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What I Learned - “Don’t Wait for a System Failure”

Remember when you came back to school in the fall as a little kid and there were those invariable reports you had to give “What I did this summer” or “What I learned on my family vacation” or “What I was taught at summer camp”? My husband and I recently went through some health problems – not to worry – we’re both fine. However, I was thinking about how we’ve recently experienced points up some similarities between health systems and what we confront on a daily basis in our businesses.

Our bodies are systems. Everything is interrelated, and one thing affects another; particularly, as we now know, the mind and body are intertwined and affect each other. We are also related to each other; meaning that when one of us has problems with our internal systems, it affects other people around us. That may mean the other person not getting enough sleep from worrying, creating massive stress that sets off challenges in their own internal systems, or one person not being able to perform as normal and depending on those around him or her to help them through.

Sometimes the problem with our system starts with just a small symptom that, over time, progresses to one or more increasingly uncomfortable symptoms. Finally, we recognize that there is a major problem. At that point, we usually seek someone from outside of our experience who has far greater knowledge about what is wrong with our body than we do. If we’re smart, we consider that person a health consultant, use our own knowledge and experience with our bodily systems to determine what we are and are not going to do, and sometimes consult yet another smart person with experience for back-up. The bottom line is that we acknowledge there is a problem, seek as much counsel as we can, but at the same time, don’t totally give over control to someone else without doing our own investigative research and using our own brain to decide how we’re going to approach the illness or problem.

In business, we are made up of systems. Each one of us is our own functioning system individually. We bring intelligence, experience, skills and a personality to the work that we do. We come together in groups to form slightly larger systems in crews, office teams and management teams. When something goes wrong with one piece of this larger system, it can be isolated at times and corrected, creating only a few symptoms of dysfunction for us. Sometimes other people within our system step in to fill a temporary void or to share skills that can help make it a short term illness.

However, sometimes, we seem suddenly to be faced with an enormous problem affecting the entire system. Often, when we look back, there are PLENTY of business indicators along the way that, if we had paid attention to them, would have allowed us to take corrective action earlier and prevent a major illness or death spiral. What this requires of us is healthy practices – much like getting enough sleep, eating right, and exercising – the preventative business actions that we often don’t take. It’s failing to address the issues at the point of minor symptom, the point where we know it’s developing.
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For many trees, such as those in Madisonville, Kentucky, the prognosis is obvious after a storm. For others, several factors come into play in deciding whether to try and save them. Courtesy of Win Henderson, FEMA.

By Sarah Magee

"Overwhelming," says Chesley Riddle about the tornado damage to his woods on Nov. 15, 2005, when the only F5 tornado of the entire year ravaged Madisonville, Kentucky.

Of 1,500 trees of various species in Riddle's woods, some as old as 200 years, there was nothing left standing except ugly splinters. "A lot of them were just twisted off down to the roots," Riddle says.

Rick Shanklin, an investigator with the National Oceanic and Atmospheric Administration, says Riddle's woods had "some of the worst tree damage I've seen in 10 years of investigating tornadoes." Shanklin estimates winds to have been about 210 mph.

Riddle salvaged $145,000 worth of timber, but the cleanup cost was more than $200,000.

If the winds are sufficiently fierce, you get a situation similar to Riddle's woods, where only a very few trees can survive. With somewhat lesser winds, a tree's species, age, and condition all contribute to its vulnerability to wind damage.

"Most trees can stand a 50 mile-an-hour wind," says Dave Leonard, TCIA member and a consulting arborist in Lexington, Ky. "Ones with defects start to go at 50 miles-an-hour."

Trees' structure and past history determine how they stand up and fall down, according to Dr. Kim Coder, a professor with the Warnell School of Forestry and Natural Resources at the University of Georgia, Athens. "If they have not been challenged by winds in the past, they will not do well with high winds in the next storm.

"Up to about 55 mph, the trees bend and the branches act like shock absorbers to save the trunk," Coder says. "You may have leaves blow off and you may lose a branch, but the tree will be intact. At about 55 mph and above, the tree can't bend back against the wind."

TREES CARE INDUSTRY – DECEMBER 2006
With winds between approximately 55 and 105 mph, the history of the tree’s previous challenges from wind is a major factor.

“How much extra wood does it have?” Coder asks. Extra wood is what engineers call a safety factor. Younger trees with a large safety factor have the best survivability in winds from 55 to 105. Older trees, particularly those that are not well maintained, are less likely to make it.

“After 105 miles per hour, you’ve already blown through all the safety factors.” Coder says. “From 105 up, that is your category 3, 4, 5 hurricanes. As we start to get wind gusts above 100, we have a hard time understanding how trees can sustain such a wind load, especially with a bunch of wet leaves. It’s amazing how they adjust to dynamic forces like wind in storms.”

Wind speed in any particular microenvironment can be much stronger than the reported average wind speed. “Whether in a hurricane, tornado, or a general storm line, the wind is pulsing at the tree in what may feel like a straight line, but in there are puffs and gusts that can go twice that amount and put a lot of load onto that tree-top,” Coder says.

“You get tremendous in-line microbursts,” says Tom Wilson, owner of A Cut Above Tree Service, a TCIA member company in Covington, Ky.

“Weaker wood species are more vulnerable,” says Zack French, CTSP, consulting arborist for Arbor Art Tree Care Inc., Nashville, Tenn., another TCIA member company. He puts hackberry, tulip poplar, linden, and others in this group, along with white pine, which “tends to snap over,” he says.

Trees with bark crotch inclusions are more vulnerable, Wilson says.

Laurel oak, water oaks, and red maple are among the species where inclusions commonly cause weakness, according to Dr. Ed Gilman, of the University of Florida, on his Web site. Gilman studies the effects of high winds on trees. “Queen palms are prone to falling over; Washington palms break; royal palms lose foliage,” Gilman says.

Evaluating the damage

“When I’m called in to assess [a storm damage] situation, I first determine the species, size, and general condition, and with that take into account the likelihood of the tree to recover from damage and if there is a likelihood for other parts of the tree to fail.”

Zach French

Florida, on his Web site. Gilman studies the effects of high winds on trees. “Queen palms are prone to falling over; Washington palms break; royal palms lose foliage,” Gilman says.

A tree that is “split, twisted, or leaning heavily from what the homeowner says is its normal angle” probably has to go, Wilson says. “If it’s a focal tree in the landscape, sometimes it gets so disfigured, there is no reason to leave it,” he says.

“Everybody can see the top of the tree, but if you look at the base of the tree, you may be seeing the homeowner shouldn’t have put the pool in 8 feet out from the foot of the tree,” Coder says. The tree wobbles on its root plate in the storm. It’s the root plate that holds it up. If you do any kind of construction “within 10 to 12 feet from the tree’s foot, you are starting to mess with the structure of the tree and how it holds itself up,” Coder says.

“Construction activities within about 20 feet of the tree’s trunk can cause the tree to blow over more than a decade later,” Gilman says.

In evaluating damage, French says he uses the Matheny Clark scale, which goes from 4 to 12. The scale is found in A Photographic Evaluation of Hazard Trees in Urban Landscapes by Nelda P. Matheny and Jim Clark.

“Construction activities within about 20 feet of the tree’s trunk can cause the tree to blow over more than a decade later,” Gilman says.

In addition to a visual assessment of the damage, you can also check whether there are signs of failure in the root and you can check for decay in the stem, French says. “It can really get expensive, depending on how much someone wants to invest in
knowing whether they should cut it down,” he says.

“If it’s just some limbs gone, you can prune up and clean up,” Wilson says.

But with trees that have more extensive damage, “a lot of things go into whether you decide to prune it and let it do what it can,” Wilson says. “But if I’m going to make an error, I’d rather make it on the side of safety rather than say a tree will be fine and then three or four weeks later the thing falls over.”

French echoes that sentiment: “If there is a risk of personal damage, no tree is worth any injury.”

Safety first

Cleaning up wind damaged trees is not something most people have to do very often. Which is good, because the safety risks are substantial.

“I don’t care who you are or how long you’ve been in your business, you are out of your element,” Wilson says. “There is just a whole lot of stuff that is different from normal daily activities. There is a lot of pressure.

“The crew and everybody needs to know what the situation is going in,” Wilson says. “You may have a guy who has only worked for you a couple of days. You have to keep an extra eye on him.

“My goal is to try to not do any more damage than what is already done to the trees, structures, cars, property – whatever,” Wilson says, adding that sometimes that can be a challenge.

“You have a lot of situations where limbs are propped on houses,” he says. “You cut something lose and the tree may roll one way or the other. If it falls one way, it could crush the rest of the side of the house.

“You can’t open a book and say, ‘It’s leaning this way, so let’s do this.’ You have to rely on things you’ve seen and done in the field. Maybe you have to have two cranes on site to cut something off a house,” Wilson says.

Downed power lines may be hanging near trees that have to be cleaned up. “You have to careful about generators,” he says. “Look at the power line on both ends, because someone may have a generator back-feeding the system.”

You also need to prioritize, Wilson says. “Trees on houses or buildings are more important than the ones just laying in yards.”

“I do a lot of crane work after a storm,” Wilson says. “I haul it with the crane if it’s accessible.”

The homeowner’s insurance company is often a third party to the tree removal, and dealing with the insurer can be frustrating,
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According to Wilson. Typically, homeowners insurance will pay to remove trees that are resting on the insured’s home, but not for any other tree cleanup.

“You’ve got to explain to the homeowner’s insurance company and convey to them what needs to be done and how it needs to be done,” Wilson says. Insurance companies want to know, how much does it cost just to get the damaged part off the house when I’m working away, doing everything at the same time. It may take 45 minutes just to get the tree off the house, but five hours to get the rest of the tree that was left standing but is unsafe and needs to come down.”

Treating damaged trees

“Trees are valuable in the landscape, not only esthetically, but also financially,” French says. When a tree stands a good chance of being saved in spite of damage from severe winds, depending on the location and other factors, the best course may be to attempt to prolong its life.

Of course, if the damage to the tree is limited to just some limbs, it may need no more than pruning.

Tornadoes and hurricanes will destroy thousands of trees every year. Just because your area hasn’t had violent winds lately doesn’t mean it’s immune.

After hurricanes, it has become commonplace to stake trees of 4- to 12-inches in diameter that are leaning. “Arborists that stood these large trees up in past storms as many as seven years ago have observed that these are the ones more likely to blow over in future storms,” Gilman says.

He notes that systems used for staking must be sturdy enough in many instances to hold the weight of the tree in place for over a year, until roots regrow to secure the tree in the ground. “None of the systems appear to accommodate the increase in trunk diameter that will take place during the year or two the tree will be staked,” Gilman observes. The merits of staking are unknown, he says, as there has been no published research on this topic.

Soil and cultural issues

Gilman lists on his Web site the following observations about the influence of soil and cultural issues on which trees blow down:

- Trees growing in confined soil spaces are prone to blowing over.
- Root defects such as girdling roots cause trees to blow over.
- Trees become unstable in soils saturated by lots of rain.
- Apparently healthy trees can blow down because supportive roots have decayed or soil becomes soft from saturation.
- Large and old trees blow over; recently planted trees blow over; well-established young to medium-aged trees are less likely to blow over.
- Trees in shallow soils are more prone to blow over than trees rooted more deeply.
- Roots do not grow in compacted limestone.
- Trees with one dominant trunk fare better than trees with codominant stems.
- Large pruning cuts create decay and cracks that can lead to breakage in storms.
- Trees in a group blow down less frequently than single trees.
- Topped trees break.

A preventive approach

Tornadoes and hurricanes will destroy thousands of trees every year. Just because your area hasn’t had violent winds lately doesn’t mean it’s immune. Although more common east of the Rocky Mountains and during certain months, tornadoes can occur anywhere in any month. In addition to doing great damage along shorelines, destructive winds from hurricanes can reach far inland.

While it is, of course, impossible to prevent all high wind damage to trees, some practices will lessen the destructive potential from severe storms. One is to plant more of the species that tend to
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Most trees that mature at a small size resist wind damage due to their small profile,” according to Gilman. Among those he identifies are live oak, southern magnolia, sweetgum, holly, sycamore, swamp chestnut oak, spruce pine, bald cypress, gumbo limbo, and blackgum. “The natural dominant trunk habit on many of these is thought to account for some of this resistance,” he says.

Pruning established trees can “minimize the likelihood of failure and improve tree architecture,” Gilman says. “Trees that are preventively pruned are less likely to fail.”

He recommends “reducing the length of, or removing weak or poorly attached, branches or branches that are overextended and too long. In many cases on large trees it is better to reduce the length of branches than to remove them. Removing large branches from the trunk can initiate decay and cracks in the trunk, which can cause tree failure later,” Gilman says.

On trees with most of the foliage at the top of the canopy, reducing the canopy height using appropriate reduction cuts will reduce the likelihood of the tree falling in storms. Thinning the canopy on full-canopied trees can also reduce wind load and likelihood of failure, according to Gilman.

Be careful when elevating the bottom portion of the canopy, he advises. “Tree health can decline from removing too many low branches at one time or from removing large branches. Living cells in wood on the interior of the tree can die or decay as a result of over pruning. Elevating too much can also shift too much weight toward the edge of the canopy which can increase storm damage. To preserve tree health when elevating the canopy, consider reducing the length of large branches using reduction cuts instead of removing them entirely. Reduced major branches can often be left on the tree for a very long time, whereas major branches with small interior and lower branches removed often droop and get in the way. This requires their removal later, leaving a huge pruning wound.”

Storm management is not something most people think about except once every five, 10 or more years when a major storm hits. However, it is something arborists can be involved in all the time as part of the services they offer their clients, according to U-Georgia’s Kim Coder.

“An arborist can look to see if there are structural faults that could lead to catastrophic loss if the tree is placed under...
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The arborist can answer questions from tree owners about such things as whether the hollow that the squirrels are going into means the tree is more likely to suffer storm damage,” Coder says. The arborist can consult on preventive measures to reduce the risk of storm damage.

**Generational storms**

A storm as fierce as the one that wiped out Riddle’s wood hadn’t hit Madisonville in 50 years. Residents hope they don’t see its like again for another 50.

“Storms like that are generational,” says Coder. “People will say, ‘We never had a big storm,’ but somebody who is older will remember the last one. I just always like to remind folks when Hurricane Hugo came ashore in Charleston, the remnants pounded Charlotte – and it was four hours inland.”

*Sarah Magee is a freelance writer living in Providence, Kentucky.*

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Yale buys Wall Rope

Yale Cordage, Inc., has spun off Yale Rope Technologies, Inc., a wholly owned subsidiary, and the new company has acquired the assets of Spencer, N.C.-based Wall Rope, Inc. According to Tom Yale, president of Yale Cordage, Inc., the North Carolina facility will continue manufacturing product, while sales and administration functions will be shifted to Yale Cordage’s Saco, Maine, facility. “We are very excited about the opportunities this acquisition presents, combining the talents, traditions, technology, and production capacity of these two great companies.

Together, the two companies have more than 235 years of rope-making history,” says Tom Yale. The combined companies will continue to produce traditional rope products, as well as today’s most advanced-fiber ropes to a broad spectrum of markets. The companies currently service the power utility, oceanographic, recreational marine, arborist, oil production, paper, and timber-harvesting industries.

LogRite Tools buys Future Forestry Products

LogRite Tools, LLC. recently acquired Future Forestry Products, Inc. Together

LogRite’s log handling tools and Future Forestry’s log arches offer a complete log handling product line for forestry, tree care and sawmill industries. This joint venture will establish a nationwide distribution network for Future Forestry Products. LogRite Tools will now manufacture the Future Forestry arches in Connecticut bringing the product closer to the primary markets.

