lines to get fuel … well, New Orleans was a terrible situation. Then Hurricane Rita approached the coastline and I had to come back (from New Orleans to his home base about two hours away) to take care of business. It was easier to operate here because everyone knows me.”

Thibodeaux speaks of pre-storm preparation as one who’s been there. “Audrey was the first hurricane I can remember being so busy,” but even then, he says he could see a solution to the problem (and steady business opportunities) long before any storm arrives.

“It’s always a surprise to me the amount of poor pruning practices I see. I think it’s because of the cheap bid syndrome. But what really bothers me is how hurricanes mean so many of these poorly trimmed trees will fall on houses and cars.”

Bob Thibodeaux
canes, Thibodeaux’s considered opinion is that about two-thirds of the tree damage could have been prevented.

“When a storm comes, I don’t want one of my regular customers to call and say a tree fell on their house. I can’t prevent all of them from falling, but if I do my job carefully and look around, taking pictures, using a shovel to test soil and pay attention to proper pruning techniques and mulches, we can minimize the damage.”

When the inevitable storm hits and cleanup is underway, Thibodeaux’s approach is to be loaded and ready to go deal with emergencies first, then come back or have other crews follow to do the final clean up. “First thing we do is clear roadways and pull trees off homes and cars and let the property owner know we’ll be back.”

Pre-cleanup preps include full loads of fuel, generators, all tools and equipment serviced and in tip-top shape plus a check on the spare parts inventory. (Usually, there’s enough warning for a major event to get in parts and maintenance needs plus extra fuel.)

“Each crew has a two-way radio, snack packs, candy and fruit, and we bring out food and ice. Fortunately in our area a lot of customers feed us – it’s part of the Cajun culture!”

In Houston, while the cleanup from Rita was ongoing, food, ice and fuel were brought to the crews. That was a far cry from working Katrina at New Orleans where nothing was available, he explains. The moral of this story is to either be prepared to operate on your own or have relationships in place that you can rely on.

Because Bob’s Tree Preservation operates from three different locations, it is highly unusual that all three locations are out of power at the same time.

A very key point, and one that Thibodeaux is quite vocal about, was being able to rely on support from other TCIA members while his company was working the extreme west side of the Hurricane Rita path in the Texas area.

“We had 88 people working there, including people we met and knew who were TCIA members from Florida, Colorado, North Carolina and Pennsylvania. Association with these people is extremely important. After being in the business more than 40 years, when my clients call, finding the right people to
With the NEW LEO 23GT spiderlift, challenging tree jobs that everyone walks away from, become the most profitable.

The LEO 23GT spider lift replaces the bucket truck, tree climber, trailer lift and ladders, with one versatile lift. Now you can work faster, safer, make more money and never walk away from any tree job.

Other models from 40 ft to 165 ft also available

LEO 23GT advantages:
- Quality German engineering
- Smooth easy to use controls
- Articulates and telescopes at the same time
- Patented rotating corner mounted basket allows you to work around trees
- 8.8 PSI ground pressure.
- 75 ft reach, yet trailerable with a pick up truck

Teupen... bringing tomorrow’s technology to you today

Special Financing Provided By:

Liberty Financial Group
1-800-422-1844
Contact Phillip McGurkin at ext. 11 or pmcguirk@libertyfg.com

Please circle 53 on Reader Service Card

800-944-5898 • www.spiderlifts.com • info@spiderlifts.com
work like we do is EXTREMELY IMPORTANT! I explain to my clients that these people are far from home, but they are

**“The best message to give to others in the industry is to go to the aid of a fellow arborist when they’re in a bind. When they’re in a bind, they’ll call you!”**

Bob Thibodeaux

The important thing to remember, Thibodeaux says, is that working relationships are a two-way street. Not only can you call on your TCIA associates for support, you can also be called upon by others – either way, the ability to fill every contract or meet the need of another TCIA member is an opportunity to do more and better business.

“The best message to give to others in the industry is to go to the aid of a fellow arborist when they’re in a bind. When they’re in a bind, they’ll call you!”

Brian Kelley is owner and president of Kelley’s Tree Service, Inc. in another hurricane target area, Lakeland, Florida.

“I’m not a storm chaser, but I will tell you that safety is the big thing, and that means being able to work in adverse weather.” Kelley runs two crews, one full time and part of another.

“The key is to make sure equipment is all together, running well and that the trucks are up to snuff and you have good spare ropes. Mainly, we educate on safety. When trees fall, the aftermath can be more dangerous than the storm. We work to make the trees we’re working on safe. We have first aid on the trucks, everything from poison oak and ivy treatments and things for allergies. We don’t keep the guys out that long. If there is a job in the middle of the night, we will secure the problem until we can get there in the morning – unless something is an absolute emergency.”

One significant pre-planning step he does take is to secure a crane if there’s a storm on the horizon. “I was on vacation when Hurricane Charlie was coming and secured one for 30 to 45 days; a crane is hard to come by after a storm hits.

“Every job is different, and that makes for a very interesting career, with trees in weird places and things like water lines that break. Certainly there is a lot of increased income that week (the storm hits), but I get a lot of awareness now beforehand from customers who want us to take down a tree or secure one if we can’t be sure,” he concludes.

John Anna runs six crews out of his Maryland-based Adirondack Tree Experts, making his one of the larger companies in the area. The company is the contractor for Montgomery and Howard counties (the lat-
BUILDING A LEGACY

CARLTON WOOD CHIPPERS

Power, Productivity & Performance

Carlton's line of chippers is designed for the most demanding commercial users. Each chipper features heavy-duty construction like form-welded frames, extra heavy-duty infeed tables, superior Torflex axle strength including heavy ply tires rated to carry the load. These chippers are built for performance with the most infeed pulling power in the industry, high-speed dynamically balanced cutter disks, channeled chip throwers to maximize discharge rate and eliminate plugging.

And with 6-, 9-, 12-, and 18-inch chipper models to choose from, JP Carlton has a wood chipper that’s just right for your landscape, tree maintenance or land clearing application. Contact JP Carlton today or visit them on the web and find out how their legacy can be yours.

800-243-9335 • www.stumpcutters.com

the CARLTON ADVANTAGE

- Digitally Controlled Reversing Autofeed
- Live Hydraulics
- Twin Lift Cylinders
- Hand Crank Swivel Discharge
- Strongest Feed Systems Available
- Hand Crank Height Adjustable Discharge
- Heavy-Duty Torflex Suspension Systems
- Integrated Single Manifold Hydraulic System
- Dupont Imron Paint

Most Standard Features in the Industry!
ter taking effect just this past July) and seven local municipalities.

“In a coming emergency situation, say a winter forecasted ice storm, Montgomery County will call, and we will activate two crews, as we did for the Valentine’s Day storm this year. They went to a staging area and stayed for two and a half days doing emergency work."

Anna acknowledges that a major storm typically will generate a lot of work. “With the county and municipal contracts, those are priority. We dispatch first to our contract customers then to our repeat customers. By that time, there is usually nothing left because there are so many of what I call bootleggers, the unlicensed, uninsured who go out and hack and whack. Unfortunately, they absorb a tremendous amount of storm work."

Anna warns that municipal contracts can be difficult to hold if you are not up to it. He explaines that the good news is that contracts often come open because the contractor didn’t deliver. That means you have a good shot at bidding on the next contract.

“For our municipalities and large contracts, we have been in there a long time, two to 12 years in some cases. It’s all about service; government contracts are easy to lose. You have to show up and perform as if you care, otherwise your tenure is short-lived – but there are opportunities,” he adds.

When a storm is coming, “first and foremost, of our 38 employees, 32 have a company cell phone,” Anna says. “We pay for that communication capability. When a storm comes up, all foremen have a company credit card to get what they need. So, if we have to stay out for an extended time, there is never an issue of needing something."

“Each crew or team is self-sufficient,” he says. “Each has a chipper and chipper truck, combination wood truck (from an F550 to F750) plus utility box to pull a stumper if needed. They leave with a litany of equipment to cover everything they need. They are packed to the hilt!"
In the real world, one requirement that never changes is finding ways to help your crews work more safely. That's why Altec tree care equipment is rugged, reliable and designed with integral safety features. Our complete line of aerial devices and wood chippers is highlighted by our newest machine — the Altec LRV60-E70. It will help your crews work smarter and more efficiently. This unit combines 75 feet of working height and smooth maneuverability with the lowest cost of equipment ownership in the industry and unmatched financing options.

For tree care units that help you work "Safer and Smarter®", call the company that builds them — Altec.
John Bean Sprayers to distribute FMC pumps

John Bean Sprayers, a brand of Durand-Wayland, recently gained the rights to distribute nearly all the pumps manufactured by FMC Technologies. FMC produces a full range of piston and plunger pumps for a variety of industries, including Durand-Wayland’s key markets of agriculture, tree care and sewer cleaning.

“By further broadening our offering of pump products and parts, we’re able to provide our customers with the best selection of pumps and service available in the marketplace,” said Rick Cordero, director of spraying systems with Durand-Wayland.

The company offers a complete line of Durand-Wayland spraying systems, as well as John Bean Sprayers and, now, FMC/Bean pumps and parts.

Terex ranks No. 4 on 2007 Barron’s 500 survey

Aerial lift manufacturer Terex Corporation was recently listed as the No. 4 best performing company on the 2007 Barron’s 500 survey.

“All of us at Terex are honored to receive this recognition because it reflects the many years of dedicated work by our team members worldwide as well as the confidence shown in us by our customers and our investors,” said Ronald M. DeFeo, chairman and CEO. “We are pleased to be considered one of the top five performers along with Goldman Sachs Group, Franklin Resources, Apple and Paccar.”

Terex manufactures construction, mining and infrastructure equipment. The Barron’s 500 survey provides a ranking of U.S. and Canadian Standard and Poor’s 500 Index companies based on the basis of one- and three-year cash-flow returns on investment sales growth and stock price performance.

Novozymes facility to support green industry product line

Novozymes Biologicals plans to open a new 32,000-square-foot Dry Agricultural Products (DAP) production facility, tripling the company’s current capabilities to produce granular and soluble fertilizers for its Roots® product line of environmentally friendly products. The new DAP facility will employ about 12 people and production will begin upon the building’s completion in 2008.

Novozymes Biologicals, a wholly owned subsidiary of Novozymes, produces environmentally compatible products using advanced biotechnologies for a wide variety of applications. Under the Roots® name, which the company acquired in 2003, Novozymes Biologicals develops and distributes organic based fertilizers, microbes, mycorrhizal fungi, biostimulants, micronutrients, biofungicides and bioinsecticides for the turf, ornamental, horticultural, landscaping, nursery and agricultural markets.

Fecon makes two hires

Fecon has named Anthony Nikodym regional manager for the Western Canadian Markets, and Darden Whitaker as Customer Services Manager.

Nikodym comes to Fecon with seven years experience serving as a business development manager, market manager and product development engineer.

Whitaker comes to Fecon with over 17 years experience in which he has held positions as president, director of operations, director of quality, and program/product manager.

BioSafe Systems names Rick Burkhard VP of sales

BioSafe Systems has named Rick Burkhard vice president of sales.

BioSafe Systems, LLC manufactures disease controls such as ZeroTol Broad Spectrum Algaecide/Fungicide, OxiDate Broad Spectrum Bactericide/Fungicide and GreenClean Granular Algaecide, with a presence in the agriculture, post harvest, horticulture, turf and aquatics industries.

Burkhard will be responsible for the day-to-day sales effort within BioSafe Systems’ North American market segments and products. Prior to joining BioSafe, he served as vice president of sales and regional sales representative for companies servicing the environmental, animal health, and farm retail markets within the U.S. and Canada.
Take your business to the next level.

One program can make your tree care business

✔ MORE professional,
✔ MORE efficient,
✔ MORE profitable.

Accreditation from TCIA is a business growth tool designed to aid commercial tree care companies in improving business practices, motivating and training employees and increasing customer satisfaction.

Evaluate your company against industry standards to learn what areas you excel in and where you need improvement. Develop and maintain first-rate customer satisfaction practices. Implement industry-standard safety training programs and stay one step ahead of OSHA. All with the guidance and support of TCIA.

Please circle 46 on Reader Service Card

TCIA – your partner in business excellence.

www.tcia.org ▲ 1-800-733-2622 ▲ e-mail Bob Rouse at rouse@tcia.org
AmeriCup drug testing

AmeriDrug Diagnostics, a manufacturer for instant on-site drug testing devices, has a new device called the AmeriCup that is used for pre-employment and random screenings. The AmeriCup has an adulteration indicator built-in and tests for five to nine drugs in the human body. The results are received within two to three minutes after retrieving the specimen from the donor. A patented user-friendly handle makes a cleaner use for the donor and operator. Customer service is available 24/7 nationwide. Contact AmeriDrug Diagnostics via www.AmeriCupUSA.com.

Green Pro’s three new spray features

Green Pro Services rolled out three significant advances in spray system technology in 2007, all designed to increase productivity, flexibility and profitability on its new Titan spray rig. Turbo Agitation uses hydraulic agitation (the utilization of water to keep ingredients in suspension) to replace costly mechanical agitation. For those Arborists and Landscapers located in temperate zones who lack heated garage space, the ColdProof™ Weather System is a must. And there’s the ShaftDrive™ System, which eliminates smaller pony motors on multiple pump rigs. ShaftDrive System benefits include noise reduction, a significant reduction in maintenance, and harnessing the greater power of the engine by utilizing the PTO. It uses no belts or pulleys. Each pump is energized separately by simply flipping a switch located on the curbside control center, dramatically reducing response time in case of emergency. The new, advanced system is available for a wide range of pump sizes and is virtually maintenance free. Contact Green Pro at (877) 262-8737 or via www.GreenProServices.com.

Morbark Typhoon 20 chipper

Morbark’s new Typhoon 20 is a 20-inch capacity heavyweight brush chipper providing greater capacity and horsepower at a fraction of the capital cost of a whole tree chipper. With the drum and feed wheel both 28½ inches wide, there is virtually no dead space, and six knife pockets allow three full cuts per revolution, greatly increasing efficiency. The 250 or 325 hp create the ability to chip more material faster, and the increased airflow significantly reduces the chances of plugging, reducing time on the job. Equipped with a 4-inch x 8-inch center beam and a 66½-inch x 40½-inch infeed chute, the chipper not only accepts a wider variety of material, but the unit can also be fed with auxiliary loading equipment. The Typhoon 20 also has a redesigned pivot, which eliminates the yoke swing and increases down pressure efficiency. Contact Morbark at 1-800-831-0042 or via www.morbark.com.

Vermeer Yellow Jacket stumper teeth

Vermeer Manufacturing Company’s new patent-pending Yellow Jacket™ cutting system is designed to provide faster, easier serviceability and maintenance in the field and extend tooth and pocket life. Maintenance is easier because the split faced carbide cutting tip is indexable. The operator simply loosens one nut and rotates the tooth for an almost new cutting surface. This universal tooth accommodates all cutting positions on Vermeer stump cutters equipped with this system, which reduces inventory for users. With two cutting edges on each tooth, the tooth and pocket are designed so the second edge is protected and clear of the primary wear area while cutting with the first edge. When the tooth is indexed to the second position, the opposite edge provides an almost-new cutting surface. This design provides more side pocket clearance, which limits pocket rubbing that can cause power loss and premature pocket wear. Also, the distance from the pocket bolt to the cutter tip is shorter, which helps reduce shear stress on pocket bolts. This system requires only three pocket styles and one tooth style, and pockets are reversible, or bi-directional, so a pocket can be used on either side of the wheel. Contact Vermeer via www.vermeer.com or e-mail salesinfo@vermeermfg.com.

Send your Cutting Edge Product information to: Don Staruk at staruk@tcia.org
Fecon track pad options for FTX440 mulcher

Fecon, Inc. now offers an assortment of track pads for its FTX440 Industrial Mulcher. The track pads range from 24 inches to 36 inches in width with Single, Double and Triple Grouser Pads. The various types of track pads are now available to accommodate low ground disturbance, steep or swamp-like terrain and low ground pressure applications. Fecon’s FTX440 Industrial Mulcher is designed for right-of-way work, land clearing, wildlife habitat improvement, firebreaks and pasture restoration. Contact Fecon at 1-800-528-3113 or via www.fecon.com.

Rainbow has three new inject products

Rainbow Treecare Scientific Advancements has three new tree injection products, all delivered through the reusable M3 infuser micro-injector. Bacastat™ is a water-soluble formulation of oxytetracycline used for the suppression of bacterial leaf scorch in oak, elm, sycamore and maple. Xytect® Infusible is a broad-spectrum insecticide that utilizes the proven performance of imidacloprid to provide quick knock-down and season-long control of a variety of insects, including emerald ash borer, bronze birch borer and a variety of other wood borer insects. Aracinate™ tree injection is an abamectin formulation used for control of mites and is a preventive treatment for pine wilt nematode. Contact Rainbow at 1-877-272-6747 or via www.treecarescience.com.