Jarraff expansion underway

Jarraff Industries is undergoing a large facility expansion. The two-part construction project will better serve Jarraff customers by increasing production capacity and reducing turn-around time. The addition will also facilitate an expanded Jarraff product line. The 15,000-square-foot expansion includes plans for a two-story office building and a large fabrication and welding shop. Construction began in late July and was to be completed by year end.

FMC Specialty Products now FMC Professional Solutions

FMC Corporation has changed the name of its FMC Specialty Products Business to FMC Professional Solutions, which will be dedicated to provide solutions to the pest control and green industries. The organization’s director, Dan Rosenbaum, says that the name change heralds the beginning of a new era of “customer-driven innovation” for the organization, which is a part of the global FMC Corp. “This organization is wholly focused on and driven by our customers’ needs,” says Rosenbaum.

FMC entered the pest control industry in 1987 and has since expanded its portfolio to address needs in the nursery, turf, ornamental, golf, aquatics and other segments. FMC’s new Innova Solutions™ initiative was launched in 2005. The company’s goal is to shorten the development cycle for products from the traditional 10 to 15 years to between two to four years, explains Jim Collins, Innova Solutions general manager. One result of this effort already was that, “through an agreement with Japanese chemical supplier Ishihara Sango Kaisha, FMC commercialized the new insecticidal active ingredient flonicamid under the brand name Aria insecticide,” according to Collins.

Bandit recruits Allen Hyman, Gene Bridges for sales

Bandit Industries has added two new faces to its sales team. Allen Hyman and Gene Bridges will travel the nation in an effort to expand the distribution of Bandit’s equipment line.

Hyman currently operates out of Charlotte, N.C., as Bandit’s southeast regional sales manager. His duties include dealer support and development for Bandit’s hand-fed chipper and stump grinder line, as well as direct sales for Beast waste recyclers in North and South Carolina. A Charlotte native, Hyman began in the equipment sales business in 1992. Prior to joining Bandit in February 2006, Allen held a sales manager position for a Bandit dealer in North Carolina.

Bridges, born and raised in Shelby, N.C., started in the industry working for a utility line-clearing company more than 25 years ago as a shop mechanic. Over the next two decades, he moved through the ranks as equipment manager, facilities manager, and general manager at various companies until being named national sales manager for a Bandit competitor in 2000. Bridges joined Bandit in July of 2006 as national accounts manager. He continues to live and operate out of his home office in Shelby.
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The new Arborwear Mid-Weight Tree Climbers’ Jacket offers tough as hickory 12.5 ounce cotton canvas durability on the outside, and 280 gram fleecy goodness on the inside. It is the only jacket on the market designed specifically with today’s tree care professional in mind. Arborwear’s new Tree Climbers’ Jacket boasts plenty of zipper secured pockets, fleece-lined hand-warmer pockets, industrial stitching throughout, and an unparalleled fit. Whether you’re climbing a 100-foot oak, grinding stumps, or working your way through an afternoon’s worth of estimates; the new Arborwear Mid-Weight Jacket is just the ticket for comfort, warmth, and freedom of movement. Contact Arborwear LLC at 1-888-578-TREE (8733) or via www.arborwear.com.

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**Leonardi M1 Cutting System**

The M1 Cutting System* provides easier, quicker maintenance with its direct mount tooth design. Without the need for pockets or bolts, changing a tooth is as simple as the tap of a hammer. Having fewer parts to keep on-hand will simplify your inventory and ordering processes. The M1 uses Phantom Wheel™ Technology, allowing operators to “see-through” the wheel. It also includes new features like revolutionary shock absorption to reduce wear and tear on your machine and integrated chip management to make for an easier cleanup. To order your M1 Cutting System, or for more information, call 1-800-537-2552.

*Patent Pending

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Branch Manager Rake from Top Notch

Branch Manager Attachments and Top Notch Equipment have found a way to save hours of labor on the task that everybody hates – raking! The Model 1070’s flexible steel tines quickly pile the bulk of your tree debris rakings for easy disposal. The Model 1070, with its spring steel tines, does not damage lawns; it will also sweep streets and push snow. The simple receiver design is adaptable to any forwarding machine, from skid steers, to articulating loaders to compact mini loaders. It will adapt to most any existing attachment. This rake saves weight (weighs 100 pounds), space (6 feet long and only 6 inches wide) and time when it comes to the unavoidable task of raking and sweeping. Top Notch Equipment will work with each customer to customize the rake for specialized needs. Branch Manager Grapples are manufactured to accept the Model 1070’s receiver. Contact Top Notch Equipment Inc at (763) 398-0079 or via www.branchmanagerattachments.com.

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Rayco RC 20xp brush chipper

Rayco’s RC 20xp is a highly productive 20-inch capacity whole tree drum chipper. A 225 hp turbo-charged John Deere diesel engine attaches to a maintenance-free hydraulic, self-adjusting clutch. Automatic feed control protects the engine from overloading and enhances machine performance. Rayco’s fuel saver technology throttles the engine down to an idle if the feed wheel control bar is left in neutral for more than 60 seconds, minimizing fuel consumption. Additional special features include height adjustable, hydraulic swivel discharge chute that swivels 360 degrees; hydraulic lift assist, variable speed feed control; an electronic throttle control, tandem torsion flex axles, dual horizontal infeed rollers, a hydraulic jack stand and rear stabilizers. Contact Rayco at 1-800-392-2686 or via www.raycomfg.com.

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Events & Seminars

December 7, 2006
Growing & Marketing Your Tree Svc, Landscp, Lawn Maint, Irrig or Snow Removal Company
Bingham Farms, MI
Contact: MGIA (248) 646-4992

December 12, 2006
Hazardous Tree Identification
Rutgers Univ. Cont. Prof. Educ., NJAES
New Brunswick, NJ
Contact: (732) 932-9271 x625; www.cookce.rutgers.edu

December 13-14, 2006
CTSP Workshop & Exam
Cleveland, OH
Contact: 1-800-733-2622; peter@tcia.org

January 3-5, 2007
Minnesota Green Expo
Minneapolis Convention Center, Minneapolis, MN
Contact: (612) 335-6000 or 1-888-886-6652
www.minnesotagreenexpo.com

January 6-8, 2007
New England Grows
Boston Convention & Exhibition Center, Boston, MA
Contact: www.negrows.org

January 22-24, 2007
Central Environmental Nursery Trade Show (CENTS)
Columbus Convention Center, Columbus, MD
Contact: www.onla.org

January 22-24, 2007
Landscape Integrated Pest Management.
Rutgers Continuing Prof. Education, New Brunswick, NJ
Contact: (732) 932-9271; www.cookce.rutgers.edu/programs/landscape.html

January 29, 2007
Pest Management of Ornamental Landscape Plants.
Rutgers Continuing Prof. Educ., New Brunswick, NJ
Contact: (732) 932-9271; www.cookce.rutgers.edu

January 30, 2007
Soil Compaction and its Impact on the Health of Trees & Writing A300 Compliant Pruning Contracts
Bingham Farms, MI
Contact: MGIA (248) 646-4992

January 30, 2007
Managing Diseases of Ornamental Plants.
Rutgers Continuing Prof. Educ., New Brunswick, NJ
Contact: (732) 932-9271; www.cookce.rutgers.edu/programs/landscape.html

February 1, 2007
MGIA’s 4th Annual Job Fair
Southfield, MI
Contact: MGIA (248) 646-4992
150+ SPECIALIZED TRUCKS AT WWW.OPDYKES.COM

23½ TON TEREX

$79,500.

99 INT 2674: INT 530E, 300 hp, 10 spd, A/C, 58 GVW, 23½ ton TEREX TC4792 CRANE, 102 ft hook ht, LMI, 2 spd winch, 21 ft wood flatbed.

$79,500.

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February 20-23, 2007
ASCRA 2007 Consulting Academy
Hyatt Regency Sacramento, Sacramento, CA
Contact: (301) 947-0483; www.asca-consultants.org

February 22 & March 21, 2007 (2-day class)
Arborists: Innovations, Techniques and Solutions
Rutgers Univ. Cont. Prof. Educ., NJAES
New Brunswick, NJ
Contact: (732) 932-9271 x625; www.cookce.rutgers.edu

February 27, 2007
Woody Ornamental Update: Review ’06, Anticipate ’07
Bingham Farms, MI
Contact: MGIA (248) 646-4992

February 28-March 2, 2007
Midwestern Chapter ISA Shade Tree Conference
Topeka Holidome,
Topeka, KS
Contact: Ivan Katzer ivan_katzer@hotmail.com; (816) 765-4241

March 6-7, 2007
MGIA’s 20th Annual Trade Show & Convention
Rock Financial Show Place,
Novi, MI
Contact: (248) 646-4992

March 7-9, 2007
Work Truck Show 2007
Indianapolis, Indiana
Contact: www.ntea.com

March 20-22, 2007
Certified Pesticide Applicator or Registered
Technician (CARTS) training
Farmington Hills, MI
Contact: MGIA (248) 646-4992

March 21-24, 2007
ISA Southern Chapter Conference
Little Rock, AR
Contact: (336) 789-4747

March 21-25, 2007
22nd Annual San Francisco Flower & Garden Show
Cow Palace,
Daly City, CA
Contact: 1-800-569-2832; www.gardenshow.com

March 25-26, 2007
NJISA Garden State Tree Conference
Cook Campus Center, Rutgers University
New Brunswick, NJ
Contact: www.njarsaitsa.com

March 27-28, 2007
Large Tree Climbing and Rigging
Rutgers Univ. Cont. Prof. Educ.,
New Brunswick, NJ
Contact: (732) 932-9271 x625; www.cookce.rutgers.edu

April 16-18, 2007
Trees & Utilities National Conference
National Arbor Day Foundation
Tuscany Suites,
Las Vegas, NV
Contact: www.arborday.org/TLconference
1-888-448-7337

May 1-3, 2007
TOCA Annual Conference
Savannah, GA
Contact: www.toca.org

May (tba) 2007
Oak Wilt Workshop
Dallas/Ft. Worth area (TBA), TX
Contact: Texas ISA, www.isatexas.com

May 18-19, 2007
SAWLEX Sawmill & Logging Expo
Columbia, SC
Contact: (207) 799-1356; www.sawlex.com

May 21-22, 2007
Storms Over the Urban Forest, National Conference
National Arbor Day Foundation
Atlanta, GA
Contact: www.arborday.org/conferences; 1-888-448-7337

June 5-7, 2007
National Oak Wilt Symposium - Texas Chapter ISA
Austin Hilton,
Austin, Texas
Contact: Mike Walterscheidt, (512) 587-7515,
mbwalter@totalaccess.net; www.trees-isa.org/events;
www.isatexas.com

June 9-12, 2007
Trees Florida 2007
Innisbrook Resort,
Palm Harbor, FL
Contact: floridaisa.org

June 18-19, 2007
Urban Wildlife Management National Conference
National Arbor Day Foundation
Portland, OR
Contact: www.arborday.org/conferences; 1-888-448-7337

July 21-24, 2007
BOMA North American Real Estate Congress & The
Office Building Show (Building Owners & Mgrs Assn)
New York, NY
www.boma.org

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

Send your event information to:
Tree Care Industry,
3 Perimeter Road, Unit 1,
Manchester, NH 03103
or staruk@treecareindustry.org
Don’t Wait for the System Failure

(Continued from page 2)

and to study how attempted cures positively or negatively affect the issue.

Sometimes, it’s also knowing how to read the indicators and symptoms so that you know when you need to ask for help. There is a difference between being able to identify the natural cycles of business in an economy that someone who has been around for 20 years can read, and a sudden catastrophic change that can plunge an entire industry into oblivion. Usually, we test the waters first through informal help by reaching out to colleagues to find out if they have experienced the same symptoms to get advice – that is often quite good and frequently less expensive. Then, there are the times when we have gathered as much assistance as we can from similar business systems (other companies), and we are smart enough to know that it is time to get the business consultant. The consultant can bring tremendous experience from time spent evaluating similar systems; has no emotional connection to what we do, the people we serve, or the people within our business system – and can look us in the eye and objectively tell us what is wrong and what corrective actions we need to take. This is often more expensive, particularly the longer we have waited for the advice, and yet, in the long term, can be exactly what the doctor ordered.

TCIA is one of the consultants that you can call on, from the simple phone call to one of our staff who are on the front line with tree care companies every day, to going through the Accreditation program. It will ensure that you have all of the business systems in place, that they are in healthy working order, and we consult on how to improve your systems, including creating a safety culture. I would urge each of you to seriously step back as the year comes to a close and ask yourself what symptoms you have been ignoring in various areas of your business. Is it that nagging pain in your back that recurs when you think about writing your business plan for the first time; is it that pain in the neck that you’ve let continue to take up space in your company because you can’t face dealing with the problem employee; is it that little bit of nausea when you think about not having dealt with something yet that you know needs attention? The sooner that you face the symptom, deal with it, and bring in whomever you need to help you correct the system deficiency, the shorter your recovery is going to be and the healthier the entire business system of your company is going to be.

Don’t wait for the system failure …

Cynthia Mills, CAE
Publisher
“Trees saw us coming, and trees will see us going.” – Alex Shigo

On our walks in the woods, we marveled at fungi, amphibians, birds and all manner of living and dying creatures. The father of modern arboriculture loved the woods and spent his life learning and teaching under the canopy. Colleagues and students came from around the world to walk by his side and sit at his feet. Sometimes we even looked at trees.

My walks with Dr. Alex Shigo ended in October. During my last visit before his death, he charged me with writing the next article about our conversations (the first of which, “The Soul of a Tree: A Conversation with Alex Shigo,” appeared in TCI, February 2006). We had been talking about the “nature of nature” – the dynamic equilibrium of natural systems. He believed that a grasp of this concept is essential for good tree care and for an enlightened walk in the woods. In fact, an enlightened walk in the woods is essential for good tree care.

Dynamic equilibrium is sometimes described as the “balance of nature,” but this terminology can be misleading. Balance can be static, and does not necessarily imply movement. Dynamic equilibrium refers to the active relationships within and between organisms within an ecosystem. The emphasis is on energy and motion. It must be understood that trees survive by constantly responding to change, and the approach that Shigo taught seeks to enhance the dynamic survival strategies of trees.

We love trees for their stability and amazing survival skills. Trees symbolize permanence and changelessness. They are the longest-lived “creatures” in our personal and cultural experience. We plant them as memorials because we expect that they will live well into the future. Ironically, the basis for tree survival is not grasped by many tree-lovers. Survival is based on constant motion and change. The stability of trees is not static, but dynamic.

The nature of nature

Alex Shigo described this dynamism as “vibration.” For Shigo, the “nature of nature” was movement and oscillation, change and response. Tree systems are in constant motion. Trees appear to be stable and somewhat static because the subtle vibrations can easily go unnoticed. Internal chemical, thermodynamic, and cellular responses can occur very quickly, but external responses can be gradual and visible only over time.

Vibration can be thought of as an attempt to settle on an imaginary middle line. The middle line represents health and stability. Opposing forces on each side of this line “push” against each other, creating an oscillating pattern. In this model, the tree
system is on one side of the line with stress factors such as pathogens, pests and environmental conditions on the opposite side.

Dr. Shigo used models and abstractions to explain tree systems. Concepts like dynamic equilibrium are not readily observed in nature, but are necessary to describe complex relationships and interactions. A model provides a simplified conceptual framework that helps us grasp and apply abstract concepts in practical tree care. Good arboriculture is based on good science and advanced technology and requires enlightened minds as well as strong backs.