Please circle 194 on Reader Service Card

G & A Equipment, Inc.  Knoxville, TN

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Stock #</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007 Ford F-450 w/Personnel Carrier, Diesel, 6 Spd, 185K</td>
<td>1401-1</td>
<td>$155,900</td>
</tr>
<tr>
<td>1997 GMC Top Kick w/11” Chip Box, Gas, Auto, 122K</td>
<td>1501-1</td>
<td>$13,900</td>
</tr>
<tr>
<td>1997 Int’l 4100 w/14’L-Shaped Chip Box, Diesel, 5/2, 288K</td>
<td>1253-1</td>
<td>$10,500</td>
</tr>
<tr>
<td>57’/11 Hi Ranger on 1989 Int’l 4090, Diesel, 5/2, 288K (Next To Be Ready)</td>
<td>1420-1</td>
<td>$27,900</td>
</tr>
<tr>
<td>57’/11 Hi Ranger on 1990 Int’l 4090, Diesel, 5/2, 288K</td>
<td>1477-1</td>
<td>$23,900</td>
</tr>
<tr>
<td>57’/11 Hi Ranger on 1991 Int’l 4090, Diesel, 5/2, 288K</td>
<td>1526-1</td>
<td>$19,900</td>
</tr>
</tbody>
</table>

Visit us on the Web: www.GAEQ.com

All Booms Pass Dielectric And Structural Tests

Lowest Prices on the Market

800-856-8261

Please circle 19 on Reader Service Card
Industry Almanac

Events & Seminars

August 10, 2007
SHADE: Southwest Hort. Annual Day of Education
Arizona Nursery Association
Doubletree Paradise Valley Resort, Scottsdale, AZ
Contact: (480) 947-5400; www.aza.org

August 14, 2007
Plant ID Workshop
Michigan State University, East Lansing, MI
Contact: MNLA 1-800-879-6652; www.mnla.org

August 16, 2007
Conifer Conundrum Tour: Diseases/Pests of Conifers
Traverse City, MI
Contact: MGIA at (248) 646-4992

August 20, 2007
Pruning Workshop
Michigan State University, East Lansing, MI
Contact: MNLA 1-800-879-6652; www.mnla.org

August 21, 2007
Trees and Soils: Biology and Care
Kevin T. Smith, Northern Research Station, USFS
Stonybrook-Millstone Watershed Assoc., Pennington, NJ
Contact: Alyse Greenberg (609) 737-3735; agreenberg@thewatershed.org; www.thewatershed.org

August 22-23, 2007
Certified Treecare Safety Professional (CTSP) workshop & certification exam
San Jose, CA
Contact 1-800-733-2622, or www.TCIA.org

August 28, 2007
Conifer Conundrum Tour: Diseases & Pests of Conifers
Ann Arbor, MI
Contact: MGIA at (248) 646-4992

September 1, 2007
Conifer Conundrum Tour: Diseases & Pests of Conifers
Oakland County, MI
Contact: MGIA at (248) 646-4992

September 6, 2007
16th Annual Urban Forestry Conference
Memphis Hilton, Memphis, TN
Contact: tufc@comcast.net; www.tufc.com

September 8, 2007
9th Annual Tennessee Tree Climbing Championship
TN Urban Forestry Council/TN Dept. of Ag. Div. of Frsty
Memphis Botanic Garden, Memphis, TN
Contact: www.tufc.com or call (615) 352-8985

September 11, 2007
Art & Science of Plant Diagnostics walk/learn workshop
Traverse City, MI
Contact: MGIA at (248) 646-4992

September 12, 2007
Toward Sustainability: Landscape for Healthy Environment
Assoc. of Prof. Landscape Designers (APLD) symposium
Frelinghuysen Arboretum, Morristown, NJ
Contact: www.apld.org

September 19-20, 2007
Certified Treecare Safety Professional (CTSP) workshop and certification exam
Wingate Inn BWI Airport, Linthicum (Baltimore), MD
Contact 1-800-733-2622, or www.TCIA.org

September 21, 2007
Arizona Community Tree Council 2007 Conference
Radisson Woodlands Hotel, Flagstaff, AZ
Contact: (602) 354-3023; www.aztrees.org

September 27, 2007
The Art of Woody Plant Selection-root zone seminar
Planting Fields Arboretum, Oyster Bay NY
Contact: Naomi Zurcher, (718) 522-1130; treerap@sprintmail.com

September 27 (repeated 9/28), 2007
17th Annual Perennial Plant Symposium
Chicago Botanic Garden, Glencoe, IL
Contact: (847) 835-8261; www.chicagobotanic.org

September 27-28, 2007
ISA Rocky Mountain Chapter Annual Conference
Radisson Graystone Castle, Denver, CO
Contact: (303) 756-1815; www.isarmc.org

October 2-4, 2007
International (Trees) Congress of Italy
Modern Arboriculture Institute & Riccione Council
Riccione, Italy
Contact: www.geat.it; www.fito-consult.it (link to corsi: english version provided)

October 10-12, 2007
Texas Tree Conference
Waco Convention Center, Waco Texas
Contact: www.isatexas.com

October 16-17, 2007
Landscape Ontario Garden Expo
Toronto Congress Centre, Toronto, Canada
Contact: www.gardenexpo.ca

October 16-18, 2007
Workshop for Implementing Biomass Boiler Systems
Holiday Inn Parkside, Missoula, MT
Contact: Bitter Root RC&D (406) 363-1444 ext. 5; bitterrootrcd@cybernet1.com; http://fuels-forschools.org/biomass_boiler_workshop.html

October 26-28, 2007
The NJ Shade Tree Federation 82nd Annual Meeting
Crowne Plaza, Cherry Hill, NJ
Contact: Bill Porter (732) 246-3210; njshadetreefederation@worldnet.att.net

More almanac online!
For the most up to date calendar information, visit www.treecareindustry.org ➔ news ➔ industry calendar

November 6-7, 2007
Certified Treecare Safety Professional (CTSP) workshop and certification exam – TCIA
Hartford, CT
Contact 1-800-733-2622, or www.TCIA.org

November 8-10, 2007
TCI EXPO 2007
Tree Care Industry Association
Connecticut Convention Center, Hartford, CT
Contact: Deb Cyr 1-800-733-2622; cyr@treecareindustry.org; www.tcia.org

November 13-15, 2007
Empire State Green Industry Show
Rochester Riverside Convention Ctr, Rochester, NY
Contact: NYSTA (518) 783-1229; 1-800-873-8873, www.nyesta.org

January 8-10, 2008
Landscape Ontario Congress 2008
Toronto Congress Centre, Toronto, Canada
www.locongress.com

January 30-31, 2008
2008 Connecticut turf & Landscape Conference
CT Grounds Keepers & CT Irrigation Contractors
Conn. Conf. Ctr, Adriaen’s Landing, Hartford, CT
Contact: Dick Tice (203) 699-9912 or rtice@snet.net

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

February 8-12, 2008
U.S. Composting Council Annual Conf. & Trade Show
Oakland Marriott City Center, Oakland, CA
Contact: www.compostingcouncil.org; (631) 737-4931

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

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

Send your event information to:
Tree Care Industry,
3 Perimeter Road, Unit 1,
Manchester, NH 03103
or staruk@tcia.org
Please circle 35 on Reader Service Card
A slip on cabling piece

When I read in H. Dennis P. Ryan III’s article on cabling (“To Cable or Not to Cable – That is the Question,” July 2007 TCI) that “you shall use a lag instead of an eyebolt in a decayed limb,” I reached for my ANSI Support Standards. I’m no expert on the subject, but common sense told me the opposite was true. Sure enough, ANSI said “Lag-threaded hardware shall only be installed in sound wood.” This is confirmed in the BMPs, which the article listed as a reference. Dennis seems to have it backwards, or there was an editing error. TCIA typically does an excellent job upholding ANSI, so it was surprising to see this slip.

The caption to the first picture, of an ash tree with included bark, states that “…without support it will fail.” It’s important to look at tree risk objectively, without exaggerating our knowledge of what will happen. It was also disappointing to read the author’s opinions that synthetic ropes are “ugly,” while “a steel cabling system … is not visible to most people.”

Steel cables are easy to see, and ugly is in the eye of the beholder. It’s not clear whether the author’s aesthetic bias indicates a deeper prejudice against dynamic cabling. In any case, what place does this degree of subjectivity have in a technical article? I hope that when you print an article on dynamic systems it will have fewer errors, and more objectivity.

Guy Meilleur
Better Tree Care Associates, Apex, N.C.

Dennis Ryan responds: Mr. Meilleur is correct. Whenever there is any decay present you need to use an eye bolt with a washer, as decay may spread along the lag threads and pull out. Sorry for my error.

As to the ash in the photo with the weak crotch, several in the area have already failed and most of these will either be removed or will have a crotch failure; in this case, it is only a matter of time.

You never know

Recently, one of my customers called to say her large oak had just toppled over. No storm, no wind, perfectly calm morning and a live, large white oak decided to fall over from the root mass. As it was, the tree fell parallel to the street, missing the house and street, but pulling down some utility wires.

Closer inspection of the root mass showed no cavities, but the internal heartwood was very pithy and weak. The one tip-off might have been a fruiting body at the base of the tree.

As a climber, this always causes me to pause and re-think my safety procedures. Dead trees, hollow trees, trees damaged in storms, trees leaning into other trees all demand respect and will hurt you. However, it is rare to be completely fooled as this tree fooled me. Lesson learned – double check everything.

This customer had discussed with me previously about the removal of this oak, but had not made the commitment. As it turns out, she got the result she wanted, but perhaps not the timing.

Steven L. Rudolphi
Effingham Tree Service, Watson, IL

Tchukki Andersen, TCIA staff arborist, responds:
It was fortunate that no one got hurt. Can you give us more of a “lesson learned” from this scenario? It sounds to me like you did everything you could to inspect the tree, which appeared to be visibly sound. I think it was just “one of those things” where you really couldn’t have predicted the failure of the tree without using decay detection methods to determine wood strength.

Again, it was lucky that nothing was damaged (except the phone wires). If you are a trained Tree Failure Cooperator, you should report this to the International Tree Failure Database, which furthers the research on failed trees. Check out their Web site for training and more information: http://svinetfc2.fs.fed.us/natfdh/.

If you find out exactly what type of stem/root disease this tree had, we’ll make sure to share that info with our readers in a future publication. Include as much information you have about the tree history, site and past maintenance.

Stay safe out there!

TCHUKKI ANDERSEN
TCIA STAFF ARBORIST

Send letters to
staruk@tcia.org

Please circle 56 on Reader Service Card

22 TREE CARE INDUSTRY – AUGUST 2007
TREE TRIMMING AERIAL DEVICES

A CUT ABOVE.

What does it take to bring you equipment that works where you do? Equipment with superior design? Equipment that does the job for you again and again?

It takes a company that knows how our products work and finds ways to make your job easier—for workers and for vegetation. It takes people who stand behind your equipment long after the sale. It takes the team from Terex Utilities.

Get more information on Terex Utilities’ hard-working line of commercial equipment. Call 1.800.982.6975, or visit www.TEREXUTILITIES.com

Please circle 52 on Reader Service Card
Before you jump to your feet and yell “See? It can happen!,” this newspaper headline is fictitious. No one ever has been reduced to a steaming pile of human flesh from wearing protective chain saw chaps or chain saw pants while working in high temperatures.

Yes, wearing protective clothing in hot temperatures is uncomfortable, at best. Yes, the chaps are awkward and dorky-looking. But as hot and dorky as you feel in these things, chain saw pants are a critical piece of equipment, even when working in hot weather.

Working hard in hot temperatures messes with your brain. You might start the day all zippy and gung-ho, but after a few hours of sweating and working hard in the sun your judgment can become impaired. You might let your guard down a bit because you’re “in the zone.” This is the time when accidents can happen.

On the other hand, if you’re wearing your protective clothing when your judgment starts to go, you could save yourself a trip to the hospital. If you are doing work that requires you to wear chain saw chaps in hot weather, consider these suggestions for staying cool (and maintaining sanity).

Chain saw chaps and pants are available in different weights and elasticity for year-round comfort. Find a pair that is lightweight, comfortable and moisture-wicking to wear in hotter temperatures. There are several different styles available from arborist supply houses or your local chain saw dealer.

Drink more water than normal to keep body temperature down. Take frequent, short breaks. That doesn’t mean break out the cribbage board every 10 minutes. This means find some shade if possible, stop moving to reduce your heart rate some, and try to take it easy for about five minutes. If you take shorter, frequent breaks, you are much more likely to be able to put in a full eight to nine hours on a hot day.

OSHA QuickCard™

Protect Yourself
Heat Stress

When the body is unable to cool itself by sweating, several heat-induced illnesses such as heat stress or heat exhaustion and the more severe heat stroke can occur, and can result in death.

Factors Leading to Heat Stress
High temperature and humidity; direct sun or heat; limited air movement; physical exertion; poor physical condition; some medicines; and inadequate tolerance for hot workplaces.

Symptoms of Heat Exhaustion
Headaches, dizziness, lightheadedness or fainting.
Weakness and moist skin.
Mood changes such as irritability or confusion.
Upset stomach or vomiting.

Symptoms of Heat Stroke
Dry, hot skin with no sweating.
Mental confusion or losing consciousness.
Seizures or convulsions.

Preventing Heat Stress
Know signs/symptoms of heat-related illnesses; monitor yourself and coworkers.
Block out direct sun or other heat sources.
Use cooling fans/air-conditioning; rest regularly.
Drink lots of water; about 1 cup every 15 minutes.
Wear lightweight, light colored, loose-fitting clothes.
Avoid alcohol, caffeinated drinks, or heavy meals.

What to Do for Heat-Related Illness
Call 911 (or local emergency number) at once.
While waiting for help to arrive:
Move the worker to a cool, shaded area.
Loosen or remove heavy clothing.
Provide cool drinking water.
Fan and mist the person with water.

For more complete information:
Occupational Safety and Health Administration
U.S. Department of Labor
www.osha.gov
(800) 321-OSHA
OSHA 3267-O9N-05

Slow the work pace down a bit (Come on, Boss! Give ‘em a break!).
Work in the shade as much as possible, and wear your hard hat to keep the sun off.

ANSI Z133.1 states in 3.4.8: “Chain saw-resistant leg protection shall be worn while operating a chain saw during ground operations.” This means every time, not just when it is comfortable or convenient. As uncomfortable as wearing leg protection might be, it will never be convenient to suffer a laceration (or worse) from not wearing chaps.

Tchukki Andersen is TCIA’s staff arborist and, though she is originally from Oregon, she spent the last two years doing tree work in Florida – with her PPE on!
Enthusiasm for TCIA’s “Until We’re All Safe” campaign is still spreading, as evidenced by the photo at right of the Line Clearing Division of Fitzwater Tree & Lawn Care in Greenville, Ohio.

In addition, last month Tim Back, president of Back Tree & Landscape, Inc. in Cincinnati, Ohio, ordered 4,000 wristbands displaying the Until We’re All Safe logo. Back planned to give them away at a parade.

The “Until We’re All Safe” wristbands, logos and stickers are available in English and Spanish, and in new larger sizes.

For more information or to order, visit www.tcia.org or call 1-800-733-2622.
Property development is a difficult process that can become even more complex when tree preservation is involved. Yet, trees offer valuable benefits – environmental, economic and social. With increasing frequency, trees on development sites become symbols of the commitment of a developer to the environment and the community.

Successful tree preservation is measured over the long term, when trees continue to thrive for many years after development. Successful tree preservation occurs when:

- healthy, structurally sound trees are selected for preservation;
- adequate space is planned for tree protection during the project design phase;
- trees are protected from damage during construction;
- everyone involved in the project is committed to protecting trees.

If tree preservation is to be successful, the arborist needs to be involved as part of the development team. The arborist’s job is to bring knowledge about the tree resource and how it will respond to site development to the planning and design table. This requires interacting with the developer, engineers, architects and construction personnel, and reviewing and responding to plans throughout the development processes.

The tree preservation process
The sequence of events that results in successful tree preservation is intimately linked to the development process itself. From an arboricultural standpoint, the preservation process consists of the following steps:

1. Select healthy, structurally sound trees.
2. Design the “right space.”
3. Prepare the trees for site change.
4. Protect from excessive damage during construction.
5. Maintain trees with long-term, low-intensity treatments.

Select healthy, structurally sound trees
Evaluating the suitability of individual trees or stands for preservation is one of the most important tasks for the arborist. Furthermore, this analysis is needed very early in the planning process. Designing projects around trees not suitable for preservation can waste considerable time and expense.

An assessment of suitability for preservation integrates tree health, structure, age and species factors. Trees that are structurally unsound, in poor health or unable to survive construction impacts are a liability to a project rather than an asset. When identifying trees that are suitable for preservation, consider the following four factors:

- Tree health
  Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.

- Tree structure
  Trees that contain significant defects that cannot be managed and are likely to lead to failure should not be preserved in areas where damage to people or property could occur.

- Species

High density projects often do not allow for as much space as we would like. However, with a healthy, construction-tolerant species, specialized construction techniques, stringent controls and monitoring during construction, optimum tree care, success is possible. This is a native valley oak in a downtown area. Previous use was a bank and parking lot. Site was demolished and rebuilt. All images courtesy of HortScience, Inc.
Tree species vary both in their tolerance to construction activities and their ability to adapt to site changes. For instance, holly oak (Quercus ilex) and plane (Platanus × acerifolia) are relatively tolerant of construction impacts while European beech (Fagus sylvatica) is not.

Another species consideration is its potential to become an invasive weed. Where natural habitats are at risk from degradation should the exotic tree escape into nearby wild lands, replacement with non-invasive species should be considered. As an example, it may be unwise to plant tree-of-heaven (Ailanthus altissima) in locations where it is likely to spread.

- Potential longevity
  Over-mature trees are less able to tolerate construction impacts than are young and mature individuals.

Declining and structurally unstable trees often have habitat value, but those trees should be retained only in areas where their structural failure would not impact people and structures.

**Design the “right space”**

The “right space” is one that provides adequate space and site conditions to sustain tree health and structural stability over time. The “right space” considers how the tree size and form will change over time as the tree grows. The “right space” must be planned for during the design phase of the project.

Project design is at first conceptual in nature, and becomes more detailed as plans are refined. The arborist participates in the design effort at first by identifying which trees are suitable for retention and the amount of space needed for adequate protection. The next step is to determine what impacts will occur and how the tree will respond. Then, if development constraints will not allow as much space as advised, the arborist may suggest design modifications to reduce the impacts. If impacts cannot be reduced, the arborist must determine whether the tree is unlikely to survive and should be removed.

**Communicating with design professionals**

If we are to be successful in preserving trees we must understand how development occurs. The simple fact is that structures, be they buildings, roads, patios or utility trenches, must be built in such a way that they are stable and safe. Therefore, specific engineering standards regarding soil compaction, footing and foundation design, and depth and separation of utilities must be attained. In many situations, the building standards and local codes allow limited flexibility for modification. The arborist usually must work within these requirements.

The most important aspects of construction for the consultant to understand are those that occur below ground. The soil (or geotechnical) engineer and the civil engineer largely determine requirements for these activities. The arborist should become familiar with common terminology and work procedures involved in these processes.

**Identifying a tree protection zone**

The tree protection zone (TPZ) is the area around the tree or groups of trees in which no grading, excavation or construction activity is to occur. The size and conformation of the TPZ depends on several factors including:

- species sensitivity to impact
- health and age of the tree
- root and crown conformation
- development constraints

In some situations the canopy form may dictate the conformation of the tree protection zone. Where large, low limbs are present that cannot be removed without disfiguring or damaging the tree, the tree protection zone must encompass those limbs.

Root conformation is typically the hardest component to assess. Our model of tree root systems describes roots as being shallow – most within 3 feet of the surface – and extending far beyond the dripline. Actual root systems often deviate from this model. Some trees root quite deeply depending on the genetic makeup of the tree and the soil profile. In built environments, underground utilities and structures affect root distribution. It may be necessary to determine where roots actually are growing when defining a tree protection zone. Excavating with hydraulic or pneumatic tools can help identify root conformation so adequate space can be designed.

Tree Protection Zone guidelines based on tree size, age and species tolerance are provided in Table 1. When applying these guidelines, the usual variables must be considered – crown density, tree height, exposure to wind, lean, presence of other defects such as decay, soil depth and strength. A larger area than that calculated may be needed for stressed trees or those with low branches that extend outside the zone that need to be protected by temporary fencing.

Try as we might, projects usually are not designed with space for trees as the primary consideration. Space is at a premium on development sites, and compromises may have to be made with tree protection zones. It seems generally accepted that roots up to 1 to 2 inches in diameter may be cut without causing irreparable damage. It is unacceptable to cut into the buttress flare.

The guideline for maintaining health has been that we can remove 30 to 50 percent of the roots of most trees. Determining when that point is reached requires know-

---

**Table 1:** Guidelines for adequate tree preservation zones for healthy, structurally stable trees.

<table>
<thead>
<tr>
<th>Species tolerance to impacts</th>
<th>Tree age</th>
<th>Distance from trunk feet/inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>Young</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>&lt;¼ life expectancy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mature</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>½-¾ life expectancy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overmature</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>&gt;¾ life expectancy</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>Young</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>Mature</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Overmature</td>
<td>1.25</td>
</tr>
<tr>
<td>Poor</td>
<td>Young</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Mature</td>
<td>1.25</td>
</tr>
<tr>
<td></td>
<td>Overmature</td>
<td>1.5</td>
</tr>
</tbody>
</table>

---
The full extent of the root system, which is difficult to accurately assess. In our experience, the minimum tolerated is highly species dependent. For instance, ash will tolerate much more root removal than walnut.

To calculate the optimum tree protection zone:

1. Evaluate the species tolerance of the tree: good, moderate or poor
2. Identify tree age: young, mature, over-mature
3. In Table 1, find the distance from the trunk that should be protected per cm of trunk diameter.
4. Multiply the distance by the trunk diameter to calculate the optimum radius (in meters) for the tree protection zone.
5. Plot the radius on the tree preservation plan.

**Example:** 
Healthy, mature, 30-inch diameter black walnut
1. Species tolerance = poor
2. Age = mature
3. Distance = 1.25’
4. 1.25 ft x 30 in. = 37.5’ radius
5. Plot radius

**Evaluation of impacts to trees**
It is virtually impossible to retain trees on a construction site without the trees incurring some degree of either injury or change in their environment. A reasonable goal, however, is to hold the impacts to the minimum that the trees can tolerate. When impacts are too severe, either the plans must be changed or the tree removed.