The oscillation model of dynamic equilibrium shows an alternating pattern. Stimulus and response do not occur simultaneously. For example, a pathogen attacks and the tree responds. Pests and pathogens are organisms that can cause harm by causing physical disruption or dysfunction in the tree system, or through a depletion of elements or energy. These pathogenic strategies may overlap when the tree is under attack. But trees are always under attack! Pathogens are only problematic when the tree is unable to respond successfully.

Pests, fungi or diseases are often blamed for tree problems when the real cause may be abiotic factors such as environmental stress or injury. Infestations and infections are frequent in most trees, but healthy trees seldom experience significant or long-term problems. However, when energy reserves are low due to stress or injury, or the attacking organism is non-native, problems may result. Trees planted outside their native range or in poor conditions are also more vulnerable.

Some defoliating caterpillars make this point. Yellownecked caterpillars (*Datana ministra*) feed on the leaves of many hardwoods such as oak, walnut, maple, elm, linden, and honeylocust. Adult moths lay eggs on the underside of leaves in June and July. Larva feed first on the lower leaf surfaces, eventually devouring the entire leaves as the season progresses. The fully-grown caterpillars pupate in the ground.

I found a heavily infested pin oak (*Quercus palustris*) at a residence in western Iowa. The property was surrounded by native woodland and the yard contained other oaks, but the caterpillars were not feeding on these oaks or on the native trees bordering the property. Pin oaks are not native to this area and poorly adapted to the native soils. To make matters worse, the infested oak had been damaged by the construction of a patio within the critical root-zone. The tree was stressed even further by heavy watering and fertilization by a local tree service, with the intention of helping the tree recover.

Insects that feed on trees favor those that are stressed. Stress lowers energy reserves needed for defense. Many defoliating insects are sensitive to signals produced by stressed trees, and the leaves are more palatable because they are low in defensive chemicals. The production of these natural toxins requires sufficient energy reserves. Many trees, including oaks, respond to defoliation by concentrating even more of these toxins in their leaves the following season, if enough energy is available.

The nature of tree care

Shigo’s oscillation model helps us understand this scenario. The pin oak in question was predisposed to problems by being planted in the wrong ecological
place. It therefore had to use more energy just to survive, and was not able to capture and store as much energy as it would in its native niche. Pin oaks are often chlorotic in alkaline soils and do not approach photosynthetic potential. Pin oaks in this situation respond with slow growth, occasional branch die-back, and low allocation of carbohydrates for defense.

When root severance, compaction, and change of soil grade was caused by the construction of the patio, the tree responded by attempting to compartmentalize the wounds. This process requires a lot of energy, and the energy cost to the tree made it harder to maintain other parts of the tree. Loss of canopy size and density commonly accompanies extensive root injury, as was the case with this tree. Oaks can be particularly sensitive to root disturbance.

The change in root-to-crown ratio is an oscillation. Sudden changes in the root zone are reflected in the canopy. The loss of canopy size, quality, and density makes less energy available for root production and defense. This oscillation is a see-saw effect between roots and crown, and the resulting decline of the tree creates opportunities for pests and pathogens. Dynamic equilibrium is still maintained, but shifts from order to disorder. The organisms that seek to digest the tree gain an advantage.

Phenology, the timing of natural processes, is a factor in oscillation. During the spring and summer, the aboveground parts of the tree form and grow and reach the highest photosynthetic potential of the year. During winter, the time we might call "dormancy," the root-tips and mycorrhizal structures form and grow. The potential for uptake and transport of water and essential elements increases. Every process in the tree is determined by season.

Other organisms in the tree community are governed by phenology. Leaf-feeding insects, like yellownecked caterpillars for example, feed most heavily in late summer, after photosynthesis has peaked. They feed...
at the time when the cost to the tree is relatively low. Other organisms infect and feed early, such as anthracnose fungi. Leaves killed by early infection can be replaced from secondary buds or meristematic points, thus minimizing the damage to the tree.

There are no bad bugs. When pests or pathogens feed on trees, they perform the ecological functions for which they have evolved. In many cases, the true agents of harm are human. The amazing survival strategies of trees make them seem indestructible, and when they do fail, we blame an infection or infestation. Our poorly planned projects and misguided practices distort the vibrations of natural systems. Even with the best intentions, we love them to death.

Good arboriculture, according to Shigo, is based on understanding how trees grow and survive. This means working to improve natural tree strategies by reducing stress and increasing energy reserves. Trying to eliminate the organisms that feed on trees can be counter-productive because tree defenses can be weakened and the population of attacking organisms can be strengthened. For example, by eliminating large numbers of defoliating insects feeding on a tree, the concentration of defensive chemicals in the leaves may also decrease. The use of insecticides can make the tree more vulnerable to future infestations.

The defoliating insect population can be strengthened because the weakest individuals are the most susceptible to insecticides. The surviving individuals are left to reproduce and pass resistant traits on to the next generation. This is one way that pests become resistant to chemical controls over time. Insecticides can also interfere with natural controls by unintentionally killing predators and parasites of the target insect, and by eliminating weak individuals that could otherwise infect the pest population with diseases. This does not mean that artificial controls should never be used; they should be used only when radical measures are the only available option.

Shigo’s oscillation model helps us learn how to work with nature, not against it. Arboriculture can take advantage of the natural controls of pests and pathogens while strengthening the defensive strategies of trees. This is not a passive approach that simply lets nature take its course and leaves trees to fend for themselves. Rather, it is an approach based on proper selection, location, planting, pruning, preservation, and restoration. This how we can help trees capture and store the energy required for healthy growth and survival.

Dances with trees

We learn in the woods that trees live in countless relationships. Shigo liked to say that the forest is a single tree under ground, and the creatures we see before us are connected in ways beyond imagination. The members of the community live, grow, die, and decay for the benefit of all. Organisms that feed on trees in various stages of life are not adversaries, but associates. Nature is not a battle, but a dance.

And we must join this dance. We are responsible for every tree we cut or plant, and must become advocates for trees and teachers of enlightened tree care. But we need trees more than they need us. On our last walk near his cottage by the pond, Alex turned to me and said: “Trees saw us coming, and trees will see us going.” This is now true for Alex. And the forest is lonelier.

Jack Phillips is a consulting arborist and lives in Omaha, Nebraska.
Alex and Me

By Donald F. Blair

“There are those who know not, they know not – ignore them.
There are those who know they know not – teach them.
There are those who know they know – follow them.” Anon.

Dr. Alex L. Shigo died unexpectedly at 7:15 pm, Friday, October 6, 2006. A full moon that night reflected across the lake at Barrington, New Hampshire, where Alex and Marilyn, his beloved wife of 52 years, had a summer cottage on the water.

It had rained all that day in Western Maryland and was raining at the estate sale of William Francis Moran Jr. Saturday morning when my cell phone rang. It was Tim Walsh, New Hampshire arborist and close friend of Shigo’s, calling to tell me that Al had fallen down the porch stairs to his walk-out basement study and died. Tim said that a post-mortem would be performed. Knowing Alex as I have for more than 30 years, I knew that being the inquisitive scientist and plant pathologist that he was, Dr. Alex Shigo, of all people, would have wanted to know exactly what the cause of his death had been.

And there it was, Alex. L. Shigo, 1930-2006.

In 1996, Linda Ellis wrote a poem entitled “The Dash.” The poem properly states that the dash that separates the date of one’s birth from their death represents the life that was lived. The poem goes on to challenge you to consider what that dash will say about the life that you lived when your time comes.

Born of Hungarian stock in Duquesne, Pennsylvania, May 8, 1930, Alex made full use of his “dash.” During the Great Depression, his father worked in the steel mills. At the Celebration of Life that the Shigo family held for the memory of Alex, older brother Elmer told of the lasting impression that those hard times made on him and Alex.

As Elmer recalled, there was very little money in those days, but the family stuck together and what they lacked in material goods, they more than made up for in love for each other. Elmer worked in the mills during the summer as soon as he could to help out the family. By the age of 14, Alex was playing clarinet around local bars in Pittsburgh for what little money he could contribute to the welfare of the family. Alex also played with the Pittsburgh Civic Symphony, where he was the youngest ever to do so.

Al made good use of his “dash.” He served in the official Air Force Band in Washington, D.C. He made the difficult choice of science over music for his life’s work out of fear that he wouldn’t be able to support his wife and family as a musician.

Fast forward to 1976. The state-of-the-art of tree care in the pre-Shigo era of 1976 wasn’t so far removed from 1956 – or 1901 for that matter. A plant pathologist from the Northeastern Forest Experiment Station in Durham, N.H., was speaking to the Western Chapter for the first time. The speaker’s name was Dr. Alex L. Shigo.

It’s been too many years to remember the details of that first talk to us by Dr. Shigo. The details aren’t important; the result is all that matters. The take-home lesson from the First Reading of the Book of Shigo for me was that I didn’t have to
paint my cuts anymore.

Not all in that room and in many rooms throughout the United States and later throughout the world were so accepting. There were those who shouted “BLASPHEMY!” and muttered darkly of dipping this false prophet in tree paint and feathers and sending him from whence he came.

As Dr. Shigo and I crossed paths with increasing frequency at meetings and shared programs, we developed a life-long friendship and Dr. Shigo became Alex or simply Al to me and so many others.

Al made good use of his “dash.” Not too many people can say that they lived to see the world changed for the better within their lifetime as a result of their work. Alex did. However, at the Sugar Shack, regular meeting place of the New Hampshire Arborists Association, on October 11, I realized that the true measure of the success of this man’s life was not in CODIT (compartmentalization of decay in trees); it was in the 52 wonderful years that he shared with Marilyn. It was in the eyes of his daughter Judy and in the firm handshake of his son Robert. It was in the laughter and hugs of his five grandchildren and the great grandchild that is on the way.

It was in the broken English and eloquently passionate Italian of his friend and disciple Dr. Daniele Zanzi, who after having only been with Alex and Marilyn three weeks prior, returned from Italy for the Celebration. It was in the solemn and respectful words of Pius Floris who came from the Netherlands to pay his respects and express his thanks for Alex’s profound affect on European arboriculture; worldwide for that matter.

It was in all of the stories of the lives that Alex had touched and changed and inspired.

Alex had class. John Ball, professor of forestry at South Dakota State University, told me that he gave a lecture once many years ago and a few weeks later got a handwritten note in that big, messy scrawl of Alex’s, congratulating him on a good presentation, to keep up the great work, and to come see him. Ball said that getting a handwritten note from the Great Man was in itself an incredible morale boost.

Some people, well-meaning in their tributes, have called Alex a great arborist. He would have been the first to deny that label. We were the arborists, he was the scientist.

Some people, well-meaning in their tributes, have called Alex a great arborist. He would have been the first to deny that label. We were the arborists, he was the scientist. He was always the first to acknowledge that we knew more about how to apply his research to actual practice than he did. The partnership of him as scientist and us arborists was one of synergy and mutual respect for each other’s strengths.

Some people thought of Alex’s untimely passing as a tragedy. It certainly was for Marilyn, his family and all of us who loved him and hurt to see him go so suddenly. What would have been a tragedy for mankind and the trees that shade us would have been if he had chosen music over science, or if he hadn’t lived long enough to see his life’s work completed and finally accepted into common practice.

Just two weeks prior to his death, Alex had given his last Sugar Shack lecture. In September, he had given all of his papers, samples, materials and artifacts to Tim Walsh for cataloguing. In the truckloads of boxes, Alex handed Tim his life’s work in organizing and disseminating the research and writings in the years to come.

Just last year, he had transferred Shigo and Trees, Associates to his daughter Judy. Alex had lived to see the world changed for the better within his lifetime. He had earned his rest, for he was weary.

Marilyn and family had a private ceremony in which they spread his ashes through his beloved woods and a pinch for the pond in Durham. There is no gravesite, no headstone, no marker.

Alex Shigo’s memorial is to be found in the trees. If you want to honor Alex, touch trees. Touch them well, touch them right. Do this in remembrance.

Farewell, my dear and true friend. Marilyn, Alex loved you above all else as did you him. Thank you for sharing him with us for so many years.

Donald F. Blair is owner of Sierra Moreno Mercantile arborist supplies in Hagerstown, Maryland.
TCIA EXPO in Baltimore was the backdrop for the official signing of a renewal Alliance between the Occupational Safety and Health Administration and the Tree Care Industry Association, Inc.

This agreement will remain in effect for two years.

The Alliance was originally signed in 2003 because TCIA and OSHA recognized the value of establishing a collaborative relationship to foster safety in the workplace. The Alliance was fostered to provide TCIA’s members and others in the tree care industry with information, guidance and access to training resources that will help them protect employees’ health and safety.

In particular, the renewed Alliance will focus on reducing and preventing exposure to safety and health issues related to tree removal and electrical, falls, and struck-by hazards. In developing this Alliance, OSHA and TCIA recognize that OSHA’s State Plan and Onsite Consultation Project partners are an integral part of the OSHA national effort.

OSHA and TCIA will work together to achieve the following outreach and communication goals:

- TCIA will work with OSHA to provide expertise in developing information on the recognition and prevention of workplace hazards, and to provide expertise in developing ways of communicating such information (e.g. print and electronic media, electronic assistance tools and OSHA’s and TCIA’s Web sites) to employers and employees in the industry.

- The Alliance was fostered to provide TCIA’s members and others in the tree care industry with information, guidance and access to training resources that will help them protect employees’ health and safety.

- Speak, exhibit, or appear at OSHA’s or TCIA’s conferences, local meetings or other TCIA events such as TCI EXPO, Certified Treecare Safety Professional (CTSP) workshops, Student Career Days, and the Winter Management Conference.

- Share information among OSHA personnel and industry safety and health professionals regarding TCIA’s best practices or effective approaches and publicize results through outreach by TCIA and through OSHA- or TCIA-developed materials, training programs, workshops, seminars, and lectures (or any other applicable forum).

- Work with other Alliance participants on specific issues and projects on tree care industry hazards that are addressed and developed through the Alliance Program.

- Encourage TCIA’s members to build relationships with OSHA’s Regional and Area Offices to address health and safety issues.

OSHA and TCIA will work together to develop and disseminate case studies illustrating the business value of safety and health and publicize their results. They will also convene or participate in forums, round table discussions, or Stakeholder meetings on tree care industry issues to help forge innovative solutions in the workplace or to provide input on safety and health issues.

OSHA’s Alliances provide parties an opportunity to participate in a voluntary cooperative relationship with OSHA for purposes such as training and education, outreach and communication and promoting a national dialogue on workplace safety and health. These Alliances have proved to be valuable tools for both OSHA and its Alliance participants.

An implementation team made up of representatives of both organizations will meet to develop a plan of action, determine working procedures, and identify the roles and responsibilities of the participants. Team members will include representatives of OSHA’s Directorate of Cooperative and State Programs and any other appropriate offices. OSHA will encourage state plan states’ and OSHA consultation projects’ participation.

Peter Gerstenberger is senior advisor for safety, compliance & standards for the Tree Care Industry Association.
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Please circle 36 on Reader Service Card
One might think that the last thing an inner-city youth would be good at is climbing trees. But a group in Boston is proving that theory wrong.

On November 4 at the Boston National Historical Park, a cheerful group of professional arborists and members of the Olmsted Center for Landscape Preservation, a program of the Northeast Region of the National Park Service, met with several youths for a morning of climbing and working in trees. The group was there as part of the Branching Out: An Exploration in Arboriculture for Boston Youth program.