The type of construction that will occur around existing trees and how it will be executed has a great influence on tree survival and growth. By thoroughly examining construction plans and specifications, communicating with the project’s design professionals, and corroborating the information in the field, the arborist can get a clear picture of what changes to the site will occur. In fact, the arborist must understand those changes long before construction begins. Once plans are finalized there is limited opportunity to significantly reduce impacts around trees.

Impacts to trees are cumulative. Rarely does the tree experience just one impact that affects its growth. Rather, a series of changes occur to which the tree must respond and adapt. The challenge for the arborist is to determine when impacts will be too severe for the tree to survive, not only in the short term, but also in the long term. That point depends on several factors including the severity of the cumulated impact and the ability of the individual tree to survive them, given the species, age and condition of the tree.

**Minimizing tree impacts**
Because in most cases we cannot completely eliminate construction impacts to trees, our goal is to minimize injury to a tolerable level. There are a number of ways this can be accomplished, depending on the specific conditions and requirements at the site. First, and foremost, the goal is to protect trees rather than repair injury.

Following are a few techniques to minimize tree injury during construction:
- **Fence trees prior to demolition or grubbing**
  The most effective fencing is chain link with posts sunk into the ground. Fences should enclose the tree protection zone, and remain until all construction activity is completed.
- **Minimize soil compaction**
  Limit traffic and storage areas
  Protect soil surface with deep mulch
  Specify minimum compaction on non-load bearing areas
  Use extra reinforcement in paving materials
  Avoid use of heavy equipment around trees
- **Minimize excavation**
  Maintain natural grade around tree
  Use discontinuous footings on retaining walls
  Modify paving materials to reduce

---

**Check Out This New Tree and Shrub Care Product!**
More Powerful and Less Expensive

**ALL IN ONE BIO-STIMULANT, BENEFICIAL BACTERIA, FUNGI AND MYCORRHIZAL PACKAGE FOR HEALTHY, LONG LASTING TREES AND SHRUBS**

**RHIZO FUEL**

- **Rhizo Living Component**
  - 19 species bacterial package
  - 2 species trichoderma
  - 7 species ectomycorrhizae
  - 4 species endomycorrhizae
  - *includes new Gliumus fasciculatum*

- **Fuel Component**
  - Soluble humic acid
  - Soluble cold water kelp
  - Vitamin C Ascorbic acid
  - Vitamin B1
  - Glycine
  - Contains more components than other top selling products

**Directions For Use**
- Direct Tank Mix: 1/2 lb per 100 gallons of water.
- Soil Drench: 100 gallons will cover 1 acre or 10 gallons per 4000 sq ft of shrub beds
- Soil Inject: Inject 4 gallons per caliber inch 2-6 inches below ground
- Compost Tea: Use 1/4 lb per 100 gallons at beginning of brow cycle
- Store: in a cool dry place for up to 24 months

For a comparison to other products you may use go to www.ROOTGROW.COM or call 866-ROOTGROW

**This product costs less than $25 to make 100 gallons!**

Please circle 55 on Reader Service Card
depth of section
Route utilities around trees, combine utilities in one trench
Lay irrigation lines on soil surface, cover w/ mulch
Tunnel lines rather than trench
Use pier foundations with grade beams above grade rather than slab foundations

- Minimize changes in water supply and drainage
  If there are changes, attempt to reproduce ‘natural’ conditions through maintenance

- Minimize pruning
  Consider location of low limbs when designing structures/uses under trees

- Minimize competition
  Avoid planting and irrigation under sensitive native trees.
  Control growth of competitive plants (e.g. vines, understory plants)

Prepare the trees for site change

Preparing the trees for site change involves two types of activities: alleviating stresses that degrade health and vitality, and providing clearance for construction.

Alleviating stresses
Trees may be under stress before construction even begins. The property may have received minimal or no maintenance prior to project approval. When evaluating trees before construction begins, the arborist should assess whether trees are affected by drought stress, limited nutrition and pests. By alleviating these stresses before construction begins, the trees are better able to respond to site changes. Consider if irrigation, fertilization, mulching or pest management are needed and discuss treatments with the owner/developer.

Provide clearance for construction
Crown and/or root pruning may be needed to allow access for construction equipment and activities. It is better for the arborist to prune properly before construction begins to avoid “pruning,” either accidental or intentional, by construction workers.
Crown pruning should be performed according to standards — ANSI Z133 and A300 standards, and the associated ISA Best Management Practices – Tree Pruning. Where only temporary clearance is required, for instance for access by equipment, it may be possible to tie back branches rather than remove them. At least 5 feet of clearance from structures usually is required for construction. The amount of vertical clearance needed varies, but usually it is approximately 8 feet over sidewalks and 14 feet over roads. Required distance will vary with the type of construction equipment to be used, so discuss needs with the project superintendent.

Root pruning before grading or excavation for foundations or footings will avoid wrenching and shattering roots by grading and construction equipment. This is accomplished by cutting roots outside the tree protection zone to the necessary depth. Roots can be cut by digging a trench (manually or with high pressure air or water) and cutting exposed roots with a saw, a vibrating knife, rock saw, narrow trencher with sharp blades or other root pruning equipment. Cut the roots at right angles. After the roots are severed, grading and construction equipment can operate outside the tree protection zone without further damage. Avoid cutting sinker roots or roots larger than 2 inches in diameter.

Protect from excessive damage during construction.

We have limited ability to repair damage done to trees, so we must focus on protecting them from damage. The single most important tree protection treatment is a sturdy fence located at the limits of the tree protection zone that excludes construction activity from the tree.

The arborist’s role during construction
The players present on a project change as it moves from design to construction. The arborist can provide important continuity among these changes.
The amount of time the arborist should spend on the site during construction varies widely. If, for instance, large tree protection zones have been established and defined with sturdy fencing, there may be little need for the consultant to be at the site. On the other hand, if equipment must maneuver close to trees, the consultant may need to be present to help determine appropriate work procedures and protection measures.

A few suggestions about working with superintendents...
- Schedule the site visit in advance. Unless there is a good reason to do so, avoid just “dropping in.” There may be
other activities that prevent the superintendent from spending time with you.

- Check in with the superintendent when you first arrive on-site.
- Direct comments and suggestions about sub-contractors to the superintendent. Managing the subs is the superintendent’s responsibility.
- Whenever possible, accentuate the positive.

Arborists commonly have five tasks during the construction phase:

1. **Protect the Tree Protection Zone.**
   Maintenance of the TPZ may be the most significant activity associated with the post-design phase. Space is often at a premium on construction sites and the open areas defined by the TPZ are attractive locations for all sorts of activities.

2. **Assist with changes in the field.**
   Few projects proceed without changes in the field. This occurs for a variety of reasons. For example, plans and field situations may not match. Or, an item may have escaped notice or was not discovered until construction. The consultant must participate in the decisions when conditions or plans change.

   A note about availability: most construction projects don’t have the luxury of time. Problems must be addressed and resolved quickly. For this reason, we must be responsive to requests for our time.

3. **Monitor injury to trees and provide corrective action.**
   Few projects proceed without some injury to trees. Plans and changes may require work within the TPZ. The consultant must be prepared to recommend mitigations and corrective actions where damage has occurred, be it pruning, irrigation or other treatment. For example, the inadvertent piloting of soil within the TPZ can quickly be corrected by removing it, without long-term consequences to the tree.

4. **Communicate with the project superintendent.**
   In our experience, one of the most critical factors in the success of a tree preservation project is the commitment of the project superintendent. The arborist must help him/her understand the need for tree protection. We must also acknowledge the range of demands placed on the superintendent to complete the project and be respectful of the challenges they face.

5. **Facilitate completion of the project.**
   Once the project has been approved by the public agency, consultants and arborists should be assisting in its completion in a timely manner.

**What to look for during monitoring**

- Ensure the integrity of the tree protection zone
  - Tree protection fences intact
  - No storage of materials
  - No parking
  - No dumping
  - No evidence of soil or understory disturbance in protected area

- Note any tree injury that occurred
  - Damaged branches from equipment
  - Cut, injured or exposed roots
  - Unapproved activity near trees

- Look for unusual changes in tree appearance. Provide recommendations for treatment

---

**The Most Trusted Name in Forestry Equipment**

**MAINKA ENTERPRISES, LLC**

**Exceeding Expectations Since 1970**

- **NEW AND USED**
- **FINANCING AVAILABLE**
- **FACTORY DELIVERY**

The equipment shown above is only a small sample of what you can find at Mainka Enterprises.

For the highest quality equipment from the name you can trust, call:

Mainka Enterprises
800-597-8283
www.mainkaenterprises.com

Please circle 31 on Reader Service Card

30 TREE CARE INDUSTRY – AUGUST 2007
Maintain trees with long-term, low-intensity treatments

At some point the developer will relinquish ownership/control of the project. The new managers may be individual property owners, a community association, the public agency or some other group. The transfer usually is preceded by an on-site inspection, often with remedial action required.

The arborist may be asked to update information in the tree survey or report, provide a list of actions taken during construction, or prepare a detailed post-construction maintenance plan. The nature of any work is determined by the needs of the new owners, specific tree condition and needs, and location regulations.

The effects of construction activity on tree health and stability may not be evident for some time. Trees must be inspected regularly for vigor, pests and structure. Follow-up treatments may include:

- Pruning
- Irrigation
- Mulching
- Pest management
- Fertilization
- Fire management (fuel loads, ladders)
- Removal of damaged or unstable trees.
- Replanting

While arborists like to think of common tree care practices as being solely positive, the reality is that some of our efforts may have negative effects on trees. Treatments such as transplanting, excessive fertilization, over-irrigation, pruning and some pest management treatments can be stress factors.

Therefore, our programs of care should minimize sudden change around the tree to the extent possible. Treatments should be tailored to the needs of the tree and provided in small doses over the long-term. Think about providing a stable environment.

Anticipate a slow response by the tree.

Conclusion

Successful tree preservation occurs when the goals of the project are achieved with minimal impact to trees designated for preservation. Success is measured over the long-term, when trees continue to thrive for many years after development is completed. For that to happen, arborists making decisions about tree preservation must be knowledgeable in several areas. First, they must understand how trees grow, as individuals and in groups. Second, they must understand the process of development and methods of construction. Third, they must understand how trees respond to changes in the environment imposed by development of the land.

Finally, everyone involved on a project must acknowledge that tree preservation requires a commitment by members of the community and the project team.

The authors are principals of HortScience, Inc., an arboricultural consulting firm located in California. They are authors of Trees and Development: A Technical Guide to Preserving Trees during Land Development, published by the I.S.A. This article is based on a presentation by Nelda Matheny at TCI EXPO 2006 in Baltimore, Md.
Pruning a tree can be like tuning an instrument. And a landscape is a symphony, with certain instruments dormant, or quiet, while others take a lead. When I come upon a garden done in concert, it is a great thing. To drive this analogy into the ground, let’s call the sun the music that courses through the plants. They have to be ready for any eventuality, storms as well as hot weather, so it isn’t as if the music is written, it’s more like a giant jam session.

I am seldom invited into a perfect garden. Like so many arborists, I am often called in a crisis. But seeing a really well-planned garden brings the words “elegant” and “charming” to my lips. Taking in the scene helps when you know a little about it. My pruning (music appreciation) has brought me closer to understanding herbaceous plants, soils, and water use and movement. But, like so many of us, I am a pruning expert. Even a sheared hedge or a line of cut-back flowers say a lot to me about the person who did it.

Does the word “tidy” come to mind when viewing a hedge? How about “geometric”? I find that one pops up a lot when I do not want it to. A good hedge, yew, arborvitae or laurel around here, should be a foil for the plants it surrounds, not a showcase for the fastidious nature of the owner. Straight lines are a nice thing, but why, oh, why can’t a few be bent? I love a softer texture on hedges, so that they seem as if about to escape their box and color a little outside the lines.

A firm foundation does not necessarily have to be exact. Soft, fluffy hedges are not the anti-garden.

Most of the gardens I have abided in as part of my profession were not ready for show, and I was there to help bring them to that state, or to at least a livable one. I have been privy to the face public and private gardens only show their workers. The backs of hedges that are not meant to be viewed, or are “just the neighbor’s side” during a bid. They are, of course, integral to the plant’s health.

Each hedge is a statement – in its placement, how it is cared for, and what it frames. In the West, we talk about privacy a lot, and our hedges tend to be planted for that purpose. But hedge is a verb, we exegetical (critically explanatory) spirits know. The act of using cuttings as starters for more plantings, a firmer row, was a practice of the ancient Druids, and may have been the original usage. We still say; “I am hedging my bet.” Row-plants, usually windbreaks and cattle boundaries, became, as a side, private gardens. And “paradise” translated literally, means “walled garden.”

So we clip away at our modern-day hedges, and we are whittling a bit of history, and of our souls. I see that most of my colleagues consider hedging to be simple stuff, but I disagree. Far from giving it to the apprentice, I wield the shears myself, and later carefully use secateurs to clip ruptured or roughened ends. I hear that I have a good eye, and that anyone with a good eye can do this but, again, I disagree. These are plants – living, dynamic little sun-digesters. I make decisions about how deeply to cut them as well as whether to prune out deadwood or lower branches each time I do a hedge. I use a good handsaw (and nobody can tell me a folding saw is safe. Using a folding saw in this brushy environment is like asking for a laceration) a pair of secateurs, and a power shear (blades on one side, gas powered), which I set down every few minutes. It is some of the hardest work I have done, besides housework.

Long ago, I was shown how a thinner top creates a better, healthier hedge. This is a subject that needs to come up during the sale, not at the sweeping. I also inform the client during the first meeting that light is the essential food for plants, and that
hedges need small holes pruned in them at random to keep them healthy. Often, I am told that the client has never needed that before, and the hedge is just fine. That is when I point out the flaws in the hedge, and prune a few out with the secateurs. I am sure we can all show a potential customer where last year’s cuts are, and how the plant (hedge) grew just a little farther out from there this season. This is usually convincing, but it also serves to separate clients from those who are simply looking for a deal. I will go on (I do go on, ask anyone) with an explanation of how the hedge will continue to expand, year after year, unless it is thinned.

I try to show that hedges can be in a burgeoning state of flux, with patches of light and dark, and that this is a landscape texture, like any other, except for the fact that it’s healthier than a flat surface, over time. Some of the nicest hedges I have done were unintentionally grouped plants that, over time, were made into something of a backdrop, or a border.

Between properties, they can serve as interruptions or as creations. They do not have to be merely for the privacy of the coiled hose. Come to think of it though, isn’t that a nice thing, to come upon a coiled hose in a hedge? I think a hose half hidden in the hedge is comfortable, and a little bit merry. One can imagine the wonder of a child discovering cute things like this in the garden, or the utility of grandma using them.

When did gardens become dry status symbols? Nowadays I am likely to come upon the obligatory granite “saying” in the garden, or the water feature, and think that it doesn’t bring the client as much joy as they might have guessed. Rolled up hoses on reels are nice, but so is a snake-like hose drifting around the grass. It is a staid addition, and doesn’t offend the true gardener. I see a lot of unused potting sheds and catalog-bought things with superior stainless-steel handles on them that I will never buy. But there it is. It’s a free country, and I can put up a nice hedge if I don’t want to see it. And it is my belief that a well-tended hedge can be as fascinating as the garden it highlights or encloses.

John O’Shea is a Certified Arborist and a member of the American Society of Consulting Arborists. He will be speaking on root pruning at TCI EXPO in Hartford in November.
The threat of massive wildfires, realized this summer in the West, was heralded by many experts decades ago. As recent as 2006, summertime moisture levels were below average in Colorado, Arizona, New Mexico, Montana and Wyoming, and much of the Great Plains from Oklahoma to North Dakota was experiencing drought as well. In all, one-fourth of the country was facing moderate to extreme drought conditions.

“The long-term moisture deficits and high fuel loadings are producing critically high fire potential, particularly in the higher elevation timber,” researchers at the University of Arizona’s Institute for the Study of Planet Earth reported.

As a result, the number of fires and the acreage burned set 10-year highs last year. The number of acres burned by July 2006 was more than twice the average over the past decade, according to the National Interagency Fire Center in Boise, Idaho.

According to a report in The Christian Science Monitor, one 40,000-acre fire even threatened the University of Nevada’s Fire Science Academy, giving students the kind of on-the-job training they hadn’t counted on.

“Over a century of fire suppression, persistent drought and declining forest health conditions are some of the main contributors to the catastrophic wildfire events occurring today,” says forester Robert Castellano, president of Potomac, Montana-based Horizon Tree Service, Inc.

“Combined with increasing development in what is known as the wildland-urban interface is an accident waiting to happen. These factors have made firefighting very costly, difficult and extremely dangerous.”

The first half of this year fared even worse than 2006. Through mid-July, more than 50,000 wildfires scorched nearly 2.5 million acres, and 13 states reported large fires in progress.

“This year the heat and lack of rain has fueled the fires, along with the lack of funds to maintain any type of protective barriers,” notes Richard Alt, president of West Henrietta, N.Y.-based Lewis Tree Service. Alt cites a likely cause for lack of government-backed funding to be the expensive war in Iraq.

One thing is certain: the sparks that cause wildfires will always be in play. No one can stop lightning, after all. But there are effective strategies for reducing property loss and loss of human life, and tree care companies can play a part in achieving those goals.

Wildfire mitigation

Mitigating wildfire threats begins when home or building development begins. A big part of the danger of wildfire comes with suburbs pushing farther into the wildland-urban interface where homes are
surrounded by trees and shrubs that can fuel fires. This is especially true in canyons where upslope winds blow stronger and push fires along — the “venturi effect,” or acceleration caused by restriction.

Houses built amid steep landscapes — an increasingly popular alternative, especially in mountainous regions — pose a special challenge for firefighters. Embankments and rough terrain make it extra difficult for crews to extinguish blazes. Building on these locations, as well as poor exterior property maintenance, have led some communities and agencies to respond. New zoning ordinances have been introduced to address the need to trim shrubbery away from structures while ensuring enough room for fire trucks to turn around. Building codes require construction materials more suitable to fire-prone areas: less-flammable roofing materials (rather than cedar shakes, for example) and double-glazed windows less likely to blow inward allowing fire to sweep through a house.

An increasing number of communities in the West are working to become recognized as Firewise Communities. Recognition in this national program requires that a municipality involve homeowners, community leaders, planners and firefighters in fire prevention programs.

A handful of counties in southern California have excellent codes in this regard, and are working on making them even stricter. Oregon also has a wildland-urban interface act that has been used as a model for other statewide efforts.

Wildfire mitigation involves cutting down dead trees and those too close to one another and to buildings. The work is essentially right-of-way (ROW) clearing, and utilizes similar equipment. One example is the type of jobs assigned to Hayward, Calif.-based Arborwell, consisting of reduction and removal of hazardous trees and limbs in public areas. An operation is scheduled to start soon for Alameda County, according to Arborwell’s vice president of operations, Andy LaVelle. The $90,000 job will entail ROW clearing of trees and brush along a two-mile walking trail, which will call for using the company’s 15-ton crane, a chipper and a chipper truck.

“We also have a Ford F550 with flotation tires,” LaVelle says. “It’s meant for golf course work, but we find that it works really well in smaller areas and in areas where you have this public right-of-way trail. If you damage it, you have to repair it, so we want to use the lightest equipment possible.”

Such an equipped truck is also ideal for steep grades, where wildfires thrive and where mitigation is a must.