Branching Out is a multi-year educational program run by the Olmsted Center for Landscape Preservation in conjunction with Thomson Island Outward Bound’s Green Corps Program, the Boston Harbor Islands National Park Area and members
of the Massachusetts Arborists Association. The program provides a smorgasbord of experience and training taught by certified professionals in the areas of arboriculture, park management and other areas of environmental consideration for young people in the Boston area. The program attracts students from all across Boston and reflects the cultural and economic diversity of the city.

Ultimately, should the participants be so inclined, the program leads them on a logical, progressive path that exposes them to extensive training, work experience and education and on into careers and further education in these and other related fields.

The program is divided into successive levels, the higher levels building on the training received in the lower levels. Level 1 is a three day introductory course taught by professional certified arborists that gives the attendees an overview of the fundamental practices of tree care, tree care safety, rope use, knots, climbing equipment and techniques, and hand pruning.

Level 2 builds on the skills learned in Level 1 and gives the young people the opportunity to practice these skills in the field. Professional arborists accompany them to a Boston area park where they participate in tree maintenance. The Level 2 attendees then help solidify their knowledge by assisting in the teaching of Level 1 attendees. Level 2 includes four days of field work and three days of mentoring Level 1 participants – seven days in total.

Level 3 participants help mentor Level 1 and Level 2 participants, again ensuring that previous skills learned become entrenched. Subsequent to this they take an active role in applying these skills to a variety of tree maintenance projects. The completion of an actual arboriculture-related project in a national park concludes this third level for the attendees. Level 3 has a total duration of 12 days including the five day field project, four days of field work working with Level 2 participants, and three days of mentoring Level 1 during training.

The final stage of the program is an Olmsted Center 17-week Internship in Arboriculture in collaboration with the Youth Conservation Corps (a program of the National Park Service), providing the opportunity for graduates to gain extensive additional field experience. After completion, the participants may choose to continue with their education and are provided with opportunities to pursue educational scholarships, or they may choose to enter directly into the workforce and the program helps to put graduates in contact with potential employers and organizations operating in the fields of arboriculture and park management.

Celena Illuzzi, an educational specialist with the Olmsted Center and National Park Service, coordinates the program with Dan McCarthey, an ISA certified arborist and gardener with the National Park Service. Illuzzi and McCarthey call on the additional services of professionals in the various fields who volunteer to work with and train the program participants.

Several instructors, including Jamie McGuane coaches Suki Jo Chiu, 15, from the Hyde Park, Mass., on her climbing skills.
McGuane, Greg Goodall and Jim Bruekner, have been involved with the program over a number of years and many young people have benefited from their considerable experience and knowledge. McGuane is an ISA certified arborist with the National Park Service and a gardener for the Olmsted, Longfellow and Kennedy National Historic Sites. Goodall has his own company, Goodall Tree Services based out of New Hampshire, but is a Massachusetts certified arborist and a past president of the Massachusetts Arborists Association. Bruekner, also a Massachusetts certified arborist, runs Wind River Tree Care.

All the organizers were of the same opinion when discussing the program in relation to the industry. “The industry is in desperate need of young, skilled employees,” McCarthey says, echoing the words of his colleagues, “and this is one way in which we can introduce the two to each other.”

Meeting at 8 a.m. under deep blue skies on the lawn in front of the navy yard officers’ quarters at Boston National Historical Park, everyone was given a quick prep talk before being furnished with plenty of coffee, juice and doughnuts, courtesy of McCarthey, to fuel the anticipated activity. McCarthey also handed out new Olmsted Center hooded sweatshirts to all present along with brand new state-of-the-art helmets. Illuzzi and McCarthey then presented one of the participants, Joe McDonough with a certificate for his completion of the 17 week internship.

“Joe’s really our poster boy,” McCarthey beamed. “He’s exactly what the program was set up to do.”

On his way back to the work area from his new truck, I managed to grab a few words with Joe, a very amiable, capable and yet humble 19 year old who comes from Dorchester.

“Through the Green Corps I did a one week program called ‘Choices’ and then did a one week arborist training program,” she says. “I had a great time doing those two courses and then I was recruited for a new program, which is this one.” Although the introductory course (now Level 1) has been running for about six years, the curriculum for the advanced, tiered training (Levels 1, 2, 3 and the internship) was developed fairly recently, in 2005, and piloted in 2006.
Leona expressed an interest in a possible career in arboriculture if the opportunity arises in the future. She was obviously enjoying her work and was active with Joe in helping to mentor Suki, who has completed level 1 and is now working on level 2.

Suki, who is 15 years old and comes from the Hyde Park section of Boston, attends the Academy of The Pacific Rim.

“I first got into the Olmsted program through a friend who used to attend the Green Corps summer program at Thomson Island,” she says. She was clearly having a great morning and her parents, who are very supportive of her activities, arrived in time to witness some of the tree work and to enjoy the last of the day’s events, which included a VIP tour of the U.S.S. Cassin Young, a Navy destroyer.

All in all it was a wonderful morning, and with several participants from different levels all working together it clearly demonstrated how the program is designed to function.

Toward the end of the morning, Illuzzi, who has seen Joe progress through the various training stages and into full-time employment, eyes Joe’s brand new truck and says to him teasingly, “Joe’s doing well!”

Joe glances over at the shiny vehicle and then turns back to Illuzzi and smiles coyly in return, and replies, “Yeah, Joe’s doing well.”
Honoring Alex Shigo, hailing Prof. King, and questioning guying article

I would like to thank TCI for the great profile of Dr. Shigo’s life (“A Tribute to the Legendary Dr. Alex Shigo,” November 2006). He is a person that made a difference in how arborists work on tree preservation. I first meet Dr. Shigo as a University of Massachusetts arboriculture student in Professor Gordon King’s classes. He would come to campus for several days and lecture to both undergrads and graduate students, as we all know he was a dynamic speaker who was not afraid to present his views.

In 1976 we moved to Long Island, N.Y., where I became chairperson for the Long Island Arborist Association’s Annual Conference. One of the first speakers I invited was Dr. Shigo. In the mid ’70s, Shigo was challenging arborists on many traditional techniques. When Dr. Shigo told the assembled arborists, approximately 500, that they should stop making “flush” cuts and not to paint the cuts, you would think that he had set off a bomb in the room. This type of talk was sacrilege. We had always painted our cuts; it was the sign of a professional arborist. One old time arborist even invited Dr. Shigo to step out into the parking lot where they would physically review his suggestions. Today, we make branch collar cuts and have hung up our paint pots. Dr. Shigo was a man who made a difference.

As many of you have heard, Prof. Gordon King was in a terrible accident this August. His wife, Barbara Hamilton King, died as a result of the accident. Prof King has been in the hospital recovering since August. His wife, Barbara Hamilton King, died as a result of the accident. Prof King has been in the hospital recovering since August. His wife, Barbara Hamilton King, died as a result of the accident. Prof King has been in the hospital recovering since August. His wife, Barbara Hamilton King, died as a result of the accident. Prof King has been in the hospital recovering since August. His wife, Barbara Hamilton King, died as a result of the accident. Prof King has been in the hospital recovering since August. His wife, Barbara Hamilton King, died as a result of the accident.

Prof. Gordon King, Shutesbury Road, Leverett, MA 01054.

Lastly, the article “Softer Strategies for Supporting Smaller Trees” (November, 2006) was very disappointing to see in TCI. For the past 80 years professional arborists have been trying to get landscapers and grounds management folks to stop wrapping ropes and straps around the branches and limbs of woody plants. The photos on page 20 show why this should never be done; yet the photo on page 13 shows the perfect way to girdle a woody plant. That tree could have had some small hardware store lags installed and the landowner would never have to worry about girdling. The A300 does not condone wrapping and it should not be presented in TCI as an accepted arboricultural technique.

H. Dennis P. Ryan
ISA & Massachusetts Certified Arborist

Bob Rouse, TCIA director of accreditation and ANSI A300 Part 3-2006: Supplemental Support Systems secretariat, responds to Mr. Ryan’s third point: First, two key things are missing for me to make a positive determination. The objective of the system needs to be stated and a written specification needs to be provided.

If the objective is to support a branch with a cable, then I would say the picture depicts a synthetic cable system, not a guy system. The caption denotes a “guying strap,” which may be where the confusion lies, since this would actually be a “cabling strap.”

If the picture does depict a synthetic cable system, it seems to be compliant with A300 standards assuming that the written specification and installation complies with the following ANSI A300 standard subclauses:

(Note: the part of the cable system shown is a home-made loop anchor:)

32.26 loop anchor: A synthetic fiber termination that serves as an anchor.

Under the general section:

33.4.3 Prior to installation, the owner or owner’s agent should be notified of the need for periodic inspection of the supplemental support system by an arborist (see subclause 34.1). Scheduling inspections shall be the responsibility of the tree owner.

In this instance the owner really needs to be notified of the danger for girdling with this system design in order to be compliant with A300 standards. One would not expect to see a deviation from the recommendation for this type of home-made synthetic cable system. The article itself does address notification.

Under installation practices:

33.5.4 Synthetic cable systems shall have a restraint to prevent movement of the loop anchor and shall not girdle the trunk, limb or branch.

In the picture, movement is prevented by a double wrap around the lateral branch, so the branch is acting as the restraint. The installation is not currently girdling tree parts, so it is compliant with 33.5.4.

Under inspection and maintenance:

34.1 Systems should be inspected periodically for wear, corrosion, degradation of hardware and damage to the tree. The inspection should include the system’s condition, position, cable tension, and the tree’s structural integrity.

34.2 If problems are detected they should be corrected or the system should

(Continued on page 38)
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Tree trimmer dies after saw taps 7,200-volt line

A tree trimmer cutting branches off a grand oak in a back yard in Dunedin, Fla., was electrocuted August 7, 2006, after his saw apparently touched a 7,200-volt power line, according to the St. Petersburg Times.

Jaime Bautista, 29, was working in a five-person crew for a Clearwater, Fla., tree care company trimming large trees at a home. Four crew members were working in front of the house, while Bautista was trimming a grand oak in the back yard. He was wearing a harness and using a manual pole saw. Bautista was roughly 30 feet up in the tree when his saw apparently touched a primary power line.

Bautista was stuck between two large branches when emergency crews got to him. He was not breathing and died at the scene.

Tree trimmer electrocuted

A 43-year-old man hung dead from a tree for more than two hours August 28, 2006, after he was electrocuted while tree trimming at a residence in Pistakee Highlands, Illinois.

According to the Northwest Herald, Pastor Zepeda died about 4:45 p.m. when a tree limb he was cutting fell onto a power line, electrocuting him. Zepeda, who ran a home-based tree service, was anchored in the tree with a rope and harness when he died. His body hung suspended about 30 feet above ground.

Rescue crews had to wait more than two hours while ComEd was called in to shut down power, members of a special high-rope rescue team were called in, and the scene was photographed, before Zepeda’s body could be removed. Nearby, his wife rested on the front bumper of a drizzle-coated white sports utility vehicle with her hands on her head, weeping over her loss, while rescue crews worked to remove the body. His four children, meanwhile, waited in the back seat of the same vehicle.

“He was cutting with a hand saw when a limb fell,” according to a co-worker. “We did notice the power lines, but we were doing it very carefully.”

It was raining around the time of the accident.

Trimmer killed after ejection from bucket

Thomas E. Hanna, 32, died August 23 in Morris, Illinois after being ejected from a bucket while working for his uncle’s tree service company, according to the Morris Daily Herald.

Hanna fell 35 feet to his death from a lift bucket while trimming a tree. A co-worker at the site said Hanna had finished cutting through a limb and was attempting to maneuver the bucket further up into the tree for more trimming. During the move, the boom on the bucket caught the stump of the severed limb. The boom then slid around and off the stump, causing a jerking sensation that propelled Hanna out of the bucket. Hanna was not wearing a safety belt or any other type of safety device.

A County Coroner said the preliminary investigation indicated Hanna, died of multiple concussions. Hanna was a 12- to 15-year employee of the company and the father of two high-school-age children and a younger child.

Letters

(Continued from page 36)

be a number of objectives for this operation, but first a determination would have to be made if this is an established tree (seems to be established in the picture) or a newly planted tree.

If this is an established tree, the system pictured would have to be specified as a temporary guy, making it compliant with 300 standards (again this depends on what the written specification says). If this was designed as a permanent guy, it would not meet ANSI A300 standards due to the following:

33.9.4.2 Permanent guys shall be attached to the tree with dead-end hardware or through-hardware.

So basically, if the picture depicts a permanent guy of an established tree, it does not meet the A300 standard. If the picture is depicting anything else, it looks like it is most likely compliant with A300 standards. As you can see, A300 compliance is based on the stated objective of the operation and having a written specification, neither of which we have for this picture but based on the article I think it is safe to assume that this is either a cable or a temporary guy, making it compliant.
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Is the **Grinding Business** the Right Business for You?

*By Rick Howland*

Whether you are considering expanding your overall business, expanding your existing grinding services or whether you’re a veritable tree care “newbie” looking to take advantage of demand and emerging market opportunities, you might take a look at the business of grinding.

In the past, we’ve profiled tub and horizontal grinders, the major manufacturers, their features and benefits and the advantage of one technology over another. All of that is good to know and a continuing service to our members. But what about the business itself?

Grinders are big, expensive and powerful. Can you afford one? Should you buy or lease? Can you keep it busy? Isn’t it a risky business? What can I expect from my return on investment? What’s all the grinder fuss about, anyway? (I’m doing pretty much OK right where I am.)

We recently ran into the owners of two companies who make a living out of grinding. Grinding period. Wood goes in one end and, hopefully, dollars fly out the other. What turns out to be most interesting about talking to these two companies is that they represent both angles of attacking the subject.

One company had evolved from an existing logging/lumber business. The other is a relatively new startup, less than a year old in fact, begun in the wake of the very active 2005 hurricane season.

**Story number one**

Begun in 1978 by Louis Overstreet as a logging company, Overstreet Mulching today is much different than its beginnings. Today, as the head of Overstreet Mulching, headquartered in Trenton in north-central Florida, Louis Overstreet’s son, Adam, oversees a company whose branded products are sold nationally.

“The Overstreet company used to be just involved in the logging of whole trees – virgin pine and cypress, all of which
store shelves, you can find the Overstreet
different chains,” says Adam. On those
Depot, Walmart, KMart and a lot of dif-
at home centers such as Lowe’s, Home
bags as an organic mix, which you can
the customer wants.”

Overstreet said the company’s initial
influence ranges about 100 miles, with log-
gers bringing in new stock for processing.

Most of the virgin wood material is run
through a horizontal machine. The remain-
der begins as “chunks” ranging up to two
feet which is then run into an older hopper-
style grinder. (There are also bark mulch
shakers, coloration and bagging stations to
complete the process). At the end of the
process, a variety of in-demand mulch
materials are bagged by species and level
of process, mix and/or color.

Products coming off the 20-acre
Overstreet site include two- and three-
cubic-foot bags of 100 percent cypress, and
the same bag sizes in a blend comprised of
pine and cypress, plus offerings in pine
bark, nuggets, mini nuggets and a potting
soil or “potter’s helper” custom mix called
Nature’s Helper.

According to Adam Overstreet, the
mainstays of the business are the com-
pany’s two main sellers, the cypress and the
pine mulch in black and red (resulting from
running the pine mulch through coloring
units before they hit the bagging stations).
Overstreet says the company can do just
about any color – orange, blue, “whatever
the customer wants.”