**Strategies**

As it pertains to wildfire mitigation, forest thinning and biomass removal are the primary strategies used. These efforts have also sparked controversy throughout the West. Opponents of such projects tend to paint them as “an excuse to harvest timber.” But environmental groups, which have long fought clear cutting of forests, have surprisingly jumped on the mitigation bandwagon. In Colorado, where about 1.3 million people live in the red zone (areas at great risk of wildfire), the Sierra Club promotes fire mitigation, even organizing volunteers to help homeowners take down trees and thin brush.

One prevention strategy is smart replanting within a cleared area. Replacing felled trees with trees that hold moisture better and do not produce flammable resin — such as aspens — is such a strategy. Also, trimming lower branches of trees near building structures prevents those trees from
becoming “ladder fuels,” linking a grass fire to the treetops and enabling a wildfire to climb from the forest floor to “the tops of the trees, where you can have 40- to 100-foot flame lengths,” according to Larry Amell, a forester for the U.S. Forest Service in Oregon.

Rick Herwehe, the owner of A Cut Above Forestry, a tree-care company in Breckenridge, Colorado, estimates that the average mitigation project costs $6,000 to $9,000 an acre, depending on the density of the forest and the type and size of trees.

“We’re amidst a big pine beetle epidemic, so we’re losing a lot of trees,” Herwehe says. “Also, we’re surrounded by U.S. Forest Service land. That said, much of our fire mitigation work is done around homes, whether that comes directly from the homeowner or from local government. The building code requires thinning as part of long-term mitigation as part of the building process.”

Herwehe’s crew uses chain saws, chippers, tractors and Bobcats with grapples to

Protecting property against an encroaching wildfire can be accomplished with a “defensible barrier,” a swath free of what could otherwise become fuel for the fire. Clearing this space gives fire less chance to crawl up trees and shrubs to attack the house or building. Here, a fire line burns through fresh fuel. Photo courtesy of Mississippi State University.

Mulching...

Go with the flow!

The new Barko 930 Mulcher is an uncompromising 305hp brush eating machine engineered for demanding right-of-way, land clearing, and site prep work. Its 96 GPM attachment flow, yielding 270 net hydraulic horsepower, wipes out everything in its path including the competition. Nothing matches its speed, power and dependability for large clearing applications.

Size really matters! This fuel efficient brute will surprise you with its service-friendly design, awesome visibility and ergonomic comforts. Learn more online at www.Barko.com.
Bandit has the tools to quickly convert land clearing and green waste into valuable products.

When it comes to your equipment, you need more than just a supplier. You need a partner you can trust. That's why more industry professionals trust Bandit to provide them with high-quality, dependable equipment that consistently outperforms the competition.

With Bandit equipment in your fleet, you instantly gain access to a support network of over 300 dedicated Bandit employees and over 80 dealers worldwide.

And with over 30,000 units in operation, you can be sure that when you buy a Bandit, you're buying the best. No matter the task, Bandit has the equipment you need to get the job done quickly & efficiently.

If you are in the market for a chipper or grinder, call to learn about the model that is right for your operation. Experience the Bandit difference today.

CALL TODAY
1-800-952-0178

to get in touch with a Bandit representative, or to arrange for a product demonstration.
load logs onto trucks, all to create a defensible space. Herwehe’s most recent equipment purchases include a large-capacity chipper with winch, and a chip-box truck with a 30-yard box. The chip-box outfit, which is akin to a garbage-collection truck that picks up dumpsters with a hydraulic lift, allows Herwehe to haul off 30 yards of chips.

Experts agree that protecting property against an encroaching wildfire can be accomplished with a “defensible barrier,” a swath free of what could otherwise become fuel for the fire. Clearing this space gives fire less chance to crawl up trees and shrubs to attack the house or building.

Rob Kimball of Kimball Tree Service in South Lake Tahoe, Calif., speaks from wildfire clearing experience of the up-close-and-personal sort. The recent fires around Tahoe burned about 50 feet from his deck and consumed two houses across the street. Kimball’s son recently graduated from the local fire institute, and the fire was an opportunity for Kimball and son to ride on a fire truck to assist residents who lost 26 homes.

Much of Kimball’s work is contracted with Tahoe’s public transportation department and involves creating defensive zones so fires drop to the ground for better management. Kimball modifies fields, removing brush and live trees under 16 inches in diameter.

“It’s all hand piling and burning,” Kimball says. “Our main pieces of equipment include chain saws and a chipper. This area is heavily regulated by the Tahoe regional planning agency, so mechanical means, such as brush mowers, are a rare sight.”

But if usage regulations permits it, mechanized is always the best option, especially during high-risk periods of drought when fires can ignite and blow up to monster-sized problems in minutes.

The best tools for the job are actually a combination of equipment, according to Castellano. “Mechanized tree harvesters, large-capacity chip trucks and large scale chippers. The volume of material (biomass) from thinning projects can range from 10 tons per acre to well over 80 tons per acre. Mechanical handling is the only cost-effective option. This applies to small urban lots to larger ecosystem projects.”

Which equipment is best for which particular job?

“That’s tough to say, because all the jobs change,” Herwehe says. “It depends on how soft the job has to be. We work on a lot of higher-end homes — we’re in a resort area — so a lot of our work is soft, a lot of hand work, work with rubber-track Bobcats. Some guys are using forestry mowers, but we haven’t gone in that direction yet.”

Post fire operations

Preventing wildfire devastation can also begin in the aftermath of an event. Properly cleaning up and restoring an area after a
Introducing the ALL New Generation 2

Body Designed with Relocated Rotor
Two-stage Cutting Chamber
Counter Teeth in Cutting Chamber
Built-in Recutter Bar at Discharge
Optional Bolt-in 2nd Shear Bar
Machined Bearing Anti-wrap

Low Profile Skid Shoes
Adjustable Tree-pusher Bar
Welded Claw Hooks on Pusher Bar
Redesigned Spiral Tooth Pattern
Optional Carbide Planer Teeth
Optional Cylinders on Pusher Bar

Plus: Timber Ax

Flail Mowers

Hydraulic Oil Cooler
wildfire is as important as fire breaks and other mitigation procedures.

Yet, as with forest thinning, post-fire salvage logging is not without controversy. Proponents of the practice say such logging, followed by replanting, helps reduce the risk of future fires and allows for quicker regeneration. But some wildland firefighters disagree.

"Timber plantations thick with even-aged nursery-grown conifers, untreated logging slash and invasive weeds pose some of the greatest hazards to firefighters," members of Eugene, Oregon-based Firefighters United for Safety, Ethics and Ecology (FUSEE) wrote in a letter to Congress last year. "Wildfires are prone to sudden 'blow-ups' when they enter this volatile mix of hazardous fuel," warned this group, whose members include current and retired wildland firefighters.

But removal and thinning are par for the course when considering the prevention of massive wildfires. In January 2007, San Bernardino National Forest officials started preparations for a multimillion-dollar effort to remove drought- and insect-devastated trees north of Crestline, Calif. U.S. Forest Service fire battalion chief David Kelly says the Miller Canyon Fuels Reduction Project, intended to reduce fire dangers on more than 4,400 acres of forest land, was moving forward. Actual tree removal began in March.

Kelly told the press that the Miller Canyon project – intended to reduce wildfire risks in the Crestline, Valley of Enchantment, Blue Jay and Lake Arrowhead areas – is expected to cost between $10 million and $11 million. At that same press conference, fire and forestry officials made it clear that people who live in the woods won’t be able to rely on projects funded by Uncle Sam to reduce fire dangers on a long-term basis.

"The money’s going to be gone," San Bernardino County Fire Marshal Peter Brierty warns, adding that people who live in the forest will bear responsibility for clearing vegetation from their own land. "It’s going to come back to you year after year after year."

A pool of money was made available, however, in the near term, funds that
A half century of experience...

WORTH ITS WEIGHT IN GOLD

equipment • parts • service

800-831-0042 • 989-866-2381 • www.mor bark.com
mountain landowners can use to help pay the costs of clearing trees and brush from their own property. The reimbursement program, called Forest Care (www.sbnfa.org/forestcare.php), launched in June 2006 and roughly 75 property owners have participated. The program is open to mountain landowners who have lots that are smaller than five acres with 200 or more trees per acre standing on that land. People who contact Forest Care then arrange for a California Department of Forestry and Fire Protection forester to evaluate their land. Property owners then are required to choose their own contractor to clear away trees. Through Forest Care, 75 percent of tree-removal costs are reimbursed. The average reimbursement is about $1,500. The program was funded with $6 million of U.S. Forest Service money.

A statewide fire risk assessment by the Nevada Division of Forestry and Nevada Fire Safe Council prompted another project. The $7 million U.S. Forest Service project will thin the forest on federal land within 300 feet of some of the most frequently used parts of the Spring Mountain National Recreation Area, including Kyle and Lee canyons and along the state highways leading to them.

The project area is scattered over 2,500 acres stretching from the tiny community of Cold Creek in the north to Mountain Springs in the south and includes everything from desert shrub to high-elevation mixed conifer.

“We want to be able to create defensible space around private property,” says Deputy Forest Supervisor Stephanie Phillips. “What they’re called is shaded fuel breaks. There will be trees and even shrubs in there that will be spaced out.”

The mountain’s largest and oldest trees will be left alone. Only trees ranging in size from saplings to those with trunks of less than 14 inches in diameter will be cut down.

The trees that are left will have their lower limbs pruned away and be spaced so their upper branches are at least 10-30 feet apart. The steeper the terrain, the greater the spacing the will be. The fuel breaks are expected to take three to five years to complete and will require maintenance every three to six years after that, though no additional trees will need to be removed for 50 years or more.

Many in the forestry and tree care business believe this year’s blazing wildfire season is a wakeup call.

“Forested vegetation could have been treated in a manner to reduce the severity of the fire events,” Castellano says. “Forested regions need to be treated, and three main forest components need to be altered: forest density, structure and composition. In addition, if possible, you need to restore natural fire regimes. All treatments are based on sound ecological and restoration forestry principles.”

Adds Lewis Tree Service’s Alt: “A longer-range plan of clearing and possible use of herbicides for follow up maintenance would certainly help.”

Herwehe, who has been in this line of work since the early 1990s, suggests rethinking how to approach customers. “Folks get in a hurry with trees. Nothing happens quick in a forest, except a fire. Clients should understand that a good fire management project requires multiple entries. What we may want to do is thin a couple of times to get the densities – or the fuel modification picture – we’re after. We want to be sure that the cure isn’t worse than the disease.”

Current information on the nation’s wildfire situation can be accessed at the National Interagency Fire Center’s Web site: www.nifc.gov/information.html
Freedom of movement

FAE’s FORESTRY equipment is a clear leader in its field. It offers a perfect combination of power, technology and safety in a range designed for land reclamation and maintenance, as well as the reclamation of dirt roads, forestry trails and firebreaks.
EXPLORATION!

- Earn CEUs with Over 60 Hours of Educational Seminars
- Exciting On-the-Floor Tree Demonstrations
- Top-Notch Speaker Lineup
- Spanish Program **NEW**
- Informative Exhibitor Displays
- Lunch Forums **NEW**
- Student Career Days

Business Leadership  Safety  Arboriculture
Please circle 51 on Reader Service Card

THE WORLD’S LARGEST TREE CARE INDUSTRY

TCI EXPO

HARTFORD’07

MORE EQUIPMENT!
More than 185 exhibitors featuring the biggest names in tree care

MORE EXCITEMENT!
Prizes, raffles, giveaways, receptions, races and contests

SOMETHING FOR YOUR WHOLE TEAM!

Register today
1-800-733-2622

Connecticut Convention Center

EXPLORE EXPO!

Pre-Conference Workshops, November 7, 2007

Trade Show & Conference, November 8 - 10, 2007

or visit us online at www.tcia.org

Please circle 51 on Reader Service Card
Jeffery Pfeil’s recent adoption of biodiesel power is a microcosm of the times we live and work in, times that challenge age-old petro-based assumptions of how we fuel up.

In May 2007, Pfeil, owner of Bozeman Tree Service, Inc. in Bozeman, Montana, began using biodiesel in his trucks. The fleet includes five trucks: two spray trucks, two chip trucks and one bucket truck. Two chippers also run on the alternative fuel, making for seven engines total.

“I switched to biodiesel for two reasons,” Pfeil says. “For starters I wanted to be more environmentally friendly. I also wanted to turn a few heads in our marketplace, among our clients.”

Turning heads meant developing a promotional mailer this past spring with “Powered by Biodiesel” as the tagline, printed in a different color and a different font. Bumper stickers were also created, and signage was placed on all the trucks, on the back and on the sides. Pfeil and his team also put a large sticker on the bucket truck.

“Then we promoted the use of biodiesel in newsletters,” Pfeil says. “Eventually that kind of buzz gets people talking. You’re driving along, and they see your trucks and at the same time see ‘Powered by Biodiesel’ – it’s pretty effective. We get people who frequently comment that they have noticed we’re using biodiesel in our trucks now, and that it’s great we’re doing so.”

And there’s undisputed truth in Bozeman Tree Service’s “Powered by Biodiesel” advertising. In the first two months since switching, the company went through approximately 1,500 gallons of the alternative fuel.

There’s a lot for the people in Bozeman to be excited about.

Biodiesel is one of a handful of biofuels on the market. Ethanol is another. Biofuels are energy sources derived from biomass – recently living organisms or their metabolic byproducts, such as manure from cows. It is a renewable energy source, unlike other natural resources such as petroleum, coal and nuclear fuels.

One advantage of biofuel over most other fuel types is that it is biodegradable, and so relatively harmless to the environment if spilled. Another is that biofuels are considered to be CO2 (carbon dioxide) neutral, meaning they do not add to the carbon dioxide level in the atmosphere; the amount of CO2 they absorb when alive is about the same as what they give off when burned.

Because of the decades of use of petro-leum-based fuel, it’s ironic that the world’s first internal combustion engine was a diesel, invented in 1897 by Rudolph Diesel. His goal was to build an engine that ran on oils from crops and he did not approve of the switch to petroleum fuels. Diesel’s prediction of one day returning to biofuels has proven prophetic. More specifically, biodiesel is made from oil seed crops such as soybean and canola.

According to Brendan Prebo of Dearborn, Mich.-based ASG Renaissance, which contracts for the National Biodiesel Board, biodiesel offers many advantages:

- It is renewable.
- It is energy efficient.
- It displaces petroleum derived diesel fuel.
- It can be used in most diesel equipment with no or only minor modifications.
- It can reduce emission of gases linked to global warming.
- It can reduce tailpipe emissions, including air toxics.
- It is nontoxic, biodegradable and suitable for sensitive environments.
- It is made in the United States from either agricultural or recycled resources.

Any diesel engine can utilize biodiesel without modification to the engine or vehicle, so, according to experts, there is no...
mechanical need for “conversion” – at least after a certain year of make.

“The nice thing about running newer equipment is that, if it was manufactured after 1997, there’s no mechanical conversion necessary,” Pfeil says. “Prior to 1997, you had to replace your fuel lines because the oils are actually somewhat corrosive, so the older fuel lines would eventually deteriorate. Also, if you have an older truck that has high mileage, you risk loosening up particulate matter that has built up in the fuel tank. So you end up having to replace the fuel pump and going through one or two fuel filters before you work out all that particulate matter.”

The oil’s corrosive make-up loosens up the gunk. Because Pfeil had newer trucks, and no conversion was necessary, the only investment required was purchasing a 1,000-gallon fuel tank to place on-site. The cost for that was around $3,700, and it came with a pump and a meter. With that, the company had its own fueling station.

Pfeil’s environmentally friendly efforts don’t stop with biodiesel. He also purchased a Toyota Yaris, a three-cylinder automobile that gets 40 miles per gallon and has a sticker of around $12,500. It also comes with several comforts, such as an automatic transmission, not available on other high-mileage models, such as hybrid models. The Yaris runs on regular gasoline, but the high mpg makes it a low-emissions poster child.

Pfeil also recently bought a saw mill for processing longer, straighter pieces of waste wood. At this point Bozeman Tree Service is stockpiling the wood and preparing to use whatever is unsuitable for milling for firewood this winter. The usable, straight lumber – primarily 1-inch by 6-inch boards – will be sold, which Pfeil hopes will go over well with a market that appreciates the rustic touch in building material.

Green Economics

Pfeil concedes that his transition to biodiesel isn’t based solely on doing his part to save the planet. There are also reasons based on the sound economic principal of reducing operating and labor expenses.

“Biodiesel is a little more expensive, probably 10 percent more, than regular fuel, but that is offset by the fact that we’re fueling up at our location,” Pfeil says. “Because of that we don’t have down time in traveling to and from fuel stations. You can spend 20 minutes waiting in line when you’re hauling a trailer.”

Pfeil buys his company’s fuel in bulk from a local fuel distributing company, located in Bozeman. According to Pfeil, there are more local distributors popping up because it really isn’t hard to make.

One such example is Bozeman Biofuels, a 2004 startup that has spearheaded the push for biodiesel in that market. The owner, Paul House, has converted a 1994

“The only disadvantage of having your own on-site supply – which isn’t a big deal at all – is that you have to buy quantity,” Pfeil says. “When they make a batch of biodiesel, you have to buy all of it. So when they come to fill up, they deliver whatever is put in their tanker and come directly here and they dispense 100 percent of what they have. They don’t come and just top it off. We have to monitor our fuel level very closely so that they can dispense with that much fuel. We usually run it down to 200 gallons, and we always have a little back up in case they get behind.”

The biodiesel industry has developed a voluntary quality control program for producers and distributors to ensure that biodiesel is produced according to ASTM specifications and contamination or degradation does not occur during distribution, storage or blending. That program is called the BQ-9000. Many equipment manufacturers recommend biodiesel that is sourced from a BQ-9000 certified marketer or accredited producer.


The cons

Pfeil joins the increasing scores of biodiesel proponents in touting the fuel’s clean burn and efficiency. But there are also some drawbacks to consider.

“There are things you want to watch for. First off, when you’re referring to ‘biodiesel,’ it’s a very loosely used term,” says Pfeil. “You can buy any variation of biodiesel, meaning that the concentration of elements can change.”

It is possible to use 1 percent to 2 percent biodiesel as a lubricity additive for ultra-
Do you trust your electrical hazards knowledge to save your life?

Electricity is a leading cause of worker fatalities in tree care

Protect yourself and your company while meeting ANSI Safety Requirements with EHAP from TCIA

**Enroll**
In the EHAP Program today and receive:
- EHAP training manual with six chapter tests
- ANSI Z133.1 safety standards
- Test correction of each chapter test, including up to three retakes
- Maintenance of transcript in the TCIA database
- On-demand notification of transcript status

**Host**
A one-day EHAP Workshop
Typical workshop includes:
- EHAP Presentation by a TCIA-approved instructor
- Review of “Electrical Hazards and Trees” safety video
- Aerial Rescue protocol session

Customize by adding:
- Practical aerial rescue
- Test taking sessions

visit [www.tcia.org](http://www.tcia.org) & click on Safety & Education for more information and to find a TCIA-approved EHAP instructor in your area!

or call 1.800.733.2622
low sulfur diesel fuels, which may have poor lubricating properties, according to Prebo.

“You can blend 20 percent biodiesel with 80 percent diesel fuel (B20) for use in most applications that use diesel fuel,” Prebo notes. “You can even use it in its pure form (B100) if you take proper precautions. Raw or refined vegetable oil, or recycled greases that have not been processed into biodiesel, are not biodiesel and should be avoided.”