“Much of the colored mulch goes into
bags as an organic mix, which you can find
on store shelves around the country
at home centers such as Lowe’s, Home
Depot, Walmart, KMart and a lot of dif-
ferent chains,” says Adam. On those
store shelves, you can find the Overstreet
brand with names such as “Southern
Pride” featuring the pine bark, nuggets,
mini nuggets or mulch and mixes. (In
addition to bagging his own product,
Overstreet says the company also does
private label work for others.) Other
Overstreet products include a fine-
ground cypress and pine blend typically
used for indoor malls and corporate cen-
ters where fine aesthetics are in high
demand.

For the bag-branded product, the com-
pany deals with wholesalers who deal
directly with the home centers nationally.
Throughout Florida, though, the Overstreet
Mulching company also will ship bulk to
local wholesalers, usually landscapers and
landscape outlets who then resell the
Overstreet end product to the public in cus-
tom quantities.

Additionally, says Overstreet, “As sort
of a community project, we will take in and
process pallets for ‘mom and pop’ to be
able to do their own landscaping at, say $1
to $1.25 a bag, but that’s not the main busi-
ness. We take in damaged pallets from an
outlet that can deliver up to several thou-
sand pallets every two days or so. For our
labor, time and expense, this community
relations project means we can advertise in
the local paper and sell to individuals at
five to 20 bags at a time at a favorable
price.”

“We do most of our own trucking
throughout Florida taking on contract
hauliers,” he says. “For out of state, though,
we go through our brokers.”

How good is business? “During the busy
season we run crews six days a week and a
15-hour processing day.”

As far as the future growth is concerned,
Overstreet says the company plans to
expand into the potting soil business from
’07 into ‘08 with products like humus top
soil and processed cow manure.
You’re probably saying to yourself, “Well, that’s pretty easy, getting that far starting from an established business. What about me? I have a small tree care business. (Or maybe you’re just getting started.)

**Story number two**

At the other end of the spectrum, we have All Wood, a wood waste center and grinding service headquartered in Newnan, Georgia. Grinder operator Matt Woodruff, who climbed off a loader for this interview, says he’s been with the company from day one – about a year.

As the story goes, according to Woodruff, the business came about pretty much in the wake of Hurricane Katrina. Jody Knowles, owner, and others had been discussing opportunities in tree and waste grinding, even though their knowledge and skills lay elsewhere. Woodruff says none of them had experience in wood grinding. (They did have a lot of experience, though, with machinery, having worked in grading, trucking and salvage, as Woodruff explains.) But they jumped into the business at the urging of a tree care acquaintance up the road, who, according to Woodruff, said “There’s PLENTY of money to be made in the grinding business.”

Now, about a year after the company invested in a used Morbark Model 1300 (purchased from another tree care company), Woodruff reports that, “business has been good.” In fact, says Woodruff, the company is running four crews six days a week from 10 to 12 hours each day. Support equipment for All Wood’s operation includes a 544 John Deere loader and a Volvo Model 210 excavator with a shear. He adds that the company is comprised of seven people right now, “including the secretary – we can’t leave her out!”

Though serving the “greater Newnan, Georgia, area, All Wood regularly takes the grinder on the road (about half the time), towing it, turning tree trash – debris, limbs and stumps – into mulch. The rest of the time, waste is delivered to the company’s 14-acre site for processing. Input sources include tree care companies, land clearing companies and municipalities.

However, unlike Overstreet, which further processes its mulch into landscapers’ decorative products, All Wood takes a different approach with its output, selling it as boiler fuel and to paper mills, which reduce it to pulp before making it into paper products.

As a new company, there are no grinding contracts in place yet for All Wood, and even though the company is busy, it is looking into contract opportunities.

Because of the nature (literally) of the mulch business, there are no environmental issues attached to the All Wood business, according to Woodruff.

When asked about future plans for more grinders, Woodruff says, “Yes, we are interested in more grinders and more equipment. We want to continue to grow and we plan to buy according to our needs.”

Unlike Overstreet which favors the horizontal type technology, Woodruff himself prefers the tub type because it tends to better handle larger stumps. “They don’t shear so much and the horizontals open up only so far.”

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Three simple techniques to connect with more Web customers

By Griffin Davis

More potential customers than ever are searching the Web for professionals like you. Once they get to your site, you have about 30 seconds of their attention to convince them to consider your business further. Many tree care businesses are updating older sites or building new ones so they can pass that 30 second test by looking professional and credible on the Web.

If you’ve already checked off the basics to make sure your site looks like 2006 and not 1996, and you want your Web marketing to land more customers, there is more you can do. Keeping your site current with regular text and photo updates can help you better connect with potential clients and convince them that your business is the one to call.

This article lays out three Web site update techniques that you can use right now.

1) Reflect seasonal needs on your site

Consumers searching on the Web are won over by the same things that attract any customer: trust that the business understands their needs and trust that the business can meet their needs with an appropriate service. But Web consumers are different in that they are active consumers of marketing: They are choosing to search now, because they have a need now. Use this to your advantage.

Seasonality is defined as the periodic and relatively predictable fluctuations in your business. If you know that during certain times of year your clients have particular needs or concerns, make that connection with a seasonally appropriate headline or a reference in the body of the text on your home page.

For instance, if you offer pesticide spray services and customers show more concern about checking for insect pests in their trees during the spring than at other times, consider adding a tagline “Complete pest control” during that season. Arborist consultants can let their frequent customers know that they are ready to handle the busy seasons by adding “We’re busy, but we still have time for you” on your site. Potential customers searching the Web will likely have similar concerns as your past clients. If they look at your site and quickly see that you address a top concern of theirs, you have a better chance of landing them as a client.

2) Keep your site current with seasonal photos

If your business service area undergoes noticeable seasonal changes, you have an opportunity to use photos on your site to give your business an edge. Let’s take a look at summer cola advertising as an example of how this technique is used. The big two cola companies launch summer advertising pushes in late May. The ads almost invariably have a major dose of summer-themed images – beaches, sun-
shine, people in shorts and so on. The reason: they want people to consider their products in the context of the season. Cola consumers’ needs have not changed, but the ad firms know that more people will buy a product or service that appears to be seasonally relevant.

The same holds true for your customers. If it’s July and they compare two Web sites that are substantially similar, except one has a picture of a chipper truck in a winter setting and one has a picture of the chipper in bright sunshine with green grass and lush trees in the background, which business looks more current, more “right now”? The business that looks more “right now” tends to win on the Web.

Here’s how you can leverage this technique for your tree care or consulting business: If you don’t already have a photo on your site, find an appropriate spot for one, preferably on your home page. Take a photograph of your office or sign or you or your staff with a seasonally appropriate background – and put that photo on your site (or ask your Web site company to do it for you). And make sure that you swap that photo out when the seasons change.

This is a simple concept but it can work to increase the incremental business you get from your Web site.

3) Reference current happenings with a personalized message or a newsletter

This is an advanced technique for those who rely heavily on their Web site for new business. Because the Web customer is a “right now” customer, references on your site to “right now” trends and local events can you help connect. For example, if your home town paper just did a big story on home buying trends and mentioned tree work or landscaping, you have a fantastic opportunity to make your business seem ‘up-to-date’ and ‘with it.’ In this example, you would call attention to this story on your home page or service page with a simple reference like:

“As the Austin-American Statesman reported in its July 10th edition, well maintained trees and shrubs are a key part of maintaining the value of a home. And at Bennett Tree Service we pride ourselves on keeping your landscaping healthy and looking good.”

Obviously, this reference would be customized for your business, but the concept will be the same: leverage a current, relevant media story by referring to it on your site and create a clear transition from that story to your business.

Current happenings can also mean happenings for your business. If you or your staff have just completed a new training certification or if you recently spoke at a business, industry or professional association event, find a way to highlight this appearance on your site.

With this technique, make sure your reference is concise, clearly identify the date and absolutely make certain you take the reference down no later than a year after posting it.

The ability to keep Web marketing current is one of the reasons why it is an effective, efficient tool at stimulating customers and landing new business. These three proven techniques can work to your advantage if you are looking to improve your Web site’s performance. They each require an investment of time and we only recommend them as a second step after you ensure your Web site meets today’s basic standards for professionalism. But if you are ready, regular and thoughtful site updates can make the difference between having a good year and having a great one.

Griffin Davis is a small business Web marketing expert with 20 years of marketing and communications experience. He is vice president of marketing for Market Hardware, Inc., a Web marketing firm specializing in tree care, landscaping and other contractor businesses, and a TCIA Affinity Partner. They can be reached at www.markethardware.com.
According to a new study released by the Federal Motor Carrier Safety Administration (FMCSA), driver behavior causes most truck crashes. Drivers of large trucks and other vehicles involved in truck crashes are 10 times more likely to be the cause of the crash than other factors, such as weather, road conditions and vehicle performance.

The Large Truck Crash Causation Study was commissioned by FMCSA to review the causes of, and contributing factors to, crashes involving commercial motor vehicles. While previous data focused on specific crashes and/or individual causes of crashes, this study was the first nationwide examination of all pre-crash factors.

The study, conducted with the help of the National Highway Traffic Safety Administration, investigated a national sample of fatal and injury crashes between April 2001 and December 2003 at 24 sites in 17 states. Each crash involved at least one large truck and resulted in at least one fatality or injury. The total sample of 967 crashes included 1,127 large trucks, 959 non-truck motor vehicles, 251 fatalities, and 1,408 injuries. Action or inaction by the driver of either the truck or other vehicle was determined to be the critical reason for 88 percent of the crashes.

Driver recognition [e.g. the driver did not recognize the situation due to (i) failure to pay proper attention, (ii) distractions by something inside or outside the vehicle, or (iii) failure to adequately observe the situation] and decision errors [e.g. the driver (i) drove too fast for conditions, (ii) misjudged the speed of other vehicles, (iii) followed other vehicles too closely, or (iv) made false assumptions about other drivers’ actions] were the most common type of driver mistakes coded by crash investigators and law enforcement officials.

In order to help prevent such accidents, organizations with commercial fleets should consider the ABCs of Fleet Safety:

- **A** – Appoint a fleet safety manager with the approval and support of executive management. The fleet safety manager should be actively involved in monitoring the day-to-day implementation of the fleet safety and risk management policies, including the development of a written fleet safety program that is approved by management.

- **B** – Begin implementation of the Fleet Safety Program. The Fleet Safety Manager should consider the following:
  - The Fleet Safety Program should establish driver selection criteria and set driver qualification standards that comply with federal, state and insurance carrier requirements. Drivers’ positions should have a complete detailed job description. A driver application should be completed as part of the application process, which also includes a multiple-step interview. Verify all information by obtaining an up-to-date Motor Vehicle Record check, completing a road test, contacting prior employers and obtaining the results of a pre-placement medical exam by a company designated physician. Other Department of Transportation requirements may also apply, such as drug and alcohol testing.
  - Defensive driver training should supplement the driver selection process. While not all drivers utilize Defensive, Decisive and Dependable driving techniques, the utilization of these techniques can help reduce crashes and collisions.

- **C** – Also known as 3-D Driving, this driving technique is comprised of the following:
  - Defensive driving – Driving so as to prevent collisions in spite of the actions of others or the presence of adverse driving conditions;
  - Decisive driving – Making the correct decision at the proper time; and
  - Dependable driving – Being consistent in driving habits, making the correct decision and applying the appropriate defense to the traffic situations.

3-D Driving helps drivers make dependable, defensive decisions at the proper time. Timing is the important key in utilizing these habits, in conjunction with knowledge, skill and experience, to help avoid driving into a trap:

- Knowledge – Knowledge of the traffic rules & regulations of the state(s) of operation. Also provide your drivers with
thorough knowledge of how your vehicles operate and the controls within the vehicles;

- **Skill** – Skill is the result of proper training plus practice. Each driver’s skill in handling a vehicle varies with training, vehicle experience, age and coordination;

- **Experience** – Knowing what to do, when to do it and doing it at the correct time, every time.

The three senses of seeing, hearing and feeling also play a critical factor in collision avoidance:

- **Seeing** – To avoid a potential collision-producing situation, a driver must first see and recognize the hazard. Good seeing skills are critical to collision avoidance. The eye has two types of vision. The first, fringe or peripheral vision, is seeing out of the corner of your eye. The second is central vision or central focus. While fringe vision is hazy and out of focus, it is highly sensitive to light and dark contrasts, large and small shapes and motion. It is used for scanning and alerts drivers to objects and hazards that are to the left, right, up or down from the central focus. A driver can see a very limited area clearly and distinctly with central vision, approximately an area of five feet in diameter at a distance of 100 feet. Since the scope of central vision is so confined, drivers should make a conscious effort to keep their eyes moving, thus presenting a continuous clear picture of the constantly changing scene. Correctly identifying conditions is essential to proper timing. If a hazard is recognized too late, the result will be poor or erratic timing.

- **Hearing** – Drivers can identify some traffic situations by their sense of hearing. Drivers can also use their horn to advise others of a condition which may be hazardous. Drivers should communicate with a friendly tap on the horn. Drivers should realize that others may not hear the horn, may not recognize the hazard or may choose to ignore the warning, in which case drivers should be prepared to slow down or stop. Therefore, whenever using the horn, drivers should always place their foot over the brake pedal. In order to react to a warning or a signal given in this manner, the mind must be receptive to these signals and recognize their meanings.

- **Feeling** – The sense of feeling can be the most important sense because it can warn drivers that they are cornering too fast or have started to skid. Most skids are initiated as a result of driving too fast for conditions or from braking too severely, especially in a curve. In 25 percent of collisions, skidding is a major contributing factor, usually as a result of wet, oily or icy roads.

<table>
<thead>
<tr>
<th>3-D Driving Rules</th>
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</thead>
<tbody>
<tr>
<td>• Be far-sighted</td>
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<tr>
<td>• Move your eyes continuously</td>
</tr>
<tr>
<td>• Take in the whole picture</td>
</tr>
<tr>
<td>• Maintain a space cushion</td>
</tr>
<tr>
<td>• Communicate</td>
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</tbody>
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Once these rules are incorporated by your drivers as part of their defensive driving, your drivers will be able to make better decisions in a more dependable manner.

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**Frequency Rate Based on Number of Vehicles**

(Ratio of collisions per 100 power units):

\[
\text{Vehicle Collision Rate} = \frac{\text{No. of Collisions}}{\text{Vehicle Exposure} \times 100}
\]

\[
\text{Vehicle Exposure} = \frac{\text{Avg. No. of Vehicles} \times \text{No. of Months}}{12}
\]

**Example:** Fleet is 35 Power Units. Total of 6 collisions in first 9 months of the annual term.

Thus: Vehicle Exposure = 35 (power units) X 9 months = 26.25

\[
\text{Vehicle Collision Rate} = \frac{6 \text{ (collisions) \times 100}}{26.25} = 22.9
\]

**Answer:** 22.9 means almost 23 vehicles out of one hundred power units were involved in a collision in the first 9 months of the annual term.

**Frequency Rate Based on Mileage**

(Ratio of collisions per one million miles)

\[
\text{Incident Rate} = \frac{\text{No. of Collisions}}{\text{Miles Driven} \times 1,000,000}
\]

**Example:** Total of 16 collisions and a total of 896,113 miles driven

Thus: Incident Rate = \( \frac{16 \times 1,000,000}{896,113} = 17.85 \)

**Answer:** 17.85 means there were approx. 18 collisions per million miles driven.

The question that you must ask yourself once you have determined your frequency rate is if it is acceptable or not. Every fleet is different and the answer to this question is best answered by you. In the first example above, a frequency rate of 23 may be acceptable to a fleet with significant exposures such as a delivery fleet or a refuse hauler. But a frequency rate of 23 for a fleet of automobiles is much too high. To set a goal for you and your drivers to achieve consider determining what your average frequency rate is over the last five years and make it a goal to reduce this rate by 10-25 percent.
C – Continuously monitor the Fleet Safety Program:

- Supervise driver performance by (i) completing road observations, (ii) conducting periodic ride checks, (iii) monitoring schedule/trip compliance, and (iv) requiring driver records such as call-ins and driver logs. Correlate driver records and reports, including the maintenance of the vehicle. Consider utilizing new technologies that wirelessly transmit information to and from a vehicle to collect information that can be used by a broad spectrum of various stakeholders.

- Implement a vehicle maintenance program that includes proper vehicle selection specifications for the job as well as a documented preventative maintenance program.

- All drivers should be trained in proper reporting procedures, and all vehicles should have an accident report packet for collecting information. Management should investigate each and every collision to determine the responsible conditions. A collision review board should also review the circumstances of all crashes and collisions by obtaining copies of police reports, internal investigation reports, supervisory statements, and an updated Motor Vehicle Record. Once all information has been assembled, the board should review the collision to determine whether it was preventable. This determination should not be confused with “Chargeable” or “At Fault” collision classifications.

- Conduct a periodic (no less frequent than annually) analysis of all fleet losses to determine emerging or occurring loss trends.

- Driver disciplinary policies and procedures should be considered. Disciplinary procedures should be implemented after the occurrence of a moving violation(s) and/or a preventable collision. Motor Vehicle Record evaluation criteria should be implemented addressing moving violations and whether the driver should be allowed to continue to operate a vehicle on company business. Disciplinary procedures should be considered for drivers involved in a preventable collision as determined by the Collision Review Board. Standard criteria should be established and may include a monetary penalty, loss of driving privileges, work suspension, remedial training, demotion, etc.

- Monitor fleet performance pursuant to a collision frequency rate. To help assure an accurate calculation, consider including all collisions (including collisions below your insurance deductible) in determining the collision frequency rate for your fleet.

Use of a collision frequency rate provides an “apples to apples” basis to evaluate your fleet’s performance based on either an average number of vehicles or miles driven, depending on the fleet data you maintain. The frequency rate should be kept on an annual basis and should be compared from one year to another. You may wish to keep a monthly rate in the current year (See Sidebar). Your goal is for the frequency rate to reflect a downward trend over a period of years.


This new ANSI standard became effective April 28, 2006. The standard provides a comprehensive vehicle safety standard. It is to be used as a guide for organizations with motor vehicle operations. It will be most beneficial for small to medium-sized fleets. It does not address Federal Motor Carrier Safety Regulations or related requirements. The key elements of the standard include:

- Scope
- Terminology
- Leadership
- Operational Environment
- Driver Management
- Vehicles and Recordkeeping

The standard also provides some sample fleet policies including:

- Sample Business Use Policy
- Sample Personal Use Policy
- Sample Driver Owned/Leased Vehicles Used for Business Purposes Policy
- Sample Rental Vehicle Policy

Also included are sample incident rates
and their methods of calculation. The rates reinforce the need to understand and develop frequency rates based on the number of vehicles or mileage driven. It also provides examples of frequency rates based on the number of deliveries, number of loads, service calls, etc. Copies of the new ANSI standard may be obtained through the American Society of Safety Engineers, 1800 East Oakton St., Des Plaines, IL 60018-2187 or www.asse.org.

Defensive driver improvement programs provide training to help bring the drivers up to date on defensive driving techniques. This training may be one of the key building blocks in an organization’s efforts to implement a safer fleet operation. The Hartford’s 3-D Driver program and other nationally recognized defensive driving programs, such as the National Safety Council program, are all valuable resources to assist in the goal of collision reduction.

Any investigation and/or determination regarding an accident may be discoverable in subsequent litigation involving the collision. Consequently, prior to implementing any business practice relating to the investigation of accidents, you should consult with your attorney to evaluate the benefit of such a program in light of the risk of discovery.

The information provided in these materials is of a general nature, based on certain assumptions. The content of these materials may omit certain details and cannot be regarded as advice that would be applicable to all businesses. As such, this information is provided for informational purposes only. Readers seeking resolution of specific safety, legal or business issues or concerns regarding this topic should consult their safety consultant, attorney or business advisors.

The information provided should not be considered legal advice.

The Hartford does not warrant that the implementation of any view or recommendation contained herein will: (i) result in the elimination of any unsafe conditions at your business locations or with respect to your business operations; or (ii) will be an appropriate legal or business practice. Further, The Hartford does not warrant that the implementation of any view or recommendation will result in compliance with any health, fire, or safety standards or codes, or any local, state, or federal ordinance, regulation, statute or law (including, but not limited to, any nationally recognized life, building or fire safety code or any state or federal privacy or employment law). The Hartford assumes no responsibility for the control or correction of hazards or legal compliance with respect to your business practices, and the views and recommendations contained herein shall not constitute our undertaking, on your behalf or for the benefit of others, to determine or warrant that your business premises, locations, operations or practices are safe or healthful, or are in compliance with any law, rule or regulation.
Our industry has continued to experience tragic loss after tragic loss this year. I wrote to you in my October TCI Outlook column that we averaged one fatality or critical injury being reported to me every three business days in the span of five weeks. Our Certified Treecare Safety Professional (CTSP) program is just kicking off. Obviously, the dream is to get to the day when we really are saving lives by having a culture of safety established in every company. However, with all of the certifications, standards, regulations and training programs out there, it still comes down to one thing.

Each arborist has to make moment-by-moment decisions on their own. That’s right. It’s that person’s decision in that specific moment in time that we have to address. All of these safety programs and standards are simply a way to provide for, and ingrain in, each arborist a practiced knowledge so they will behave in a certain way when faced with what is often a split-second decision.

As the burden of safety in this industry pressed heavier and heavier upon me, I realized that something big was missing. We need spirit, movement and commitment behind the decision by this industry to be safe. As some read this, there will be a mental protest rising as they think of the time, money, training, commitment that has already been made to safety and improvements in their accident rates. And my response is, “Well done so far. It’s still not enough.”

You see, there are other industry examples out there where people believed that to work in them just wasn’t safe, and it had to be accepted. Funny thing is, when company leadership came in that wouldn’t accept it, people started surviving, and accident rates lowered. Safety is a decision - one moment at a time - by every single person. My point - we have to be fanatics about safety in this industry. Deaths and injuries have to be unacceptable - period.

TCIA is providing tool after tool. We’ve

Until we’re all safe ...

By Cynthia Mills

The A300 committee has just completed a newly revised standard - ANSI A300 - Part 3, 2006, Supplemental Support Systems.

A300 standards present performance standards for the care and maintenance of trees, shrubs, and other woody plants. They are intended as guides in the drafting of maintenance specifications for federal, state, municipal, and private authorities including property owners and managers, tree care company owners/salespersons, and utilities.

Significant changes to the newly revised version of the standard, ANSI A300 Part 3-2006: Supplemental Support Systems, includes a new section on props, clarification and new illustrations for cabling and bracing types, and a reorganization of specification-writing guidance.

TCIA members received an order form for their free copy as a member benefit of the month with their November Reporter newsletter. This is a limited-time benefit of membership. The offer expires December 31, 2006. Additional copies may be ordered for the special member price of $15, plus shipping and handling. Non members can order A300 Part 3-2006 by calling 1-800-733-2622.
added a Safety Track to TCI EXPO this year. We’ve dedicated one full day to safety at the Winter Management Conference starting in 2006 so company leaders are annually reminded of the commitment they must demonstrate every day. We launched a program to help each company develop a safety culture – CTSP.

And now, we’re launching a MOVEMENT. You see if each student, new employee, long-term employee has a visual on their person every day. It’s a reminder in the moment – that critical moment – that determines whether or not they come home that day. So at EXPO, you may have seen thousands of wrist bands, helmet decals, and fliers being distributed that state: “UNTIL WE’re ALL SAFE.” It’s a visualization of the commitment and a spirit behind our industry’s determination that every arborist has the right to come home safe every single day – that every arborist has to know in that moment what choice to make; that anything else is unacceptable. It’s also a visualization that our industry still has a ways to go – that we’re going to wear this visual reminder that we have not achieved a safe industry and that we’re going to keep working at it every single day “UNTIL WE’re ALL SAFE.” Bottom line – we’ll never be done, because safety has to be an everyday commitment – always.

So I’m going to ask three things of you:

1.) Order a wrist band and helmet decal for every single employee and every arboriculture student in your area – they’re free. (Order at www.tcia.org)

2.) Order some spare wrist bands and helmet decals and hand them out to crews when you see a company that isn’t following safety procedures. Our Web site is going to have a page dedicated to this that anyone can get to for additional resources, so there is a way for them to work toward a safety culture, too, member or not.

3.) Stop hiding.

What? What’s she talking about? Stop hiding what’s going on in this industry. I know it’s painful for your company when someone dies or gets hurt. I know you fear OSHA citations and increased insurance premiums; that it can feel embarrassing or like you should be able to prevent it. I know you’re afraid your company’s reputation within the industry might get hurt. You can’t turn the clock back if something happens.

What you CAN do is prevent other people from dying or getting hurt. Recognize that you have a responsibility not just to your company and your employees. If you have knowledge that can prevent a death or a serious injury, you have a responsibility to all arborists in our industry. By not sharing what you have learned, you are actively engaging in hurting, and potentially causing the death, of other arborists. Yes, not communicating what you’ve learned is a decision not to help the industry get better. What if something you know now could prevent children from losing a parent; or allow a son or daughter to be present at a 50th wedding anniversary of their parents; or to walk a daughter down the aisle on a wedding day? What if something someone knows in another company, right now – today – could prevent YOU from dying tomorrow? Would you want to know?

By de-personalizing safety, whispering about it in the bar and hiding it, we prolong our decision to celebrate a victory for our industry. I know it’s a sensitive topic. It’s why it has to come out into the light of day. It only gets better when we can understand together why these tragedies happen in the first place. Knowledge is power. In this case, it’s the power to save lives.

Oh, and two more things. Safety is not a competitive advantage. Safety is also not something that we should only be concerned about for members of professional arboriculture associations. Being safe is every single field employee and arborist’s right. I beg you to inundate TCI with the details of your incidents and what you’ve learned. Alright – so now I’m asking you to do four things. However, it’s the analysis of our experiences, the commitment that we can be safe, and our actions that will change things.

Please commit to our industry’s safety movement today and take action - “UNTIL WE’re ALL SAFE!”

Cynthia Mills, CAE
President

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SafetyFirst Systems, LLC

www.safetyfirst.com

Services: SafetyFirst provides three fleet safety programs, including safety hotline services, online management reporting, and driver coaching and training services. Their services reduce crash events that harm the company’s public image and safety reputation, help managers spend more time with their teams rather than at the desk managing records, and enable supervisors to place proper emphasis on driving safely without having to author new materials each month.

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

Example: If your company purchases $2,000 in products from SafetyFirst, SafetyFirst will send TCIA a credit of $50 to be deposited into your membership account. Credits accumulate through the 12 months of membership and, when you receive your annual renewal statement, the total credits will be subtracted from your membership dues.

Requirements: Place you order on www.safetyfirst.com or call toll free at 1-888-603-6987 and mention that you are a TCIA member to take advantage of the dues credits.

To learn more about how your company can benefit from these and other TCIA affinity programs, please call 1-800-733-2622.
Put the focus on a good customer experience

By Ron Keith

I dialed the number and waited. This was my fifth call to the company in just three days. Outside my window sat the new spray rig that was delivered earlier in the week. The phone quit ringing, and the executive assistant answered. (I’d talked with him so many times, I recognized his voice).

“Bob, this is Ron Keith calling again. Remember me? I’m the one who purchased the defective spray rig from you and am still waiting for your owner to return my call. Why doesn’t he call me back? Is this how you treat all your customers?”

How many times have you had a similar, frustrating conversation? Maybe it was with an equipment vendor or at a local retail store. But, no matter how hard you tried to convince the sales person that you were not happy, they didn’t seem to care. So, in the final analysis, you walked away, committing never to use their service again and to let others know of your frustrating experience.

On the other hand, have you ever considered how many of your customers have had this kind of experience with your company? Perhaps they were frustrated that the trim crew didn’t clean up the small limbs and leaves after the trimming. Or, the bucket operator set down the stabilizers on the recently planted sod. And when they called to complain, you dismissed them with the thought “just another whiner.”

After taking a long hard look at the market, our industry and our company, we are introducing a new paradigm to our business philosophy that encourages the sales team (and the entire company) to focus on giving every customer such a good experience with us, they return year after year and purchase more services. By focusing on the customer experience, we believe that sales and profits will take care of themselves. (Of course we still monitor sales and profits, but we place equal value on the quality of service provided)

We recognize that talk is cheap, and to establish this approach to doing business will not happen overnight. Here are five key action steps that have helped us get started:

1. 100 percent Buy In – We are working to be sure there is buy-in to our Customer Experience model. Everyone from our receptionist, to our crews, to our office staff have been challenged to think like a customer. Only by knowing what’s important to the ones we are servicing, can we give an exceptional experience.
2. Lifetime Value is a key indicator – Developing goals to increase customers’ lifetime value are critical. If customers leave you for a competitor after buying only one service, you’ve not given them a good enough experience to stay.
3. Know what is important to your customers, and do it – Be sure to take time to understand what makes a good experience for the customer. This may mean you have to fine tune your listening skills. Or, learn to ask better questions. Then, use a well designed database or software to store customer responses and use that data extensively.
4. Track Customer Satisfaction – Look for opportunities to get customer satisfaction input. Follow-up phone calls after completing a job is great. Train in-house staff to ask all customers for their input when they call in for any reason.
5. Learn from mistakes – Changing the way you do business does not happen quickly. We still stumble and provide less-than-perfect service at times, even though we are committed to this model.

As many of you have already discovered, our market place is changing. Customers are better informed, and there is a growing parity between services offered by your company and those of your competitors. We believe that the main thing that will set you apart is how well you perform the services and how positive of an experience your customers have in the process.

Ron Keith is CEO of Arbor Masters Tree & Landscape in Shawnee, Kansas, and a member of the TCIA Board of Directors.

More CTSP workshops/exams scheduled

At press time, there is a great deal of activity and interest in the Certified Treecare Safety Professional program, the first individual certification program for safety professionals in the tree care industry.

With the CTSP workshops in Baltimore during TCI EXPO, and in Hartford in late November, behind us, TCIA has one more 2006 workshop/exam date:

- Cleveland, OH - Wednesday & Thursday, December 13-14

To be eligible to attend a workshop and sit for the exam, enrolled CTSP candidates must first satisfactorily complete the 13 “Critical Thinking Exercises” and fill out the Safety Program Checklist from the CTSP Core Competencies manual.

Why CTSP?

The CTSP program is dedicated to making a significant change in the way safety is looked at in the industry. Having a CTSP offers another way for your company to provide exceptional work at competitive prices to your customers.

What’s more, CTSP helps teach that safety must be balanced with, and incorporated into, the other core business processes, such as production, sales and employee development. When this integration is achieved, safety can directly benefit all these core processes.

Take a look at TCIA’s CTSP program and consider enrolling one your employees today! Call 1-800-733-2622 for an enrollment form or more details.
THE TREE CARE INDUSTRY ASSOCIATION WOULD LIKE TO SAY THANK YOU TO THE 2006 Partners Advancing Commercial Tree Care

Crown Partners

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Seed Partners

Wright
Fanno
Mauger

SavATree. www.savatree.com

Alcorn Tree & Shrub Care Co.