Research shows that vegetable oil or greases used in diesel engines at levels as low as 10 to 20 percent can cause long-term engine deposits, ring sticking, lube oil gelling, and other maintenance problems and can reduce engine life. These problems are caused mostly by the greater viscosity, or thickness, of the raw oils compared to that of the diesel fuel for which the engines and injectors were designed. Biodiesel is comprised of methanol and vegetable oil, with the methanol needed to make the fuel less viscous (sticky or congealing) than straight vegetable oil. It is necessary for vegetable oil to be thinned so the diesel engine can consume it.

The specification for biodiesel (B100) is ASTM D6751-03. This specification is intended to ensure the quality of biodiesel to be used as a blend stock at 20 percent and lower blend levels. Any biodiesel used in the United States for blending should meet ASTM D6751 standards.

“The biodiesel you’re using should be certified,” Pfeil says. “If it’s not certified, I wouldn’t touch it, because you don’t know how much it’s been – or not been – filtered, or even what the real concentration is.”

Pfeil is planning to cut his fuel supply down to B5, with 5 percent vegetable oil, in the winter.

“If you’re using it in the wintertime, there’s always a little bit of risk that you’re going to run into problems with your vehicles,” Pfeil says. “This is due to congealing in cold weather.”

For those considering making the switch to biodiesel, Pfeil says to not be intimidated or scared. “Diesel engines were designed to run on vegetable oil,” Pfeil says. “Do the environment a favor – make the switch.”
“THE BLADE OF CHOICE BY TREE CARE PROFESSIONALS”

### Vermeer

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Part No.</th>
<th>Knife Description &amp; Size</th>
<th>SALE Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC1000</td>
<td>KCH20109</td>
<td>Double Edge 9&quot; x 4-1/2&quot; x 5/8&quot;</td>
<td>$32.50</td>
</tr>
<tr>
<td>BC1220-BC1250</td>
<td>KCH20002</td>
<td>Single Edge 8&quot; x 3-1/2&quot; x 3/8&quot;</td>
<td>$19.25</td>
</tr>
<tr>
<td>BC1400</td>
<td>KCH20110</td>
<td>Double Edge 8&quot; x 5&quot; x 5/8&quot;</td>
<td>$37.25</td>
</tr>
<tr>
<td>BC1800-BC2000</td>
<td>KCH20103</td>
<td>Double Edge 10&quot; x 5-1/2&quot; x 5/8&quot;</td>
<td>$41.50</td>
</tr>
<tr>
<td>BC1800XL</td>
<td>KCH20112</td>
<td>Double Edge 10&quot; x 5&quot; x 5/8&quot;</td>
<td>$43.50</td>
</tr>
</tbody>
</table>

### Morbark

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Part No.</th>
<th>Knife Description &amp; Size</th>
<th>SALE Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>100, 200, 290</td>
<td>KCH10001</td>
<td>Double Edge 7-1/4&quot; x 4&quot; x 3/8&quot;</td>
<td>$20.25</td>
</tr>
<tr>
<td>10, 13, 17, 2050</td>
<td>KCH40001</td>
<td>Double Edge 10-1/2&quot; x 5&quot; x 1/2&quot;</td>
<td>$33.95</td>
</tr>
</tbody>
</table>

### Brush Bandit

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Part No.</th>
<th>Knife Description &amp; Size</th>
<th>SALE Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>90XP, 280XP</td>
<td>KCH10004</td>
<td>Double Edge 5-3/32&quot; x 4&quot; x 1/2&quot;</td>
<td>$23.95</td>
</tr>
<tr>
<td>100-250</td>
<td>KCH10003</td>
<td>Double Edge 7-1/4&quot; x 4&quot; x 1/2&quot;</td>
<td>$21.25</td>
</tr>
<tr>
<td>250, 254 after '01</td>
<td>KCH10101</td>
<td>Double Edge 7-1/4&quot; x 4-1/2&quot; x 1/2&quot;</td>
<td>$28.25</td>
</tr>
<tr>
<td>1890 Intimidator</td>
<td>KCH20103</td>
<td>Double Edge 10&quot; x 5-1/2&quot; x 5/8&quot;</td>
<td>$41.50</td>
</tr>
</tbody>
</table>

### Asplundh

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Part No.</th>
<th>Knife Description &amp; Size</th>
<th>SALE Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>12&quot; Drum</td>
<td>KCH30001</td>
<td>Single Edge 12&quot; x 3&quot; x 3/8&quot;</td>
<td>$19.50</td>
</tr>
<tr>
<td>16&quot; Drum</td>
<td>KCH30002</td>
<td>Single Edge 16&quot; x 3&quot; x 3/8&quot;</td>
<td>$21.50</td>
</tr>
</tbody>
</table>

To receive this special pricing, you must use this code: 08397

Offer ends September 30, 2007

---

Visit Zenith Cutter’s new Website with secure online ordering and request a 2007 Product Catalog. Use Promo Code WEB1106 and save 10% when ordering online.

Stump Cutter Teeth

![Stump Cutter Teeth](image)

Pruning Saws

![Pruning Saws](image)

Arborist Rope

![Arborist Rope](image)

1-800-223-5202

www.zenithcutter.com

5200 Zenith Parkway
Loves Park, IL 61111
USA
Fraud: Blindsided by Vulnerability

By Mary McVicker

A small business is vulnerable in many ways, and owners spend time and resources trying to reduce that vulnerability. Insurance addresses some of the risks that are readily identifiable, such as fire.

Other types of vulnerability aren’t as obvious: the loss of your best customer, a downturn in demand for your services, another tree care business opening in to your area, your best supplier going out of business. Prudent owners spend time monitoring for those situations, so their business isn’t caught unawares.

There’s another area of vulnerability that’s often overlooked, sometimes with catastrophic results: your business’ vulnerability from within: Employee fraud. Embezzlement. Theft. We tend to dismiss this as someone else’s problem — not in my business! It’s a case of “It can’t happen here” syndrome; but it can.

It does.
Upsetting to even think about? Yes? Wildly improbable? Not as improbable as you might want to believe.

Fraud is a fact of life for businesses, and small businesses are particularly vulnerable to being defrauded by an employee. And, unhappily, these employees often are long-time trusted employees of the business.

Audits
It is a common misconception in large and small businesses that regular audits will detect errors or fraud. They may — and they may not, for several reasons. An audit is not a complete examination. One aspect of an audit is done by testing random transactions, somewhat like test-pitting when you’re trying to determine what’s underground. The auditor is responsible for doing the testing broadly enough to give “reasonable assurance” that the financial statements are free from misstatement caused by error or fraud. A well-conducted audit, then, is no guarantee that there is absolutely no error or fraud.

There’s another factor to consider with respect to audits and embezzlements. Audits pay more attention to “material” transactions, those involving amounts of money over a certain level. Transactions involving comparatively small amounts are less likely to be audited. Auditors do look for discrepancies, though, and may question costs of materials that are way out of proportion to the amount of sales recorded, particularly if the difference isn’t accounted for by other records.

An embezzler who works with small amounts and doesn’t get greedy is very likely to be under the radar with respect to an audit.

That doesn’t mean you shouldn’t bother with an audit. In addition to the fact that lenders, investors and creditors may require audited financial statements, having an audit (and making a big deal about having an audit) will scare off some people or at least make them wary. Obviously, though, you can’t count on that.

Let’s look at other preventive measures. Who steals?

▶ People who know stealing is wrong and intend to pay back the money.
▶ People who are in a jam and are desperate.
▶ People who feel exploited by the business.
▶ People who think the business owes them something.
▶ People who are intrigued by the challenge of taking money from the business without being caught.

There’s no reliable profile.

The critical role
If you were tempted to embezzle, what would seem offer the best “opportunity?” A business where the boss knows the workings of the business, particularly the financial ebb and flow? Or a business where the boss asks, “What’s a general ledger?”

Managers and owners who appear disinterested in the accounting and bookkeeping routines or too busy to be involved in the business’ financials send a clear message of opportunity to an employee who – for whatever reason — is susceptible to the temptation to commit fraud.

Types of fraud
We tend to think of fraud as involving money — and that’s the fraud we’re talking about in this article. But fraud, which is technically “asset misappropriation,” also includes such matters as theft of office supplies, assets such as laptop computers, kickbacks, and situations that involve conflicts of interest.

Fraud that involves money can take place in an alarming range of ways. Among the most common are

▶ Skimming cash before it enters the company’s accounting system.
▶ Altering cash receipts
▶ Processing refunds for merchandise that wasn’t returned
▶ Processing merchandise discounts that aren’t authorized
▶ Making fictitious sales
▶ Forging checks
▶ Straight theft of cash

Most cash frauds involve some form of fraudulent disbursement, often by fictitious billing, inflating invoices or writing invoices for personal purchases. The old fictitious employee trick still — surprisingly — occurs,
Don’t hire someone without verifying his or her information, particularly with respect to schooling, credentials and employment. This may seem like a lot of bother, and you may feel those aspects don’t matter with respect to the person’s doing the job.

But do you really want an employee who lies to get the job?

Or, if the business is growing, “it’s time to do some things differently.”

Or, “I need you to take on some different responsibilities, so …” and split up the responsibilities with respect to cash.

Similarly, in a business having inventory or large amounts of equipment or supplies, the same person shouldn’t be the “store-keeper” and the record-keeper and the person who handles all the purchase orders.

The person who has an expense account shouldn’t also have the authority to authorize expenditures and also do all of the record keeping. That person has to keep records, but corroborating credit card receipts and records should be handled separately. Where there is a business credit card, an owner may want to receive the bills directly. One owner – with well-founded suspicion as it turned out – had duplicate billings and charges sent to his home.

Pay vendors only by original invoices. Keep close tabs on the checking account. Be sure checks and cash are deposited frequently. In fact, one of your important preventive measures is high visibility.

An owner/manager who is visibly involved with the money aspects of the business presents less of a vulnerable target.

Outside audit. Earlier we discussed the fact that an outside audit isn’t a guarantee of spotting all incidents of fraud. That said, audits still are one of the best lines of prevention, in both the literal sense and in the fact of having a deterrent effect.

Internal fraud is one of the more distressing problems a small business can have. It damages to the health of the business and finances. The aspect of betrayal can be devastating. Isn’t there an old saying about having trust but locking the barn door anyway?

Mary McVicker is a freelance writer who lives in Oak Park, Illinois.
Trimming accident leaves one man dead, one injured

A tree-trimming accident July 10, 2007, claimed the life of one man and critically injured another at a Vernon Township, Pa., condominium complex.

Robert E. Garbark, 71, was killed, and Robert Shay, 66, was injured when they were both struck by a large limb on a maple tree they were trimming, according to The Meadville Tribune in Meadville, Pa.

The men had been cutting trees all week at the property. The accident happened when Garbark was on the ground steadying a ladder as Shay was up the ladder trimming. A limb rolled off to the left and shot back, bending the ladder, knocking Shay off. The limb hit Garbark on the left side of the head. The limb was estimated to be about 40 feet long and weigh as much as 1,000 pounds.

Garbark was pronounced dead at the scene. Death was due to blunt force trauma to the head and neck. Shay was listed in critical condition at Hamot Medical Center in Erie following the accident.

Veteran tree trimmer electrocuted

A Fort Wayne, Indiana, man who had been trimming trees for 20 years was killed June 2, 2007, while clearing limbs near power lines in Kendallville, Indiana.

Rodney McDowell, 40, a tree care company employee, was trimming trees when, according to his foreman, it appeared McDowell was holding a branch near a power line that arced.

McDowell competed in a “Tree Trimmer Jamboree” in Indianapolis in 1995 and ranked third in the state in two different competitions, according to his wife, Egri McDowell, as reported in the Journal Gazette of Fort Wayne. “He was just a very good, very talented tree trimmer,” she said.

McDowell’s job took him all over, most recently to Dallas, where he helped clean up tornado damage. He also helped with hurricane cleanup in Delaware several years ago. He worked on Christmas and Thanksgiving holidays when he was needed to help clear trees contributing to power outages, his wife told The Journal Gazette.

Emergency crews tried to revive McDowell, but he died at the scene.

Man injured in tree-trimming accident

A Largo, Florida, man is recovering from serious burns after a tree-trimming accident July 15, 2007.

Part of a tree fell onto a live power line and the power line touched the boom lift that William Cunningham Jr. was in. The 7,000 volts of electricity caught Cunningham’s clothes and the boom lift on fire. He was forced to jump about 30 feet to the ground, still holding the chain saw, according to a report on BayNews9.com.

Cunningham, 39, was airlifted to Tampa General Hospital with non-life-threatening injuries.

Man amputates own leg to escape fallen tree

Alone in the woods with his left leg pinned beneath a fallen tree for 11 hours on June 1, 2007, a 66-year-old Iowa Hill, Calif., man used pocketknives to cut off his leg below the knee to free himself.

Al Hill had been cutting trees when one fell on him. After freeing himself, he cried out for help, and a neighbor passing through the sparsely populated area heard him. The neighbor then hiked nearly two miles to get a cellular signal and placed an emergency call to the town’s all-volunteer fire department. Hill was eventually airlifted by helicopter to a hospital where he underwent amputation surgery.

Iowa Hill is about 60 miles northeast of Sacramento, where there is no electricity and few services.

Man pleads guilty in runaway chipper deaths

Bradley Demitras was sentenced May 22, 2007, to nine-to-18 months behind bars and six years of probation for a chipper accident that killed a Cranberry, Pa., man and two of his children. As part of his sentence, he must keep a picture of the accident scene prominently displayed in his home.

Demitras pleaded guilty in March to manslaughter for failing to properly hitch the chipper to his truck. It broke loose and struck a van April 13, 2006. Spencer Morrison, 37, and 4-year-olds Alaina and Garrett were killed. A third triplet, Ethan, was critically injured, but survived.

Demitras pleaded guilty to three counts of involuntary manslaughter and one count of reckless endangerment. He faced a maximum possible prison term of 17 years and three months. He also pleaded guilty to several lesser traffic violations.

Send accident news to Don Staruk at staruk@tcia.org.
199 companies and 312 individuals have enrolled in TCIA’s Safety Certification Program. 
Join the ranks of leaders in safety.

HOW THE CTSP PROGRAM BENEFITS YOU:

- Reduces work-related fatalities, injuries and illnesses as well as their associated costs
- Gain client recognition as a company with one or more CTSPs on staff
- Promotes your company’s safe working environment for employee recruitment and retention
- Provides insurance companies with a means of evaluating your company favorably
- Prepares your company for TCIA Accreditation
- Provides your employees with a rewarding career path
- Tap into the network of Certified Treecare Safety Professionals

Workplace SAFETY is closer than you think.

SCHEDULED WORKSHOPS

SEPT 19 & 20
Wingate Inn BWI Airport
Linthicum, MD

NOV 6 & 7
Hartford Hilton Hotel
in conjunction with the TCI EXPO
in Hartford, CT

Become a LEADER in tree care safety.
Call now to enroll at 1-800-733-2622 or online at www.tcia.org

TCIA
TREE CARE INDUSTRY ASSOCIATION, INC.

Please circle 48 on Reader Service Card
HELP WANTED

Premier Tree Care – Atlanta Area
Located in Gwinnett/Walton counties. Accepting applications for Climbing Foreman & Climbers. Class B CDL needed. ISA cert. a plus. Minimum 5 yrs. exp. Year-round work. Also rough terrain Brush Hog operators needed for Easement clearing. Fax resume to (770) 267-8711, e-mail premiertreecare@yahoo.com or contact Eddie Sheppard at (770) 267-8733.

Tree Climbers/Sales Reps/Crane + Loader Operator

Climber/Foreman
Long Island, NY-based co. with year-round work seeking experienced climber/foreman. Boom operator experience a must, CDL preferred. We are dedicated to safety, training & most importantly, customer satisfaction. Top pay based on experience. Relocation assistance for right candidate. Call (631) 474-8084.

Bartlett Tree Experts
Continues to grow in the Western U.S. & Canada. Immediate openings for Experienced Foremen, Tree Climbers, IPM Monitors & Arborist Reps in San Francisco Bay area, Phoenix, Tucson and British Columbia, Canada, offices. Paid vacation, holidays, medical, dental, 401(k), training and continuing education. Applicant must be safe, reliable, customer-service & career oriented. CDL & ISA certifications are a plus. Fax or e-mail your resume to (415) 472-8651 or pandreucci@bartlett.com.

TREEDO Tree Service
San Francisco Bay Area – A successful 17-year-old business has dynamic opportunities for experienced arborists to join us as:
• Account Managers • Foreperson
Call for info (510) 293-6966, or e-mail jobs@TREEDO.com

Atlanta GA Arborist
Opportunity for an ISA certified arborist to join a growing tree care and removal company. Join the team and be part of our expanding services. We offer competitive salary, paid vacation, group insurance and retirement benefits/401(k). E-mail chrislane@cowartreeexperts.com or phone (770) 921-8227; Fax (770) 932-5150.

Ready for a Change?
www.GreenIndustry-Jobs.com

Manpower, Safety Expertise and Equipment
• Nationwide service
• Vegetation management professionals since 1919
• Industry leader in field and office technologies
• The “right” equipment to fit the job and the maintenance program to keep it running
• Rapid professional crisis response

Nelson Tree Service, Inc. • 14843 Sprague Road, Suite E • Strongsville, Ohio 44136
Phone: 1-440-243-3333 • Fax: 1-440-243-6445 • www.nelsontree.com

For more information about vegetation management or line clearance needs,
Contact us at 1-800-943-0065

Please circle 33 on Reader Service Card

TREE CARE INDUSTRY – AUGUST 2007

56
Downey Trees, Inc.

Join Atlanta’s premiere tree care company and see why our employees love their jobs. We have a full-time position available for a Certified Arborist/Salesman. Position requires knowledge of all phases of tree care and plant health care, experience in tree care sales, good communication skills, a valid driver’s license, and a passion for excellence. Knowledge of Atlanta area a plus. Please send resume to: Russell Lee, V.P. of Tree Care Operations, Downey Trees Corporate Office, 5055 Shadburn Road, Cumming, GA 30041 or call: (770) 889-2822, fax: (770) 889-3260, e-mail: rlee.downeytrees@hotmail.com, Web site: www.downeytreesinc.com.

Live and work at the Beach!

The top tree care firm in beautiful Wilmington, N.C., has immediate opening for a Sales Arborist. Top candidate will have degree in forestry or equiv., ISA certification, 8-10 years’ experience in the residential tree industry, and a record of success in sales. Income potential of $70-90,000+, and we offer medical, dental, vacation, retirement and more. Fax your resume to: Blue Ox Tree Care, (910) 792-1000, or bonnie@blueoxtree.com.

Experienced Crew Lead/Climber needed in Seattle

Seeking career-minded professional motivated to grow with our company. Excellent customer service skills, safe work practices and a dedication to excellence are essential. Minimum 5 years climbing & 3 years supervising required. CA preferred. The ideal candidate will transition to a sales/management position. Benefits: top industry wages, retirement, medical, vacation, holiday/sick pay and continuing education. Send resume to info@4seasonstree.com.

Bartlett Tree Experts

Continues to grow in the south with immediate openings for experienced tree climbers in the Savannah, Atlanta, Hilton Head, Tallahassee, Charlotte, Raleigh and Charleston offices. Benefits include paid vacation, holidays, medical, dental, 401k, training and continuing education. Applicant must be reliable, customer-service and career oriented. CDL a plus. Fax or e-mail your resume to (770) 414-9762; sjohnston@bartlett.com; www.bartlett.com
Open Positions for Field Employees, Boston Area


Arbor Talk Radio

Seeks volunteer Plant Health Care correspondents from around the world to provide live on-air reports. Please fax resume to (631) 249-4910. Visit www.arbortalk.com and listen to Arbor Talk live Weds. 1-3 p.m. EST, 10 a.m.-noon PST.