Bartlett Tree Experts

Buckingham Since 1896
Morbark’s Model 4600 XL Track Wood Hog was put through its paces for attendees, moving from place to place, and pivoting.

Welcome to Morbark Demo Days

Morbark hosted about 100 customers and members of the trade press at a Demo Days event at its Winn, Michigan, plant October 26 and 27. Tours of its factory and brand new office building, a display by some of its equipment suppliers, education sessions and dinner on October 26 were followed by an outdoor equipment demo and a West Texas-style barbecue on the 27th. Morbark celebrates its 50th anniversary in 2007.

Tours of the factory provided an up close look at the chipper drums and other equipment that go into Morbark’s chippers, grinders and other equipment.

The Model 3600 Wood Hog grinder also has a non-track version, shown here.
David Machuta, drafting and design engineer for Morbark, checks the calibration of the Model 30 RXL Chiparvester, measuring the chip length and thickness.

Last but certainly not least of the equipment demos for the day was the Model 1600 Tub Grinder, which made quick work of even the largest, toughest looking logs and stumps. Morbark’s tub grinders come in six sizes, with the 1600 being the largest. Photos by Don Staruk.

Though cold temperatures chased some observers into the tent where there were portable heaters, most toughed it out to watch the chippers and shredders do their thing. Here, a Wood Hog shreds logs.

Lon Morey, left, president and CEO of Morbark Inc. and son of company founder Norval Morey, chats with Don Staruk, TCI managing editor, during the equipment demos. Photo by Wendell Jennings, Waste Handling Equipment News.
The upcoming holiday season might be an excellent time to give the gift of a new chipper.

That will be one reaction for many tree care company owners as the industry moves through another phase in a long-range plan to reduce engine emissions.

Engine manufacturers are currently moving through the third tier in a four-tier Environmental Protection Agency plan to clean up emissions. It is part of the Clean Diesel Initiative, the same federal initiative that ordered cleaner-running diesel trucks and low-sulfur fuel by 2007 (TCI, November 2006), which created serious consternation on the part of end-users concerned about price hikes (some truck companies announced increases of $5,000 or more) and performance.

A group of smaller horsepower diesel engines will have to meet new standards in a process that begins in January 2007. There are the 101 hp to 174 hp engines found in chippers, lifts, and other hard-working, off-highway diesel equipment.

For both the diesel engine manufacturers and those who put those engines into the types of low horsepower machinery typically used in tree care, the challenge has been to find a way to conform to the EPA directive without taking too big a hit in either the performance of the engine, or in the bottom line.

For the manufacturers that produce these engines, the new standards represent a challenge that they must meet for the greater societal good. As part of the larger clean air initiative, the new standards will benefit the environment.

What benefit? According to EPA estimates, by the year 2030 controlling emissions from these off-highway diesels will prevent 12,000 premature deaths each year, more than 15,000 heart attacks, 6,000 children’s asthma-related emergency room visits, 8,900 hospitalizations and almost a million work days lost.

While cleaner air is a result worth supporting, the technologies needed to create the change will present a challenge and likely come with a cost for engine manufacturers, certainly, and possibly trickle down to the end user. As one industry expert put it, “you don’t get something for nothing.”

The good news for consumers is that history is on their side. Engine manufacturers exist in a competitive market, and low-horsepower engine manufacturers have historically absorbed many of the costs associated with new designs.

But the manufacturers of machinery that use these engines also expect to take a financial hit.

“Fitting the engine into the product may cost more money,” says Tom Cowher, president of Capital Engine Co., a manufacturer that produces engines in a horsepower range below 100 but has been monitoring the changes in the industry in anticipation of next year. “Radiators and other parts may need to be redesigned.”

He has also observed, and some manufacturers’ engineers have also noted, that fuel consumption has gone up in some engine models that have been redesigned for better emissions.

One industry insider who formerly worked for International Truck recalls the
run-up in purchases prior to the EPA-mandated changes affecting those vehicles a few years ago. In 2002-2003 there was a huge buy and in subsequent years it was a little bit lean, the result of people trying to avoid the price increase that comes with these emission controls.

Some equipment manufacturers may seek permission (via an intricate group of rules) to use the older tier engines for an extended period of time as allowed under the Transition Program for Equipment Manufacturers. But the majority of those in the industry will share their discomfort for the sake of the common good.

While meeting new emission regulations on compact engines will provide new opportunities, the challenge to an engine manufacturer is maintaining a balance between the application of engine technologies, performance, fuel economy and price.

Environmental impact

The plan to reduce emissions goes back to the Clean Air Act of 1990, and as the project moves through a schedule tiers (or stages, as they’re called in Europe) ending in 2015, the goal will be to reduce diesel emissions to almost nothing.

In scientific terms, the standards are designed to regulate oxides of nitrogen (NOx) and particulate matter (PM, or more commonly called “soot”). When the fourth tier is completed in 2015, NOx will be reduced by more than 90 percent, and PM by more than 95 percent.

Within each tier, there is a “phasing in” of standards governing engines, based on horsepower ranges. Engines with a horsepower range of 175 to 750 horsepower had to be compliant with regulations at the start of the current year, those with a horsepower range of 100 to 175 must be compliant to new standards at the start of 2007, and those with a horsepower range of 50 to 100 will need to meet a new set of standards by Jan. 1, 2008.

Engines with less than 50 or more than 750 horsepower will change as the project moves into “Interim Tier 4,” beginning on Jan. 1, 2008.

Compliance with the new standards means an overhaul of all the engine designs in a manufacturer’s product line, and an increase in costs. The challenge for engineers is to design cleaner-running engines at a cost that’s palatable. Another is to build an engine that will fit into the “envelope” of the machines that the engines are placed in, so that the retooling of that equipment is minimalized.

Manufacturers will approach the challenge of meeting the standards by utilizing different technologies. To reduce particulates, engineers may utilize particulate filters, which are emission control devices on the after-treatment side. To reduce NOx, they may implement the use of exhaust gas recirculation, which introduces exhaust gas back into the engine. Those cost money, and may also come with related costs.

When you introduce exhaust gas back into the engine, you’re also introducing carbon back into the engine, which can be detrimental to the life of the power cylinder. That could raise issues with reduced engine longevity that you may not have had if you’re not using exhaust gas recirculation.

Also, the engine could get dirty a little sooner, so oil change may be needed more frequently, though oil manufacturers are apparently trying to come up with oil formulations to combat the extra soot being put back into the engine.

There are several strategies being considered, including looking at more precise fuel controls than the typical fuel-injection pump that off-highway diesel engines have used since Bosch invented the fuel injection pump back in the 1920s and 1930s.

More engine manufacturers may go to electronic fuel injection for more precise metering of the fuel, to reduce the formation of oxides and nitrogen and to reduce particulates. Changes to the engine in terms of valve timing, and valve overlap – the time the intake and exhaust valve are open in relation to each other – may also be needed to maintain engine performance. Changes to the combustion chamber in general may also be in the works.

That’s a substantial amount of research and development that will increase costs for the engine manufacturers.

And that doesn’t include changes that
equipment manufacturers may be forced to make in order to fit the newly-designed engines into their chippers, skidders, or other tools.

The challenge for engineers is to design the best clean-running engines they can, at a cost that makes sense for manufacturer and buyer.

On the other hand, while the cost of the higher-end models may be more expensive than previous models, the superior technology of the new engines may offer other added benefits, such as fuel efficiency.

If that is the case, depending on the engine and the amount of fuel savings, choosing the better technology could have a substantial payback over time.

**New fuel, more changes**

“On the diesel side of the business, the phase-in has not been that stringent until this upcoming ’07 year,” says Glenn Cummins Jr., owner of Engine Distributors Inc., a distributor of gasoline diesel engines for the off-highway market, “because ’07 regulates 170 horsepower and below, which is the meat and potatoes of the tree care industry, as far as horsepower is concerned.”

“What’s going to impact them is what’s going on on-highway, where you have low-sulfur fuels being introduced,” says Cummins.

Beginning in California in September, and in other states since, most diesel engines on the highway have been operating on lower-sulfur diesel fuel. While EPA officials have said that the fuel will run anything regular diesel will, some are skeptical.

If the engines in the 100 to 170 horsepower range do not run well on the lower-sulfur fuel, Cummins says, that could present problems.

“Let’s say you have two crews: One has a Tier 2 engine that he bought in ’06, the other has an engine that he bought in ’07,” says Cummins, whose company is headquartered in Blackwood, N.J. “Next June he pulls into the station and fills them both up with the low-sulfur. He’s got an issue. Or he cannot go the other way. He can’t put the stuff that doesn’t have low-sulfur into Tier 3 or he’ll just kill it. It will be gradual, not over 5,000 hours, but gradual over 100 hours.”

“He can run a Tier 2 engine on low-sulfur, but he can’t run the Tier 3 on the diesel he used to buy,” argues Cummins.

Cummins is predicting that some tree care owners will shift their buying prefer-
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"As the environment changes, the gas product is going to be a better product, in a certain horsepower range, than the diesel. From 5 to 150 (hp), the gas product is going to be cleaner and less expensive than the diesel."

Glenn Cummins Jr., Engine Distributors Inc.

ences to machines that run on gasoline. With gasoline engine technology much-improved, it may be a more cost-effective solution, he says.

“If you look at a typical crew, they run 500 hours a year,” he says. “In theory, the new gasoline engine will run 5,000 hours, which is a 10-year cycle, for 50 percent of the up-front money. So, there’s going to be a transition going back to gas, rather than to the diesel.”

Cummins pointed out that at one time, the market was primarily one that used gas to power engines. “They went to diesel because the gas price got so high (compared) to diesel. It was close. In other words, if you could buy an engine for $5,000 gas, 100 horsepower, and diesel for $5,500, why would you buy the gas?”

For example, Cummins says, in the days when most cars ran with carburetors, a person would feel fortunate to run his car for more than 100,000 miles, with regular tune-ups and other maintenance. Now, cars run hundreds of thousands of miles longer, and require less maintenance along the way.

“‘The same technology exists industrially now, with the EFI (electronic fuel injection) product that’s being introduced to the market. So where before you would run a gasoline engine off highway and get maybe 2,500 hours, you’re now going to get 5,000-8,000 hours. You’re going to get the..."
same life as the diesel, for half the money."

Cummins also added that the emissions coming out of the gas product is almost cleaner out than what’s going in.

“As the environment changes, the gas product is going to be a better product, in a certain horsepower range, than the diesel,” says Cummins. “From 5 to 150 (hp), the gas product is going to be cleaner and less expensive than the diesel.”

He predicts that diesel engines will remain popular in the higher horsepower ranges, or for equipment that gets heavy use, but the gasoline engines will be more popular in the lower ranges. “I believe (it will happen by) this time next year, if the customer is educated.”

Dave Rattigan is a freelance writer living in Peabody, Mass.
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* 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.swingle-tree.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.

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.

Peterborough/Milford, NH

Broad Oak Tree Care needs 1 tree climber specialist and 1 plant health care specialist to assist our two-crew PHC operation. See complete job posting at www.broadoaktree.com or e-mail dan@broadoak-tree.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

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.

Barrett Tree Service Inc., Sheffield, MA

Seeks tree climber to start immediately with our TCIA Accredited company. Applicant must have: valid driver’s license (Class-A preferred, or be willing to obtain class-B for starters); 2 years’ climbing experience; and desire to work with our crane on a daily basis. Competitive pay DOE, and benefits include health insurance, pd. holidays, clothing and boot allowance. Fax resume to (413) 229-9915 and/or call (413) 229-9914, ask for Trumbull.

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, 401(k), 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

Sales/Consulting, Houston

Lge. tree service & mulching co. looking for cert. arborist to assist in estimating & sales. Must be self motivated, organized & can multi-task. Fast growing co. w/$4 mil. + annually. Exc. salary pkg. Call Lance (713) 539-8076.


This position is an excellent opportunity for a self-motivated and ambitious person, as compensation is based on sales. All Co. benefits & vehicle provided. See our Web site for more information: www.savatree.com.
Arborist/Salesperson in SE PA
Small but rapidly growing full service landscape and tree service company seeks motivated and ambitious salesperson. Must have basic knowledge of tree care, degree in arboriculture plus, be ISA certified, and display great communication & leadership qualities. Please fax resume & references to (215) 535-2654 or call (267) 784-8560.

Sales Position/Consulting Arborist
22 reasons to make a career at Hartney Greymont:

Arboriculture/Urban Forestry Instructors, Oregon & Illinois
ACRT, Inc. teaches urban forestry classes at several Job Corps centers throughout the U.S. Job Corps is the nation’s largest & most comprehensive residential, educational, & job training program for disadvantaged youth. Instructors provide vocational training to students in the fundamentals of urban forestry & arboriculture as well as life & employment skills. This position requires an individual that possess leadership, motivation & interpersonal skills as well as a desire to teach & inspire young adults. Applicants must have climbing experience, valid driver’s license, & a minimum 2 yr. degree (H.S. diploma PLUS 4 yrs of experience may substitute). Great pay, excellent benefits & AWESOME work environment. Send cover letters & resumes to jobs@acrtinc.com or fax (330) 945-7200. Reference #TCI0906. ACRT, Inc. is 100% Employee-Owned, (EEO/AA & Drug Free Workplace).

Great Opportunities in SE Florida! All positions!
High-end commercial tree work year-round in the most affluent communities in the country. Professional environment. New equipment/latest technology. Ongoing training. Room for advancement. NOVO ARBOR is a fast growing company that values what you have to offer as you will value what we have to offer! Relocation assist. Tel: (561) 330-9785 Fax: (561) 330-2392. E-mail Admin@NovoArbor.com

Staff Arborist for TCIA
Trade association for commercial arborist companies seeks qualified candidate with arboricultural background for full-time position. Position requires demonstrable and extensive skills in project management, managing volunteers and communication – esp. writing skills. Candidate should possess a Bachelor’s degree in Arboriculture or closely related field as well as two or more years’ field experience in arboriculture. He/she must be willing to take direction and work in a team environment, and must submit current samples of writing and undergo personality profiling exercises during the interview process. Working knowledge of Microsoft Office software products in a PC environment needed; experience with desktop publishing software preferred. Previous experience with volunteer and/or non-profit groups preferred. Position requires travel at least six times a year. Ability to speak and comprehend Spanish a plus. Salary and other benefits commensurate with demonstrated experience and abilities. Please send resume and salary requirements to travis@treecareindustry.org.

Experienced climber needed for growing tree co. in Seacoast NH
Strong pruning and removal skills. Arborist cert. preferred. Must have strong work ethic, valid driver’s license and clean driving record. Pay commensurate w/ experience. (603) 765-4421.

Cutter’s Choice Arborist Supplies!
Pruning supplies...hand pruners, pruning saws, loppers, pole saws, and pole pruners!

Chainsaw parts and accessories...guide bars, drive sprockets, saw chain, safety wear and accessories for all popular chainsaws!

Climbing supplies...ropes, saddles, lanyards, hitches, gaffs, climbing pads and much more!

The Northeastern Sprayer is one of the finest sprayers on the market. Our sprayers are dependable, affordable and simple to operate. We offer Tree and Turf Sprayers with UV protected molded polyethylene tanks from 50 gallon to 1000 gallons. Heavy duty Mig welded steel frame for durability and long life. Power from Honda engines. We offer Pumps from John Bean, Udor or Hypro. We also offer a larger selection of hose, Spray guns and Deep root feeding injectors.