Work on Long Island’s “Gold Coast”

Work on our prestigious North Shore estates. Join Long Island’s first TCIA accredited company. Wonderland Tree Care has an opening for a Salesperson/Arborist with 2-3 years’ experience in the arboriculture or horticulture field. This person would prospect & generate sales revenue in a prestigious territory by adding new clients & further developing existing residential clients. Some of the requirements are: • Assoc. Degree or equivalent from college or technical school • ISA Certified Arborist • Ability to write reports and communicate effectively while building rapport with clients • Possess a clean, valid driver’s license • Must be able to identify basic shrubs and trees • Knowledge of insect & disease management through the principles of Integrated Pest Management • Computer skills a plus Wonderland Tree Care is extremely well-positioned in our territory & well respected in the industry. Work in a supportive environment where your opinion counts. We place high value on our clients & employees, as well as in honesty, integrity & quality. Safety is paramount. We promise to deliver the best product possible to our clients. A passion for this industry is needed! Starting salary for this position is based on experience. Wonderland Tree Care offers up to 3 weeks vacation, sick days, paid holidays, excellent medical benefits & a 401(k) plan. E-mail resumes: dlannedeck@wonderlandtreecare.com Phone (516) 922-5348, or Fax: (516) 922-2177.

Why SavATree? Advance your education.

Patrick Parker, PHC Director

“After gaining practical experience on some of the most interesting landscapes in the country, I’m using my Urban Forestry and Arboriculture degrees to apply cutting edge tree care programs and constantly increasing my knowledge.”

SavATree
The Tree and Shrub Care Company

Offices in CT, DC, MA, MD, NJ, NY, PA & VA.
Please fax or email your resume to 914-242-3934 / careers@savatreecom www.savatreecom

Call Toll Free 800-829-4161
20 Tolland Tpk., Manchester, CT 06042
218 DeLaiia St., Norwalk, MA 02056
www.shawmuhte.com/nationalcrane

23 - 33 Ton National Boom Trucks In Stock
Ready For Immediate Delivery!!!

New 2007 National Model 806D - 23 Ton
New 2007 National Model 405A - 26 Ton
New 2007 National Model 1311H - 30 Ton
New 2007 National Model 1311A - 30 Ton
New 2007 National Model 1412A - 23 Ton

Please call Joe Vergoni for pricing: 508-326-6073 (Cell Phone)

LOW SUBSIDIZED FINANCE RATES
Call to ask about Manitowoc Crane Credits First Time National Crane Buyer Program

Representing The Manitowoc Crane Group

Please circle 40 on Reader Service Card

For People Who Love Trees – www.arborguard.com

Arborguard Tree Specialists, with offices in Atlanta and Augusta, Georgia; and Charlotte, North Carolina, seeks experienced sales arborists, crew leaders, climbers and plant health care technicians who demonstrate a passion for excellence. Arborguard maintains an exciting and highly spirited team culture that is focused on a positive experience for employees and clients alike.

A decision to join our team will ensure year-round work for a prestigious and high-end client base, over 100 hours of annual paid training, an OSHA compliant work environment, paid vacation and personal days, paid holidays, paid healthcare and 401(k).

If you seek personal and professional development, appreciation, recognition and career opportunities, you may have found them. To explore this unique opportunity, contact: Dennis Tourangeau, Director of Operations, Arborguard, P. O. Box 477, Avondale Estates, GA 30002, or send fax to (404) 294-0090, or e-mail dtourangeau@arborguard.com.

Production Managers/Climbers/Sales People

Min. 5 yrs’ exp. Climbers must prune w/o spikes. Year-round, salary, pd vacation/health, help moving. Virginia, near Williamsburg, Busch Gardens, VA. (757) 595-8733, hendrontreecareinc@verizon.net
Swingle Lawn, Tree and Landscape Care

Seeking professionals who are passionate about what they do. If you’re motivated, experienced and dedicated to service, you’re just the type of person we want. Swingle has been a leader in the Denver market since 1947, and we’ve since expanded to include the Northern Colorado/Ft. Collins area. We’re looking to add key members to our already outstanding team in both locations:

- Sales Representatives
- Trim Field Supervisor
- Certified Arborists with Removal Experience
- PHC Qualified Supervisors
- Other outdoor production positions also available

Swingle offers year-round employment plus top industry wages and benefits including 401(k) with company match. We also provide great opportunities for college graduates and student interns! If you are a results-oriented professional and looking for a career opportunity with a growing company, we want to talk to you! Visit our Web site at www.swingletree.com to submit an online application or send resume and salary history to Dave Vine at: Swingle Lawn, Tree and Landscape Care, 8585 E. Warren Ave., Denver, CO 80231; Phone: 1-888-266-6629, Fax (303) 337-0157; E-mail: dvine@swingletree.com. When it comes to your passion, choose Swingle.

Bartlett Tree Expert Commercial Sales/Outstanding Career Opportunity

Chicago area office seeks candidate with experience in commercial landscape/tree care sales to fill a new arborist position. Successful applicant will demonstrate excellent technical background, willingness to expand technical knowledge, ability to develop client base via networking, and a track record building successful client relationships in commercial markets. Excellent benefits, competitive starting salary, and an outstanding work environment offering peer support and ultimate professional growth. Contact: cwedekind@bartlett.com or Fax (847) 559-9423.

ValleyCrest Tree Care Services

Provides award-winning arborist services on a wide range of properties throughout the nation. Rather than focusing on isolated management techniques, our certified arborists approach the tree as an entire biological system. We have full-time opportunities available for our following positions:

Account Manager; Operations Manager; Business Developer/Estimator, Crew Leader/Foreman; CDL Driver; Production Specialists; Spray Technicians.

Branches Include: Livermore, Sacramento, Santa Ana, Gardena, Ventura, CA; Phoenix, AZ; Tampa, Sarasota, Venice, Orlando, FL; Atlanta, GA.

For consideration, please e-mail resumes to: treecare-jobs@valleycrest.com or fax to (818) 225-6895.

Florasearch, Inc.

25 years performing key employee searches for the tree care industry. Retained basis only. Candidate contact welcome, confidential & free. 1740 Lk. Markham Rd., Sanford FL 32771, (407) 320-8177, search@florasearch.com www.florasearch.com

For even more up-to-date Help Wanted ads, check out TCIA’s Web classifieds at www.tcia.org

You can wear a lot of different hats at Bartlett

Administrative Assistant•Arborist Representative•Crew Leader•IPM Technician(Pest Control)
Arborist Representative•Crew Leader•IPM Technician(Pest Control)•Climber•Administrative Assistant
Crew Leader•IPM Technician(Pest Control)•Climber•Arborist Representative•Crew Leader•IPM Technician(Pest Control)•Administrative Assistant•Arborist Representative•Crew Leader

Call today for our brochure, Careers with Bartlett

Tree Experts. Learn about the full range of rewarding career paths with the industry leader in tree care.

Simply call Carmen Berrios, Manager Employment and Benefits: 203.332.1331, Fax 203.323.3631, email cberrios@bartlett.com, or visit our website, www.bartlett.com.

Corporate Office: Post Office Box 3067 Stamford, CT 06903-0067
United States • Canada • Ireland • Great Britain

1-800-94-ARBOR (27267)
The ONLY number you need to remember for....

Saddles • Climbers • Rope • Safety Equipment
Carabiners • Hand Saws & Pruners • Hand Tools
Educational Books • Power Tools • Protective Clothing
Rigging Equipment • Chippers & Stump Grinders
Pole Pruners & Saws • Scabbards • Snaps and more..

We will match anyone’s advertised price!

Please circle 60 on Reader Service Card
Plant Health & Tree Care Salesperson

Duties will include: estimating & scheduling crews in an established branch office. Certified Arborist & computer literacy is a must. Compensation includes family medical, dental, retirement plan, commission, vehicle & salary of $750/wk. Relocation expenses provided to qualified candidate. Please contact Vince Winkler, Winkler’s Tree Service, or info@winklerstreeservice.com

Homer Tree Care, Inc.

- Experienced Log Loader (Clam truck) Operator/Driver
  As a team member of our tree care crews, your duties include following a daily pre-arranged schedule of projects to load up logs from work sites. This is a full-time position with lots of overtime available. CDL license is required. Newer equipment. Benefit package.
  - Aerial Lift Truck Operator
    Qualified applicants must have verifiable experience using a 65’ High Ranger Tower to perform Pruning and Removals on a daily basis. All new equipment with year around work. Must have a CDL License with a clean MVR. Full-time positions with overtime & benefit package.
- Tree Worker/Chipper Truck Driver
  Ideal applicant must have CDL License with clean MVR. Experience driving a 25-yd Chip Truck with tow-behind chipper. Duties also include working with crew on a daily basis. Full-time position with overtime and benefit package.
- Experienced Tree Climbers
  Previous verifiable climbing experience required. Duties to include performing trimming & removals on a daily basis. Full-time positions with overtime, year-round work & benefit package.
- Experienced Plant Health Care Technician
  Qualified applicant must have working knowledge of our common insects & diseases. Also must be able to work outdoors in most weather. Must have valid Driver’s License & Pesticide License. Full-time position with benefits. Certified Arborist preferred.

If you are interested in branching out to join our company, please e-mail your resume to hr@homertree.com.

Sales representative/ Arborist

Enjoy success in Big Sky country by joining the only accredited tree service in Montana. Bozeman Tree Service & Christmas Decor Inc. is currently seeking an individual who will help our company grow relationships with new & existing clients. Sales experience I.S.A. Cert. or Horticulture Exp., & knowledge of Rocky Mountain plants important. Wage D.O.E., 401(k) w/profit sharing & paid health insurance. Fax or e-mail resume Shirley@bozemantreeservice.com (406) 586-3352.

Kramer Tree Specialists, West Chicago, IL

Has full-time positions open for Plant Health Care Technicians. Training & continuing education provided, valid driver’s license required, CDL a plus. Company benefits include Health Insurance, Profit Sharing, 401(k) & Production Bonus weekly! Contact Lor@Kramertree.com or phone (630) 562-0160. Fax (630) 562-0871.

Climber Higher with Rainbow Treecare!

Minnesota’s premier treecare service is looking for experienced Climbers who are committed to quality and protecting the Urban Forest. If you have 2-3 years’ experience climbing/pruning and an education in forestry, contact us today to learn more. Send resume to jobs@rainbowtreecare.com or fax (952) 252-4720 or call Human Resources at (952) 252-0533.

Stump Cutters

Carbide Tipped

Now Manufacturing and Distributing “STUMP CLAW TEETH”

Buy from the Original Manufacturer
Established 1964

1-800 421-5985

Border City Tool & Manufacturing Co.
23235 BLACKSTONE • WARREN, MI 48093-2675
(586) 758-5574 • 1-800-421-5985 • FAX (586) 758-7929
Ira Wickes/Arborists
Rockland County-based firm since 1929 seeks qualified individuals with experience. Arborists/Sales Reps, Office Staff, Crew Leaders, Climbers, Spray Techs (IPM, PHC, Lawn). Great benefit package includes 401(k) matching, advancement opportunities, EOE. Check us out on the Web at irawickes.com. E-mail your resume to info@irawickes.com; fax (845) 354-3475, or snail mail us at Ira Wickes/Arborists, 11 McNamara Road, Spring Valley, NY 10977.

Tree Work Climber Crew-Leader/Supervisor
Live/work year-round at the beach, Wilmington, NC. 7 yrs’ residential tree work, 5 yrs as climber, 3 yrs as crew leader. ISA cert arborist a+. Valid DL, CDL a+. Require expertise in modern climbing/rigging, bucket operation, proper pruning, & ability to manage crews to be highly productive. Salary + commission $55-60K+. We offer medical, dental, vacation, retirement & more. Fax/e-mail resume to: Blue Ox Tree Care (910) 792-1000 or bonnie@blueoxtree.com

Denver, CO, Tree Care
Mountain High Tree Lawn and Landscape Company – Immediate openings for climbers, foreman and lead foreman positions. We offer top pay, full benefits. We are one of the leading arbicultural companies in the rocky mountain region, with a branch office in Colorado Springs. Call: (303) 457-5856 or e-mail to: DaveEntwistle@MountainHightree.com

Exciting Career Opportunities for Service Industry Managers
Come join one of the largest Vegetation Management Companies in the United States. DeAngelo Brothers, Inc., is experiencing tremendous growth throughout the country creating the following openings:

- Division Managers
- Branch Managers

We have immediate openings in:
- VA, New England, FL, MO, TX, CO, LA, IL

Responsible for managing day-to-day operations, including the supervision of field personnel. Business/Horticultural degree desired with a minimum of 2 years’ experience working in the green industry. Qualified applicants must have proven leadership abilities, strong customer relations and interpersonal skills. We offer an excellent salary, bonus and benefits packages, including 401(k) and company paid medical coverage.

For career opportunity and confidential consideration, send or fax resume, including geographic preferences and willingness to relocate to:
DeAngelo Brothers, Inc., Attention: Carl Faust, 100 North Conahan Drive, Hazleton, PA 18201. Phone: 1-800-360-9333. Fax: (570) 459-5363 or e-mail: cfaust@dbiservices.com. EOE/AAP M-F

Tree Climber Specialist & PHC Technician
TCIA accredited – Broad Oak Tree Care has openings for high end, year-round work in Milford, NH. See complete job posting: www.broadoaktree.com, e-mail: dan@broadoaktree.com or call (603) 673-1513

Come to the Great Pacific Northwest in the capital city of Salem, Oregon
Unbelievable skiing, hunting, fishing, camping. One hour to beach & Cascade mtns. Giant trees. Safe, easygoing work environment. Top wages for the industry. Med/Dental, 4 10-hr work week, year round. (Except after storms). Elwood’s Tree Service Co. since 1981. Call for confidential interview (503) 390-2838, fax (503) 390-9648, e-mail ftreei@proaxis.com

The Best Since 1921
Announcing a new addition to the Fanno Family...

Introducing the newest addition to the Fanno’s line of quality tools, the FI-130PG
- Pistol-Grip, Non-slip handle (more comfort & more control)
- Rigid 13” blade with “Tri-edge” teeth for a fast & smooth cut.
- Also available: New Belted Sheath (#BS130)

www.fannosaw.com

Please circle 14 on Reader Service Card

Please circle 17 on Reader Service Card
Arborist/Climber w/drivers license.

EQUIPMENT FOR SALE

Allied Equipment of Wisconsin
Local Rentals, Bucket Trucks to 70 ft., Stump Grinders, Chippers, aerial lift parts & service. Rayco parts, OEM Stump’r Guard. We rent Rayco Hydra Stumpers/Forestry Mowers. www.alliedutilityequipment.com 1-800-303-0269.

Brush Bandit Chipper
Brush Bandit 1890 HD, super-sized feed system, 250 horsepower John Deere, hydraulic tongue jack, 210 hours, excellent condition. $52,500. Call (802) 365-9748.

Ropes, Ropes, Ropes
All types and brands of professional arborist climbing, lowering and rope accessories at warehouse prices. Call for current price list. Visa, MC, AX. Small Ad – Big Savings, since 1958. 1-800-873-3203.

Vermeer Brush Chipper Model 1800A
Only 1965 hours on this unit. New Perkins diesel engine. Excellent condition and ready to work. Steal this unit and go to work. Call Brad at (818) 419-9989.

Equipment for Sale
2002 Morbark Model 1000 Tub Grinder, 1125 hours, excellent condition $80,000! 995 Peerless Semi-trailer, 53 feet, walking floor $28,000 NW Chicago Suburbs (847) 669-8658 John.

For Sale
1995-1999 Aerial Lift of Connecticut, 55-foot working height. Chip Boxes mounted on Ford, GMC and International. All diesels. 27,500-39,500 miles. Call Matt at (315) 323-2303, (315) 386-8273 ext. 7, or e-mail mrandi@tamarackforestry.com

Grand Slam Tree Equipment
Bucket Truck w/Chip Box

2002 Altec, LRV 58, GMC diesel — very good, kept in heated garage 24,000 miles used by one operator w/35 yrs’ experience. Available late August. $62,000 OBO Reading PA area (610) 589-5164.

1990 GMC forestry bucket truck

366 gas FL 65,000 mi 5 speed trans 1100-22 tires Asplundh LR50 55’ working height with pony motor Recently serviced boom. Body no rust mint condition. $22,000 OBO. NY (914) 447-8882.

PRODUCTS and SERVICES

Would You Like to Close More Sales and Increase Revenue by 30% or More?

Complete job management! Tree Management Systems, Inc. delivers cutting edge software specifically designed to help tree care companies close more sales, create repeat business, reduce cost and monitor crew productivity. Visit our Web site www.ArborGold.com for a FREE in-depth video demo or call 1-800-933-1955 today for more information.

ArborSoftWorx is the industry’s leading business management software and hardware that boosts sales with its DataSync Mobile Office feature; provides anytime-anywhere access to critical data; improves staff productivity; provides the highest level of depth and breadth in data capture and sound information for business decisions — all you demand in a management solution. Call today to learn more about the power and flexibility that ArborSoftWorx delivers. 1-800-49-ARBOR. www.ArborSoftWorx.com.

Increase sales!

No internet, fax or cell needed. Join 1000s of tree services on the fastest growing tree estimate request site! Be the only Tree Service in the zip code(s) you choose — $11.95/year per zip. www.TreeEstimate.com or (419) 318-4455.
**BUSINESSES FOR SALE**

**IPM Tree Maintenance Co. for sale in So. CT**

Excellent investment for established tree or landscape co. to add to the bottom line or for self motivated individual. Loyal base res. & comm. Est 12+ yrs, turnkey. Truck & trailer, spraying & fert. equip., client list & financial records included. Earn $95-$170 hr. Must have, obtain or work under a valid CT Arborist license. Owner is available with transition. $55,000 – call (203) 481-0078.

**Established tree business for sale in Beautiful NC Mountains**

Excellent reputation, & member of BBB. Very profitable & growing. $85,000 includes equipment, client list & phone #s of business (828) 684-3595 or e-mail tree_surgeon@juno.com

**Tree Health care company for sale in Atlanta, GA**

2006 sales of $345,000. High-end client base. Focused on tree preservation. Great opportunity in a great market for someone who generally loves trees. $210,000 Call (404) 459-6352.

**Tree Service NYC Suburbs**

50+ yrs estab. Northeastern NJ co. Excellent reputation. Removals, pruning & land clearing. Mulch & firewood sales. All necessary equipment, house, property & out buildings. $2.7 mil. Serious inquiries only. Woodman1024@msn.com

**Beautiful Southwestern Colorado**

Franchised tree service business specializing in creating Defensible Space for homeowners in forested areas. Also spraying for bark beetles. $98,000 includes all equipment, inventory and client list. (970) 759-9380.

**Well known tree co. in Ft Lauderdale, FL**

Repeat customers, quality equip, customer lists, complete financial records. Owner avail to help w/sales and transition. $398K. Serious inquiries only to Tree Service, PO Box 24755, Ft Lauderdale, FL 33307.

**Western Montana**

25 years of service with lots of room to grow. 56' & 75' bucket trucks, Vermeer 1400 BC, Vermeer stump grinders, F450 chip truck, Ford 800. Owner assist with transition. Work booked 6 weeks out $260,000. Rick (406) 261-8489.

---

**Our Business is Helping Your Business Grow**

Liberty Financial Group, Inc.

7 Church Road, Hatfield, PA 19440
Phone: (800) 422-1844 • Fax: (888) 883-9380
Visit our website! www.libertyfg.com

**Flexible & Affordable Financing**

- New & Used Trucks & Equipment
- Bucket Trucks
- Crane Trucks
- Chippers
- Stump Grinders
- Dump Trucks
- Any Type of Business Equipment

✓ No Age Restriction
✓ Deferred Payments
✓ Extended Terms
✓ Seasonal Payments

For More Information:
Call: (800) 422-1844
Phillip McClurkin, Ext. 11
David MacDonald, Ext. 51

Please circle 29 on Reader Service Card

TREE CARE INDUSTRY – AUGUST 2007
Retail $49.95
Member $44.95
#P1230 (English)
#P1230S (Spanish)

To Order: 1-888-ISA-TREE
www.isa-arbor.com

 Chapters include
Tree Health & Sciences
Safety
Ropes and Knots
Climbing
Pruning
Rigging
Removal
Cabling

Now available in Spanish!
• Written specifically for tree climbers
• More than 200 color illustrations
• Full glossary and index
• Step-by-step knot-tying illustrations
• Workbook section with each chapter to reinforce concepts
• Study guide for Certified Tree Worker exam

Please circle 23 on Reader Service Card
By Michael Raupp

Eastern hemlock, *Tsuga canadensis*, is a wonderful landscape tree. It is found in the wild stretching from the shores of the Chesapeake to the Blue Ridge Mountains. It ranges from Canada in the north to Georgia in the south. In neighborhoods it graces landscapes as an evergreen specimen or screen along property lines.

The hemlock woolly adelgid, *Adelges tsugae*, arrived in North America in the 1920s, when it was introduced to British Columbia. It was first detected on the eastern seaboard about 30 years later near Richmond, Virginia. It likely entered this country on infested nursery stock from Japan. For many years this pest made its presence known mostly in home landscapes and parks where it often disfigured and sometimes killed hemlocks. As it spread to the Appalachian Mountains, it devastated magnificent stands of eastern hemlock and left thousands of dead trees in its wake. Throughout its range, it now threatens eastern hemlock, in the north, and its rarer cousin, the Carolina hemlock, *Tsuga caroliniana*, in the south.

This tiny insect spends most of the summer and early autumn hunkered down as an inconspicuous, immature stage called a nymph on the bark of the hemlock near the base of the needles. When the cold winds of winter blow in late October and November, the nymphs resume development and mature. By mid-winter, adelgids have produced large amounts of the white, woolly wax that give the adelgid its name. This wax provides protection for the adelgid and later the eggs she lays within the white sack. Between March and May adelgids complete a second generation and females produce the next batch of nymphs that summer on the twigs.

All the while the developing nymphs and egg-laying females insert hypodermic-like mouthparts through the bark of the twigs. The long, sucking mouthparts search along the tree’s vascular system and eventually find specialized tissues called parenchyma cells in the xylem rays. The mouthparts are inserted into these cells and the adelgid robs the tree of its stored nutrients. Heavily infested trees decline in vigor, turn a sickly green color, lose their needles, and may die in five to 10 years, if the adelgids are not...
controlled.

To reduce the risk of death or damage to hemlocks, try to keep them as healthy as possible. Be sure they are planted in loose, organic soils with room for the roots to grow. In times of drought, irrigation may be helpful. Inspect hemlocks carefully at least twice a year, once in December and again in May, to catch an adelgid infestation early. Sometimes a small, isolated infestation can be nipped in the bud by simply pruning out and destroying an infested branch or two.

If you find that trees are infested with adelgid, avoid the temptation to fertilize them to improve their color or vigor. ... You may actually hasten the demise of the tree.

If you find that trees are infested with adelgid, avoid the temptation to fertilize them to improve their color or vigor. One of the great names in adelgid pest management, Mark McClure, conclusively demonstrated that by fertilizing hemlocks infested with adelgids you boosted the survival and reproduction of this pest. You may actually hasten the demise of the tree. The key to good management is to eliminate the adelgids before you fertilize.

Fortunately, several good materials and methods are available for controlling adelgids in landscape settings. Horticultural oils, acephate and several other insecticides applied as wet sprays have proven effective in killing this pest. The trick here is to have excellent coverage. Coverage can be a problem in tight locations such as between houses, along property lines or where trees are near bodies of water, streams or swimming pools.

Fortunately, several systemic insecticides are also available. Some of these such as imidacloprid and acephate can be introduced into the vascular system of the tree using injections or implants through the bark.
For those who dislike the idea of wounding trees to introduce insecticides, some of the newer neonicotinoid compounds such as imidacloprid and dinotefuran can be applied systemically through the soil with probes or simple drenches. In an efficacy trial in 2003, we found that soil drenches of imidacloprid provided more than two years of control of adelgid in a residential landscape setting. One important finding of this study was that imidacloprid was most effective in reducing adelgids when the canopy of the hemlock was in good condition. Remember, for systemic insecticides to do their job, they must reach the canopy of the tree where the pests are found. A canopy that is heavily damaged and defoliated will not be able to move insecticides upward in the vascular system. Control will be better on trees with intact canopies than on trees that are declining.

Recently, we evaluated the efficacy of a new neonicotinoid insecticide, dinotefuran, and imidacloprid in a forest setting. Hemlocks used in this study were part of a large population of hemlocks growing under natural conditions in a forest in Harford County, Md. We visited the site on June 6, 2006, and active adelgid infestations were confirmed on 16 small eastern hemlock trees distributed over approximately one acre of forest. We performed pre-treatment counts of adelgid populations on these trees by counting the adelgids on two small branches on each tree. Trees were then randomly assigned to four treatment categories. Adelgid densities did not differ among treatments on June 6 for the pre-treatment counts (F4, 11 = 0.85, P = 0.52). At the time of treatment densities were fairly light, only about two to three adelgids per centimeter of branch (Figure 1). We applied dinotefuran at the rates of 3 grams, 6 grams, and 12 grams of insecticide per inch DBH as a soil drench. We also treated trees with a soil drench of imidacloprid at the rate of 2 grams per inch DBH. Four trees were left untreated.

We returned to the site on October 23, 2006, to see how well our insecticides performed. Once again, we counted all adelgids on previously marked branches. By October, adelgid densities differed significantly among the trees in different treatments (\( \chi^2 = 11.4, P = 0.02 \)). All rates of dinotefuran annihilated the adelgid and no living adelgids could be found on the treated trees (Figure 1). Imidacloprid also provided very high levels of control and only a few living adelgids were seen. There was no indication of phytotoxicity in any treatment.
Introducing PureSpray GREEN, from Petro-Canada – the world’s largest producer of Pharmaceutical-grade mineral oil. It’s an effective spray oil that’s the purest and safest pesticide around. Designed to make everyone happy. Except pests. And so safe it’s listed for use in organic food production. It’s a pesticide formulated with the same high quality, ultra pure oil that you find in food products and even baby oil. So it’s less toxic than many household cleaners like powdered laundry detergent and window cleaner. But not less effective. Because of its higher temperature range, you can use PureSpray GREEN throughout the entire growing season (up to 95°F). This means you can kill pests right through the summer and fall, minimizing risk of leaf burn (phytotoxicity). And best of all, PureSpray GREEN is proven to kill pests as well as, or better than, many leading synthetic chemical shrub and lawn pesticides. So make the switch, your customers will thank you. The pests won’t. See the proof for yourself. Call for test data and the name of your local distributor. 1-800-299-4996. (Distributor opportunities available.)

Organic PureSpray GREEN. Safe on anything but pests.
While we have the tools and techniques to whip this bugger into submission in managed landscapes, dealing a knockout punch to the adelgid in natural forest stands remains a challenge.

The United States Forest Service is spearheading several projects to help defeat this heinous pest throughout the range of our hemlocks in forest stands. One project focuses on identifying methods to rapidly detect forest trees infested with adelgids. In the western United States, mountain hemlock, *Tsuga mertensiana*, and western hemlock, *T. heterophylla*, exhibit much greater levels of resistance to adelgid than eastern hemlocks. Studies are underway to evaluate species and varieties of hemlocks that resist attack by adelgids.

Good progress has been made in the search for biological control agents that murder adelgids. Scientists have identified several species of lady beetles attacking the adelgid in its home range in Asia. More than a million adults of the lady beetle, *Sasajiscymnus tsugae*, have been released in 15 states, from Maine to South Carolina. Results from several release sites are promising with reductions in the populations of adelgids ranging from 47 to 83 percent. Two additional species of lady beetles, *Scymnus sinuanodulus* and *Scymnus ning Shanensis*, were discovered in China and initial field trials look promising, especially when releases were made against increasing populations of adelgids.

A different type of predator, *Laricobius nigrinus*, belonging to an obscure group of predatory beetles called derodontid, was discovered on the west coast and imported and released in the east by Scott Salom and Loke Kok, research entomologists at Virginia Tech University. This species also shows promise for managing hemlock woolly adelgid in natural forest stands.

Arborists have the tools, techniques and knowledge to manage the scourge of hemlocks in landscape settings. With a bit of hard work, determination, and good fortune, perhaps we will discover the right mix of natural enemies to help save the magnificent veterans that grace our forests.

For more information of hemlock woolly adelgid and its management, please visit the fantastic hemlock woolly adelgid Web site developed by the United States Forest Service: http://na.fs.fed.us/fhp/hwa/

Michael Raupp, Ph.D., is a professor of entomology and extension specialist at the University of Maryland at College Park, and is affectionately known as “the bug guy.”
Serious Chemistry. Sensitive Delivery.

Golf course superintendent, Joseph Galloway, and certified plant injection specialist, Latisha Galloway, examine Hemlock trees on the Connestee Falls Golf Course.

The pre-measured capsule is inserted into a small hole drilled at the base of the trunk, and the tree takes the solution up naturally.

“The longevity of the active ingredient, imidacloprid, was much greater with Mauget’s Imicide than any other competitor product that we looked at. We see about twelve to fourteen months control, and have used Mauget for the last four years to control the Hemlock Woolly Adelgid.”

“Mauget is a completely hermetically sealed system, so we can treat trees that are growing up out of the water. The systemic insecticide is injected directly into the tree and translocated throughout the tree’s vascular system. It stays in the tree, so there’s never any insecticide that can get into the waterway.”

Joseph Galloway
Brevard, NC

Trust the proven microinjection technology of Mauget’s pesticides, fertilizers and micronutrients.

- University and field proven since 1948
- Can be used near waterways, parks & schools
- Easy to use with minimal tools
- High profit potential

Mauget
The Right Way To Treat A Tree

5435 Peck Rd • Arcadia, CA 91006 • 800-TREES Rx (800-873-3779) • www.mauget.com • mauget@mauget.com

Please circle 24 on Reader Service Card
The Council of Tree and Landscape Appraisers (CTLA) is in the midst of revising the Guide for Plant Appraisal. This article discusses the impetus behind the 10th Edition, highlights some of the proposed features of the text, and describes the process the Council is following.

How Did We Get Here?

Plant appraisal has come a long way. So has the Guide for Plant Appraisal. Prior to the 8th Edition (1992), the Guide looked at trees mainly as things having intrinsic value, more or less independent of their contribution to the market value of the property on which they sit. Formulaic approaches were the focus, with attempts to utilize standard assigned dollar values per cross sectional square inch and develop cost-based estimates that would satisfy insurance companies and the courts. Plant appraisers were “plantsmen,” emphasizing – and in some cases advocating for – intrinsic plant values. After all, plants support the very essence of life, providing humans with oxygen, shade, and other benefits while recycling carbon dioxide and pollutants. Many plant appraisers have held that these benefits translate directly into “value,” as evidenced by the fact that customers pay real money to have plants installed.

The real estate industry has enjoyed phenomenal growth since WWII. As people in the United States have become more prosperous, we have seen rapid growth in the nursery and landscape industry. Plants and outdoor hardscapes now represent a multi-billion dollar industry, and the need for professional plant appraisal services has never been greater.

Why produce a new edition?

There are three principal reasons for producing the 10th Edition. First, the 9th Edition does not offer satisfactory guidance in problem identification and solving. Second, the terminology and concepts historically applied are inadequately defined and often conflict with terms and concepts promulgated by the real estate appraisal profession; there is no legitimate reason for this to remain the case. Third, the plant appraisal profession suffers from a credibility problem arising from two primary sources: (a) unwarranted advocacy, and (b) practices that are not rooted in economic reality or empirical data.

The IRS does not accept formulaic cost methods to determine appraised values. The courts, while at times recognizing the intrinsic value of trees and shrubs, generally prefer to see realistic replacement or restoration costs, and in many cases insist that plant valuations reflect their contribution to the overall market value of the property upon which the plants sit. The 10th Edition will place more emphasis on these issues.

The IRS and some courts have rejected traditional cost approach methods that are the primary focus of the 9th Edition. The Council, therefore, will strive to provide more balance to the text and advance ideas more consistent with principles of real property appraisal. We will clarify where cost methods may be appropriate, and how to tie them into market value if the assignment calls for doing so. We will distinguish among basic concepts such as cost, price and value. We will expand upon the issue of reasonableness, exploring why certain jurisdictions reject traditional plant appraisal methods, and offering alternative procedures.

A simple example will illustrate the sort of tension we seek to resolve. What is the difference between “appraisal” and “valuation?” The real estate appraisal profession sees these terms as synonyms – basically, an unbiased estimate of some specifically defined monetary value. In contrast, some plant appraisers hold that a “valuation” assignment allows the appraiser to be an advocate for the client. The Council prefers treating the two terms as synonyms, in con-
behavior. These ideas lend credibility to the mental to economic theory and market of diminishing returns and balance, and best use, contributory value, the principles standing concepts relating to highest and help provide a foundation for under-

estate appraisal community – terms that borrow terms and concepts from the real estate profession is relatively plant appraisal, the Council notes that the subject.

Moreover, many practitioners and users of professions will benefit both of these com-

munities and the users of their services. The reader may wonder why the 10th Edition will place so much emphasis on market value and real estate. First, plant appraisal is but a subset of real property appraisal in many situations. Moreover, the Council authors increasingly observe – indeed, participate in – the intersection of the plant appraisal and real estate appraisal professions. Efforts to minimize confusion and misunderstanding between the two professions will benefit both of these communities and the users of their services. Moreover, many practitioners and users of plant appraisals have observed that there needs to be more accountability in the work that plant appraisers do, and the real estate profession has much to offer on this subject.

While we recognize the traditions of plant appraisal, the Council notes that the real estate appraisal profession is relatively mature and offers many useful, time-tested ideas from which plant appraisers can benefit. Therefore, the 10th Edition will borrow terms and concepts from the real estate appraisal community – terms that augment the plant appraiser’s vocabulary and help provide a foundation for understanding concepts relating to highest and best use, contributory value, the principles of diminishing returns and balance, and other important concepts that are fundamental to economic theory and market behavior. These ideas lend credibility to the appraisal process if properly understood and applied.

The 10th Edition is intended to be used as a guide and reference. Just because you read this text does not mean you will be qualified to appraise plants or landscaping – no more than reading a book on medicine will qualify you to be a doctor. There is no substitute for experience. On the other hand, many plant appraisers will likely find that the 10th Edition challenges how they have traditionally interacted with clients and conducted their work.

Beyond this book, the plant appraiser should expand his or her abilities and services by seeking out advice from peers through networking opportunities, consulting list serves, researching articles in various trade and professional journals, and reading a wide variety of materials on real property appraisal. We also recommend that plant appraisers take advantage of the excellent instruction offered by leading appraisal organizations. The appraiser must be guided by a wide variety of resources and experiences. The Guide will not, by itself, prepare the appraiser for the job.

Ultimately, we anticipate that the 10th Edition will help the plant appraiser to better identify and understand the type of value being appraised, the proper techniques to apply, and a clear framework for communicating the results – all while adhering to the highest standards of professionalism and ethics.

What is the revision process like?
The Council is currently comprised of one delegate from each of seven organiza-

tions, and its current chairperson is a member of four of these groups: Chairperson (Jim Ingram); American Nursery and Landscape Association (Dick Gooding); American Society of Consulting Arborists (Denice Britton); American Society of Landscape Architects (Timothy Toland); Association of Consulting Foresters of America (Bret Vicary); International Society of Arboriculture (Russ Carlson); Professional Landcare Network (Lew Bloch); Tree Care Industry Association (David Hucker).

The Council meets several times a year to review draft material that various members have been asked to produce, as well as written suggestions from outside sources. The strength of the Council derives from its broad representation; its delegates offer wide diversity of experience and perspectives. Our editorial meetings reflect an open, free-flowing process, and all ideas are considered without prejudice. We seek consensus on matters where we disagree.

There is no hard and fast time table for completing the 10th Edition. We have remained focused in our efforts, but have found the need for extensive revisions to require substantially more effort than initially anticipated. We are driven by the need to complete the work in a timely fashion while soliciting appropriate suggestions from those outside the Council.

We welcome written comments from outside the Council. Written comments are the only means by which each member of the Council can have equal opportunity to consider outside ideas. Meanwhile, in the interest of maintaining focus and avoiding an unmitigated free-for-all, we intend to wait until our first draft is complete before turning it over to reviewers. The Council will assess the reviewers’ comments and produce at least one more draft before sending the text to a professional editor.

Realizing our responsibility to the plant appraisal community, the Council expects to provide leadership by offering future training seminars on plant appraisal. For those interested in providing suggestions for the 10th Edition, please send your comments in writing to your organization’s CTLA representative.
Line Drop Survey Results

Prompted by requests for information from our members, TCIA recently sent out an e-mail survey asking 1,155 members whether utility companies in their area charged for line drops. We received a 10 percent response, with three-quarters of the respondents telling us that their utility did not charge for a line drop. The results are summarized below.

Many respondents told us that it depended on the situation and utility. For instance, in an area with multiple utilities, one might provide line drops while the other did not.

Furthermore, contract line clearance crews do not always perform line clearance operations on service drops. Some tree companies get service calls from clients requesting service line clearance. The utilities, as one member put it, are happy for the assistance to clear the line, especially if the client is paying. In some areas, requests for service line clearance are on a list of approved contractors.

Industry loses Oscar Stone

Oscar P. Stone, 93, of Marlboro, Vt., died July 2. All who practice tree care – not only in the northeastern U.S., but everywhere – will miss Stone. In a long and colorful career, he truly saw arboriculture grow up and develop due in no small part to his efforts. Stone was kind, gentle, wise, knowledgeable and filled with a deep passion for trees, for people and for the proper care of trees by people truly committed to their craft and to the future of their profession.

He worked his entire life and dedicated his work to being an arborist. He was a long-time and essential member of the Connecticut Tree Protective Association, a member of the ISA, and a privileged member of the Tree Care Industry Association.

In Connecticut, which has had an arborist licensing law since 1919, the better part of at least two generations of arborists can thank Oscar for helping them earn their license. Always generous with his insights as well as his support, Oscar taught a class that was essential to helping us achieve this professional milestone.

His support, though, went well beyond helping people pass a test. Oscar could be counted on to offer his advice and share his insights all the while remaining a fierce protector of the professionalism and responsibilities that underlie tree care in all forms. As a teacher, Oscar could be counted on to deliver the lesson, often in the form of a story, always right on target, always with a point. In turn, the passion and respect for trees and for tree care he instilled in others will remain for a long time to come.

Stone is survived by a son, Stephen Stone, an arborist, of New Haven, Conn.; three daughters; eight grandchildren and five great-grandchildren. Memorial contributions may be made to: Oscar P. Stone Research Trust Fund, c/o CTPA, P.O. Box 356, Northford, CT 06472.
Accreditation can help you get back to doing what you’re good at and enjoy

Going through the Accreditation process has done several positive things for John Richards, owner of Tree Care Enterprises, Inc. in Rockford, Ill., not the least of which was giving him his life back and reenergizing his interest in his business. While Tree Care Enterprises was officially accredited only this past April, the changes it brought began two years earlier.

Richards received his bachelor of science degree in forestry from Michigan Technological University in 1977 and launched Tree Care Enterprises a year later. In 1988, they added a landscape group, and in 1990 purchased the assets of Forest Hills Ground Management, which gained them entry into the irrigation and maintenance business. In 2000, they merged with Forsgren Landscaping, a well established landscape and maintenance company, which provided them with several more experienced laborers, foremen and designers. Currently they have 50 employees and had gross sales last year of $3.1 million.

Ninety percent his business comes through word of mouth.

“Our customers spread the word,” says Richards. “We’ve only grown by expanding to customer needs: we haven’t really been out there selling. We’ve been order takers up to $3 million. That’s why I think our potential is so much greater, but we really had to go through this (Accreditation) process to get systems in place and written down.”

Reliability separates his company from the competition, he says.

“We don’t profess to be the cheapest; in fact we are probably the most expensive in town. But we do some simple things. We answer our phone when somebody calls. We say what we’re going to do and we do it. We show up for appointments on time. Busy people making good money want to just know they can trust somebody to show up, do the work and they don’t have to deal with it. That’s really how we’ve grown.”

Why did Richards, who has been in business almost 30 years, decide to take the plunge and become accredited?

“At Winter Management Conference, I had a good conversation with John Hendrickson (chairman of The Care of Trees), who I’ve known for my whole business life,” he recalls. “He convinced me. I just knew my business had to do this if I was going to get out of day-to-day operations, which were dragging me down. I wasn’t out selling, which is what I like to do, versus run the business – hiring people, talking about HR stuff – I just don’t enjoy any of that.”

Once started, one weak point Richards discovered during the Accreditation process was that they did not have an organized system of dealing with customer complaints.

“Our system was that when somebody complained we dealt with it as a sales opportunity,” explains Richards. “We had response cards we leave with customers saying what work was done. The card left room for customers to write down comments. It also left a place for them to check off other services they might be seeking.”

But they had no written policy on dealing with complaints. Richards had expanded the business over the years running it “as sort of a mom and pop operation,” he admits. “We didn’t have a lot of systems written down. Now we feel like we’ve got the ability to grow without me being the only guy doing it.”

Richards made the decision two years ago that he wanted his company to become accredited. Part of that decision involved moving his company beyond the mom and pop style of operation. The first thing he did was hire an operations manager. Together, they started writing down policies that were either in Richards’ head or they didn’t have but knew they needed.

The result, according to Richards, was a streamlined policy process that makes things easier for all employees. They are in writing, so employees don’t have to “go to three different guys and get three different answers.”

Usually it was Richards they came to, but he was too busy doing other things.

“I was just winging it,” he says “and I’d solve problems by giving in to everything. That wasn’t very smart. Having written policies in place has taken things out of my hands.”

That freedom has allowed him do what he does best and enjoys. Richards tries to live by the 80/20 rule.

“I want to do what I like to do 80 percent of the time,” he says. “Everybody who works for us should do what they’re best at and what they like 80 percent of the time. Otherwise, you are going to have unhappy people who don’t do a very good job.”

His 80 percent includes a bit of golf, and that’s the way it should be, he says. (He currently plays golf one day a week but plans to make it two days a week in the future.) His goal is to have the day-to-day operations of the business run by the qualified people. He enjoys...
seeing customers and getting jobs going. Each operations group has its own salesperson, so Richards is a floater now. He is trying to let the people he’s hired do their jobs.

His operations manager, Alex LasCasas, took the lead in resolving all the issues regarding Accreditation. LasCasas and Doug Edwards, the vice president and head of sales for the arboriculture group, and the company accountant pulled all the Accreditation elements together.

The hardest part, according to Richards, was changing the attitudes of people who had been with the company for years. Some of the long-term employees who were set in their ways had some difficulty with new management being brought in. It was hard to convince some that the new operations guy, who didn’t know anything about the tree business, was going to help write policies and make things better.

In order to convince employees to buy into the change, Richards formed a worker-empowered safety committee to review incidents and make decisions. “It’s not management making decisions on how to deal with a safety violation, it’s their own peers they’re judging. It’s been very effective. We’re pretty new at this, but we like what we see.”

Richards also believes Accreditation has helped employees believe they are being treated fairly.

“And I think we’ve gained some respect from them. We’ve been accused of saying a lot of things and then never following up. We’re serious now and there’s a little more discipline.”

They also now have job opportunities within the company posted, so employees know there is room for advancement. “We locked-in job descriptions that talk about pay ranges,” he says, “things that were vague in the past. People want to know their chances of improvement and what they can earn by going to the next step. That was never written and communicated well. Our internal communications with employees is probably 100 percent better than before. Systems are in place, and growth is ready to take off.”

Accreditation has already helped Tree Care Enterprises retain a municipal contract. Based on the terms of the contract and what they were able to promise and provide in writing, when the bids came in they got the contract—even though they were $70,000 higher than the next bid. The other bidder did not have the certified arborists, the training programs or other credentials, Richards says. “The other bidders couldn’t match the terms of the contract, so the city was willing to pay about $70,000 (annually) more to us. That right there ought to be testament to anybody who’s thinking about Accreditation.”

He would certainly recommend Accreditation to others.

“For all those who have struggled with growing their business and been so involved that they have no free time and don’t have a life outside of their business, Accreditation will help you get a life. When we got to $2 million in sales, I was way busier than I wanted to be. At $3 million, things have to change or you will go crazy. My background was in arboriculture in college. The business part was shooting from the hip and learning by experience. It took me 29 years before I hired my first true business operations guy. I wish I had done it sooner.”

Richards encourages everyone, even companies with much smaller sales levels, to become accredited. “It will force you to become more organized about your business and do all the right things,” he says. “If I had done it 15 years ago, I can’t even imagine where I’d be today. I’d be so much further along—with a lot more profit in my pocket.”

Newly revised for 2007
Maximize Your Safety Training!

Convenient, on-the-job safety training that provides maximum benefit in minimum time.

Includes easy-to-reproduce handouts and comprehension quizzes.

The Tailgate Safety Program from TCIA is expert-endorsed job site safety training for the crew on a tight schedule.

Employers are required by OSHA to provide safety training and Tailgate makes it easy!

The program includes 80 brief, effective lessons that use simple props and that may be performed on the job site.

Gear your lesson to the day’s scheduled job and get through your training without losing time or money.

Make safety a part of every workday!

Retail: $165
TCIA Members: $105

Call Today 1-800-733-2622 to order your manual with CD Rom online www.tcia.org

Please circle 50 on Reader Service Card

TREE CARE INDUSTRY – AUGUST 2007
The Tree Care Industry Association recognizes our 2007 Partners Advancing Commercial Tree Care. Their strategic partnership with TCIA supports our journey to Transform the Industry.

Crown

Vermeer

Altec

Husqvarna

Branch

STIHL

Root

Jes.E. Fern Co.

Seed

SAVATREE

Fanno

BARTLETT

Buckingham

Helping to build a stronger marketplace can have significant benefits for your company. To learn about the many branding and marketing opportunities available, contact Deborah Johnson, Director of Development; johnson@tcia.org or call 1-800-733-2622
Oldest tree may have had fronds, not leaves

The branches of Earth’s oldest tree probably waved in the breeze like a modern palm, according to scientists, who based that summation on two intact tree fossils that help explain the evolution of forests and their influence on climate.

The 385-million-year-old fossils, which scientists believe are evidence of Earth’s earliest forest trees, put to rest speculation about fossilized tree stumps discovered more than a century ago in Gilboa, New York, according to a recent Reuters report.

Linda VanAller Hernick, a paleontologist at the New York State Museum wrote about her discovery in the journal *Nature*.

The forests were flourishing at an important juncture in the history of life of Earth, coming shortly before the appearance of the first vertebrates – four-legged amphibians – that could live on dry land.

The stumps in Gilboa were unearthed in 1870 when workers were blasting a quarry. Until now, scientists had never seen the tops of those trees. Hernick and museum colleague Frank Mannolini discovered an intact crown and part of a tree trunk in 2004 and a year later found a 28-foot trunk portion of the same species.

Pieced together, they represent Wattieza, a tree that looked like modern-day palm with a crown of fronds that grew up to 30 feet high and reproduced through spores.

“The rise of the forests removed a lot of carbon dioxide from the atmosphere. This caused temperatures to drop and the planet became very similar to its present day condition,” British researcher Christopher Berry of Cardiff University, who worked on the study, said in a statement.

Discovery leads to greater biomass yields

Phenotype Screening Corporation, a three-person Knoxville, Tenn., company, has won an internationally prestigious “R & D 100” award for groundbreaking work in crop and tree diagnostics. Their work helps scientists improve yields in a wide range of crops, including biomass for alternative fuel production. The research and development awards go to the top 100 most technologically significant products new to the marketplace each year.

Phenotype Screening’s non-invasive methods of studying plant root systems enable scientists to develop stronger, more...
pest- and drought-resistant crops. The new techniques can also help improve production of switchgrass, willows, poplars and other plants used as feedstock in biofuels.

The company uses a proprietary substrate, or soil, and special plant containers that allow low energy spectrum X-ray imaging of plant root systems at various stages of development. That could have major implications for food production and greater energy independence through alternative fuel production.

**N.H. chestnut tree may rebirth species**

A healthy American chestnut tree discovered on a New Hampshire farm may serve as the “mother tree” to bring back a species nearly wiped out by Asian blight.

The tree was found on a 125-acre Farmington parcel owned by Bill and Nancy Yates. Bill Yates told *Foster’s Daily Democrat* that he remembers 60 years ago when American chestnuts lined the road near his home before the tree was all but wiped out on the Eastern seaboard. American Chestnut Foundation officials hope to use the tree as a way to bring the tree back to New Hampshire.

Leila Pinchot, the foundation’s New England science coordinator, pollinated the 40-foot tree in mid-July using pollen from a Tennessee chestnut that has developed resistance to the blight.

The Asian blight, which first started infecting American chestnuts around 1904 in New York City, is a fungus that enters wounds in trees and grows in and under the bark until it has grown through the trunk, according to the foundation.

Scientists have crossed the Chinese chestnut, which is resistant to the fungus, with the American chestnut to produce blight-resistant trees. The process is a slow, but may eventually make chestnut a common species again.

Pinchot put 80 small bags around blossoms on the Yates’ tree. After pollinating the blossoms 10 days later, she retrieved the bags to prevent airborne pollen from fertilizing or blocking the fertilization of the blight-resistant pollen.

Sometimes this fall, the tree should produce chestnuts that will be collected and planted in a Vermont orchard where they will be closely monitored.

---

**Please tell these advertisers where you saw their ad. They appreciate your patronage.**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Almstead Tree &amp; Shrub Care</td>
<td>57</td>
<td>31. Mainka Enterprises, LLC</td>
<td>30</td>
</tr>
<tr>
<td>2. Alturnamats, Inc.</td>
<td>15</td>
<td>32. Morbark, Inc.</td>
<td>41</td>
</tr>
<tr>
<td>4. Arborjet, Inc.</td>
<td>68</td>
<td>34. NESCO Sales &amp; Rentals</td>
<td>63</td>
</tr>
<tr>
<td>5. ArborTech</td>
<td>33</td>
<td>35. Opdyke, Inc.</td>
<td>21</td>
</tr>
<tr>
<td>7. Barko Hydraulics, LLC</td>
<td>36</td>
<td>37. Plant Health Care, Inc.</td>
<td>29</td>
</tr>
<tr>
<td>8. Beaver Squeezer Grapple, LLC</td>
<td>40</td>
<td>38. Rapco Industries, Inc.</td>
<td>54</td>
</tr>
<tr>
<td>10. Border City Tool &amp; Manufacturing Co.</td>
<td>60</td>
<td>40. SavATree</td>
<td>58</td>
</tr>
<tr>
<td>11. Buckingham Manufacturing Co., Inc.</td>
<td>31</td>
<td>41. Schodorf Truck Body &amp; Equip. Co.</td>
<td>48</td>
</tr>
<tr>
<td>12. DICA Marketing Co.</td>
<td>42</td>
<td>42. Shawmut Equipment</td>
<td>58</td>
</tr>
<tr>
<td>13. Doggett Corporation</td>
<td>70</td>
<td>43. SherrillTree</td>
<td>7</td>
</tr>
<tr>
<td>14. Eagle Claw Tooth, LLC</td>
<td>61</td>
<td>44. SilkyUSA</td>
<td>60</td>
</tr>
<tr>
<td>15. FAE USA, Inc.</td>
<td>1</td>
<td>45. Southco Industries, Inc.</td>
<td>50</td>
</tr>
<tr>
<td>16. FAE USA, Inc.</td>
<td>43</td>
<td>46. TCIA Accreditation</td>
<td>17</td>
</tr>
<tr>
<td>17. Fanno Saw Works</td>
<td>61</td>
<td>47. TCIA EHAP Program</td>
<td>49</td>
</tr>
<tr>
<td>18. Fecon, Inc.</td>
<td>3</td>
<td>48. TCIA Certified Tree Care Safety Professional-CTSP</td>
<td>55</td>
</tr>
<tr>
<td>19. G&amp;A Equipment, Inc.</td>
<td>19</td>
<td>49. TCIA PACT</td>
<td>77</td>
</tr>
<tr>
<td>20. Giuffre Brothers Cranes</td>
<td>57</td>
<td>50. TCIA Tailgate Program</td>
<td>76</td>
</tr>
<tr>
<td>21. Gyro Trac, Inc.</td>
<td>42</td>
<td>51. TCI EXPO</td>
<td>44-45</td>
</tr>
<tr>
<td>22. IML-Instrument Mechanic Labor, Inc.</td>
<td>63</td>
<td>52. Terex Utilities</td>
<td>23</td>
</tr>
<tr>
<td>23. ISA</td>
<td>65</td>
<td>53. Teupen America</td>
<td>11</td>
</tr>
<tr>
<td>24. J.J. Mauget</td>
<td>71</td>
<td>54. Timberwolf Mfg. Corp.</td>
<td>23</td>
</tr>
<tr>
<td>25. J.P. Carlton, Div. DAF Inc.</td>
<td>13</td>
<td>55. Tree Health Management, Inc.</td>
<td>28</td>
</tr>
<tr>
<td>27. Jarraff Industries, Inc.</td>
<td>10</td>
<td>57. Tree Pushers, Inc.</td>
<td>62</td>
</tr>
<tr>
<td>28. LAMTRAC International</td>
<td>Inside Back Cover</td>
<td>58. Vermeer Manufacturing Co.</td>
<td>22</td>
</tr>
<tr>
<td>29. Liberty Financial Group, Inc.</td>
<td>64</td>
<td>59. Vitamin Institute</td>
<td>53</td>
</tr>
<tr>
<td>30. Lofness/US Attachments</td>
<td>39</td>
<td>60. Western Tree Equipment &amp; Repairs</td>
<td>59</td>
</tr>
<tr>
<td>31. Mainka Enterprises, LLC</td>
<td>30</td>
<td>61. Zenith Cutter Co.</td>
<td>51</td>
</tr>
</tbody>
</table>

* Please circle this number on the Reader’s Service Card for more information.
Winona, Minnesota is home to classic Midwestern America. It is a place where people know what everyone is up to and where people help their neighbors when it counts.

Winona is also home to a community proud of its veterans and puts its helping hand forward to support its veteran organizations. The local Veterans of Foreign Wars (VFW) and American Legion organizations have a long time dream to create a joint facility that can serve all the area veterans. Their dream is to purchase the old Army Reserve Center and construct a 12,000-square-foot building that will not only serve their organizations’ 900 members, but also the area’s Disabled American Veterans, and the Hiawatha Valley Marines. They have struggled with the bureaucracies controlling the property and have had to go as far as enlisting the services of the local congressman to assist in the purchase process. They have raised funds and pooled resources to plan, acquire and begin. However, financial resources are dangerously thin and they realized that a 100-year-old silver maple stood in the middle of moving construction forward.

Merle Blong is one of those typical Midwestern Americans, born and raised with Iowa farm values and work ethics. Merle, 73, is owner and operator of TCI-member Blong’s Tree Service in Winona. This 52-year-veteran arborist and supporter of our local veterans organizations rose to the challenge and offered his company’s tree services to remove the giant silver maple. On March 16, 2007, Blong’s Tree Service’s boom truck, chipper, dump truck, loader, crew and Merle Blong arrived on site to help the vets. Merle’s crew began taking down the tree, limb by limb. Slowly the tree was reduced to a single large trunk, which was dropped to the ground. Merle’s crew worked, chipped and cleaned. Merle worked hand-in-hand driving a truck and hauling chips and logs to his off-site storage, where he converts trees to firewood.

Now, several months later, construction is underway and Winona will soon have a new, all veteran and community restaurant and support facilities. Merle smiles and watches its development, while he bids new jobs and puts in his typical six-day weeks. He not only loves his work but loves the peace and solitude of the forest. He annually plants a minimum of 2,000 trees, engaging grandkids, friends and associates in the classic arborist activity of maintaining our forests. Merle is an icon of what typified the American worker – hard work, long hours, long weeks and a passion for his country. He does not long for the retirement sofa and TV; he lives for the chain saw, bucket truck and operating his machines. Merle is the American Arborist.

Barry Drazkowski is director, GeoSpatial Services, Saint Mary’s University of Minnesota, Winona, Minn. He writes: “Merle is an amazing man. He is 73 years old and still runs circles around most of the young guys that work for him. His biggest complaint is trying to find workers who have a work ethic and can work.”

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

With an excellent reputation for durability and reliability the high-performance Lamtrak will get the job done. With quality features such as exceptional maneuverability and low "PSI", these multi-purpose vehicles can snake through your most challenging environments.

**BRUSH CUTTER**
The rotary Brush Cutter is used to clear areas of brush and vegetation up to 3" in diameter. This attachment is perfect for clearing power lines, sump fields and land development projects. The unit features high speed dual rotation blades as well as a stumpy jumper for gear box protection.

**DOZER BLADE**
The Dozer Blade will turn your machine into an effective dozer, easily leveling, dirt, gravel, rocks, snow or whatever material you need moved. The unit features 8-way action permitting it to not only go up and down but also left, right, forward and backward.

**ROOT RAKE**
The Root Rake is a powerful attachment that allows you to pick up and pile brush, cut trees, branches and other debris. It’s also good for pulling out rocks and tree stumps while leaving the soil behind. The unit features zinc plated, greaseable pivot pins and replaceable hardened steel bushings, and an exclusive O-ring for pulling applications.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Width</td>
<td>1500 mm</td>
<td>4' 11&quot;</td>
</tr>
<tr>
<td>Weight</td>
<td>5,135 kg</td>
<td>11,280 lbs</td>
</tr>
<tr>
<td>Ground Pressure</td>
<td>21.18 KPa</td>
<td>3.07 PSI</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Performance</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High Range Speed</td>
<td>6.9 km/h</td>
<td>4.3 mph</td>
</tr>
<tr>
<td>Low Range Speed</td>
<td>4 km/h</td>
<td>2.5 mph</td>
</tr>
<tr>
<td>Climbing</td>
<td>45° (100%)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Engine</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Make</td>
<td>Cummins</td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td>QSB 3.9</td>
<td></td>
</tr>
<tr>
<td>Horsepower</td>
<td>93kw</td>
<td>125 hp</td>
</tr>
</tbody>
</table>

Power where you want it. Control where you need it.

1 888 LAMTRAC www.lamtrac.com
BACKWOODS OR BACKYARD. WE’LL BE THERE.

No matter what the terrain or location, Vermeer has a brush chipper and stump grinder to meet your needs. Our equipment includes industry-leading features that help increase productivity and worker safety, and we back it up with a worldwide dealer network. When it comes to tree care, look to an industry leader — Vermeer. Call 1-888-VERMEER or visit Vermeer.com.