**call for options and pricing on the sprayer of your choice***
Cagwin & Dorward Career Opportunities, San Francisco Bay Area

We are accepting applications for experienced, highly motivated people for the following positions in our Tree Care Department:

Managers  Climbers
Groundsmen  Spray Technicians

Please call 1-800-891-7710 for applications, or online at www.cagwin.com.

Gregory Forrest Lester, Inc.
Cincinnati, OH, since 1963

Foreman & Climbers. Fall/winter work, top pay, incentives. Great work environment, opportunity for advancement. Valid driver's license, CDL a +. Jeff (513) 313-3412 or jeffreyforestlester@gmail.com

Crew Foremen, Climbers, Groundspersons

Growing mid-size San Diego-based tree service company hiring crew foremen, climbers and groundsmen; minimum 2 years' experience, $15-$20 an hour, EOE. Certified Arborist a PLUS. Benefits, drug screening. Must have valid driver's license. Immediate openings, year-round work. Fax resume to (760) 727-3813 or call (760) 941-3992.

READY FOR A CHANGE?
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Open Positions for Field Employees, Boston Area


TREECO Tree Service
San Francisco Bay Area - A successful 17-year-old business has dynamic opportunities for experienced arborists to join us as:
- Account Managers
- Foreman person

Call for info. (510) 293-6966 jobs@TREE-CO.com

Operations Manager

D68 Tree Service, with offices in Central & Eastern Massachusetts, is seeking an Operations Manager to help lead our Team. Duties and Qualifications:
The candidate must have proven tree care industry experience with general tree care work and plant health care. Responsibilities include: Field Training, Production and Safety Management, and Overseeing Daily Operations. The candidate must be goal oriented and have a strong commitment to Safety and Teamwork. CDL License a must. Certified arborist preferred. Benefits package. Please submit resume to Bob Young: bob@dbtree.com or fax (617) 471-4777 Ext. 30.

Wanted - Licensed Plant Health Care Technician, Boston Area

Experienced spray technician wanted now! Open position as a result of growth and an internal promotion. You will be responsible for operating the Plant Health Care profit center. Earn top pay, benefits and year-round employment. Please submit resume to Bob Young: bob@dbtree.com or fax (617) 773-3318. (617) 471-4777 Ext. 30.

Beetlebung Tree Care on Martha's Vineyard

Is looking for Arborist/Climbers and Climbers for full-time positions in year round business. Generous salary for committed applicants who are experienced, reliable and safety conscious. Benefits include paid vacation, medical, training, continuing-edu. Work on some of the most beautiful properties in New England and play on the Vineyard's spectacular coastline! Please fax or e-mail resume: (508) 645-3037 or Beetlebungtreecare@msn.com or call (508) 645-2877.

There are many ways to climb to the top at Trees, Inc.

Groundperson ■ Trimmer/Climber ■ Bucket Operator ■ Foreperson ■ General Foreperson and more ... Career opportunities abound in the utility vegetation management industry for qualified and motivated people. Join a team that puts safety first and provides training, benefits and advancement opportunities in many places throughout the United States.

For more information about Trees, Inc. visit our website www.treesinc.com and e-mail your resume to resumes@treesinc.com.

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Houston, TX 77060
Phone 866-865-8617 Toll-Free
EOE M/F/D/V

Autumn Tree Care Experts, Inc. – one of Chicagoland’s leading arboricultural firms – is growing again! We seek an arborist with the drive, knowledge, and personality to nurture our existing and developing sales territories. ATCE is an EOE.

Competitive salary. Great benefits. Improve (sometimes quirky) work environment.

If interested, contact Dan by calling 947.729.1903, or send an email to dank@autumntree.com

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**Sales Representative**

Certified Arborist only, must be experienced in commercial sales. Co. car, exc benefits, 60K-80K. Atlanta area. Full-service tree company. Please fax resume to (770) 729-1980.

**Arborist/Sales**

Silver Spring, MD - Opening for experienced licensed arborist for leadership role in sales and production. This is a year-round, F/T position with full benefits package. Contact Kuhn’s Tree Service (301) 384-4724.

**Tree Climbers/Sales Reps/Crane + Loader Operator**

Enjoy a mild climate while working & playing in Va. Beach, Va. Our easy going crew members with a “Let’s get the job done” attitude look forward to having others join them. Call (757) 425-1995 for info.

**Limb Walker Tree Services in Roseburg, OR**

Looking for motivated, career minded individuals who are seeking employment in the tree care industry. Positions currently available for goal oriented tree techs with a minimum of 5 yrs. exp. in pruning, high climbing & tree removal. Valid OR Class-B drivers license required or willing to obtain. Drug screen required. Unlimited opportunity for those who possess the desire to learn & a strong work ethic. E-mail resume to jim@limbwalkertreeservice.com

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**Climber Wanted**

Prefer 1 yr exp but can train. Year-round work on NC coast with a certified Arborist tree service. Valid driver's license required. Fax resume (252) 808-3397 w/salary requirements.

**Advanced Tree Care, McKinney, Texas**

Entry Level Arborist

Learn how to become an arborist and introduce yourself to all facets of tree care and tree remediation. Train under a registered, degree and licensed arborist. Bachelor's degree in forestry, arboriculture or other horticulture related fields. An individual with a passion for trees, a drive to learn and a "can-do" attitude. Also looking for PHC technicians, foremen and climbers. Fax resumes to the following: Telephone: (214) 544-TREE (8733); Fax: (972) 569-8370; Mail: Advanced Tree Care, 590 N. Meandering Way, Fairview, TX 75069.

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**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.

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**2002 Big John 90D Tree Spade**

Brand New Condition, Mounted 2002 International, 330 hp, Fuller BIL, 20,000 miles. $105,000. Contact Tom J. Fulmirello (401) 788-9988 South Kingstown, RI.

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**3 - 1994 Chevy 16-yard chipper trucks**

Cat Diesel engines, auto trans, w/approx. 100,000 mi each. Run great, look even better, white cab w/school bus yellow boxes. Twin hoist for big lifting power & ready to work. $23,800 each. 1997 Ford truck w/rear mt, 58’ hi-Ranger, in great cond. ready to work. $26,500. Can e-mail photos. Call MI (586) 756-7615.

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**Grand Slam Tree Equipment**


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**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.

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**Colchester, VT**


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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.

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- Pruning
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- More than 200 color illustrations
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- Workbook section with each chapter to reinforce concepts
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Small Engine repair & sales center for sale
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Warm South Carolina
Fifty-eight year old company located in central South Carolina is seeking crew leaders and climbers. Three years experience, valid drivers’ license and a passion for trees is a must. Company offers job stability, excellent pay, bonuses, sign-on bonus, relocation help, health insurance, holidays, vacation and a stress free opportunity. (803) 252-7664 or chris@soxandfreeman.com

Already own or planning to start a tree care company?
The Owner/Arborist Program can show you how to start or convert an existing business and grow with a proven leader in the tree care industry. We will assist you with sales & marketing, financial mgt., recruiting and equipment support. Our expertise can aid in your success. Our systems, coupled with your talent and determination, will give you an opportunity to control your destiny. Call D&B Tree (617) 471-4777 x30 or ownerarborist@dmtree.com

Holden Beach, one of the fastest growing counties in NC
Owner retiring after 38 yrs. Tree management & Landscaping contracts in place till 2010; w/25 acres of land (f)wood waste grinding site. Too much equipment to list. $2.2 mil. Call (910) 443-1072.

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Tree Service established in 1978 with a $500K annual gross; is located in fast growing area between Sacramento & S.F. Bay area. Year-round work. Price $225,000. (530) 308-0565.

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Majority of work is generated from the loyalty and referrals from our base. Virtually no competition. Great opportunity that is priced right. Hard to let go, but here it is. Call (503) 263-8733.

Tree service company for sale in Bradenton, FL
Gross of approximately $450,000-$500,000 per year, net of approximately $95,000 per year. Asking $325,000. Equipment includes: 2000 Ford F650 with rear-mounted High Ranger XT 50 bucket, 2000 Ford F750 with Prentice 90E grapple loader, 1994 Dodge 3500 dump, 1997 Dodge 3500 dump, 3 Stihl MS 360 saws, 2 Stihl 066 saws, 1 Stihl 084 saw, 2 Echo CS 8000 saws, 4 Stihl MS 200T saws, 1 Echo pruner PP2400, 3 Stihl pole saws, 1 Stihl BR 400, 1 Stihl BR 420C, wood splitter, Vermeer 252 stump grinder, Vermeer 502 stump grinder, Vermeer BC 1800A chipper, ice machine, and other accessories. Phone (941) 758-9931, fax (941) 748-8364, e-mail scdoll60@yahoo.com.

Tree Care Company for sale
Beautiful Central Coast California
Well established tree care company, prime for major expansion locally and/or into 3 nearby cities. 15 years in business, only locally based Tree Company. 1300 documented long-term repeat clients and 60 commercial accounts. Fully computerized, large public service Web site and year-round local advertising. Very high-end clientele includes: 5 trucks: Top kick 50’ Boom, 2 chippers, 1 Bandit 1290H, 2 stump grinders, full compliment of chain saws, cabling equipment, inventory and more, 7-man crew and office manager. We are deeply rooted in the community and have progressive gross increase of over $100,000 per year. We work 5 to 6 days per wk, 52 wks a year. No down time. No layoffs for over 12 years. Scheduling weeks in advance year round. Projected gross income for 2006 is $625,000. For additional information, please contact: (818) 986-9585.
**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” x 4-1/2” x 5/8”</td>
<td>$29.25</td>
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<tr>
<td>BC1800XL</td>
<td>KCH20112</td>
<td>Double Edge 10” x 5” x 5/8”</td>
<td>$37.50</td>
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<tr>
<td>BC1220-BC1250</td>
<td>KCH20002</td>
<td>Single Edge 8” x 3-1/2” x 3/8”</td>
<td>$17.25</td>
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<tr>
<td>BC1400</td>
<td>KCH20110</td>
<td>Double Edge 8” x 5” x 5/8”</td>
<td>$33.40</td>
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<tr>
<td>BC1800-BC2000</td>
<td>KCH20103</td>
<td>Double Edge 10” x 5-1/2” x 5/8”</td>
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**Morbark**

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<td>100, 200, 290</td>
<td>KCH10001</td>
<td>Double Edge 7-1/4” x 4” x 3/8”</td>
<td>$18.25</td>
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<td>10, 13, 17, 2050</td>
<td>KCH40001</td>
<td>Double Edge 10-1/2” x 5” x 1/2”</td>
<td>$30.55</td>
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**Brush Bandit**

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<tr>
<td>90XP, 280XP</td>
<td>KCH10004</td>
<td>Double Edge 5-3/32” x 4” x 1/2”</td>
<td>$21.60</td>
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<tr>
<td>100XP-250XP</td>
<td>KCH10003</td>
<td>Double Edge 7-1/4” x 4” x 1/2”</td>
<td>$19.20</td>
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<tr>
<td>250XP, 254XP after ‘01</td>
<td>KCH10101</td>
<td>Double Edge 7-1/4” x 4-1/2” x 1/2”</td>
<td>$25.50</td>
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<tr>
<td>1890 Intimidator</td>
<td>KCH20103</td>
<td>Double Edge 10” x 5-1/2” x 5/8”</td>
<td>$37.50</td>
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**Asplundh**

<table>
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<th>Model Number</th>
<th>Part No.</th>
<th>Knife Description &amp; Size</th>
<th>SALE Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>12” Drum</td>
<td>KCH30001</td>
<td>Single Edge 12” x 3” x 3/8”</td>
<td>$17.50</td>
</tr>
<tr>
<td>16” Drum</td>
<td>KCH30002</td>
<td>Single Edge 16” x 3” x 3/8”</td>
<td>$19.75</td>
</tr>
</tbody>
</table>

To receive this special pricing, you must use this code: 12396  
Offer ends December 31, 2006

Visit Zenith Cutter's new Website with secure on-line ordering and request a 2006 Product Catalog.  
Use Promo Code WEB1106 and save 10% when ordering.
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Pruning Ornamental Trees
By Cass Turnbull

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By Richard Howland

Safety: Taking a Header Off a Ladder
By David Hawkins

Five Step Preventative Maintenance Program for Your Fleet

Washington: New Rules Needed for Crane
By Peter Gerstenberger

From the Field: How Death Anxiety Affects Pest-Control Perceptions
By Bruce Colman

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Technical Rigging: Setting a Speed Line
Downey Trees, Inc.

Biofertilizers Bring Soil Back to Life
By Lakshmi Sridharan

Understanding the Relationship between Trees and Carpenter Ants
By David Oettinger

Ergonomics for Arborists and Landscape Workers
By Camille Di Monte Peterson

Single Rope Technique
By Jeff Jepson

TREE Fund’s Tour Des Trees Memoir
By Terril Collier

A300 Part 3: Cabling and Bracing Standard proposed revision.

Go from Good to Great: Five Ways to Boost your Sales Career.
By Chip Eichelberger

Washington: Help for Putting Together a Driver Safety Program
By Peter Gerstenberger

Start Thinking of your Business as a Retirement Asset
By Mary McVicker

Accident Aftermath – Terminate or Train
The Hartford

Observations on Tree Care in Germany
By Leonardo Polonski

Exploring the Fine art of Spider Sniffing
By Steve Sandfort

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How to Move a Banyan Tree Across the Country
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By Dr. Brian Kane

Emerald Ash Borer: Where Is It Headed and What Do You Tell Your Customers?
By Dr. David L. Roberts

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Crabapple Scab Can Mute this Colorful Ornamental
By Dr. Lakshmi Sridharan

Washington: South Carolina’s Edwin G. Foulke Jr. to Head OSHA
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By Walt Warriner

Tree Preservation: Austin’s Treaty Oak
By Margery M. Harrington

City Forester Meets Cat Woman
By Brian Colter

For Financing, Stick with Companies that Know the Industry (Locator)
By David Rattigan

MAY

Integrated Spray Equipment – One-Stop Calls Improve Efficiency & Profitability
By Brenda Carol

Chip, Chip – Ka-ching! Turning Chips Into Cash
By Rick Howland

Biological Controls for the Bad Bugs
Dr. Lakshmi Sridharan

Are Your Hispanic Workers Safe?
Barbara Mulhern

Is California’s New Workers’ Comp Program Working?
By Janet Aird

TCIA’s Associate Members are the Backbone of the Association
By Cynthia Mills

Washington: Utility service vehicle operators gain exemption from HOS Regs
By Peter Gerstenberger
Ergonomic Tools and Equipment Can Reduce Injuries and Company Expenses  
By Camille Di Monte Peterson and Barbara Henderson

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By Kay Harrison

Listen, It’s Up the Tree or Down the Road  
By Elmer Pyke

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The Chips are Flying Over the Soaring Costs of Fuel  
By Rick Howland

Pruning Lilacs for Flowers and Shape  
By William Warren

Rigging: Removing, with Care, a Willow Oak in Georgia  
By Trees Unlimited

TCIA Accreditation Opens the Door to Consulting  
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Washington: Is End Near for Co-op Help  
By Peter Gerstenberger

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By Adrian S. Juttner

Washington: Two World’s of Arboriculture: The Maryland Story  
By Peter Gerstenberger

Massachusetts Arborist Association Day of Service at Crane Estate  
TCIA’s CTSP Program has 117 Enrollees in 28 States  
Submit Better Bids if you Want More Work!  
By George Hedley

Structuring and Restructuring Debt as Your Business Grows  
By Mary McVicker

Trees and Bees Just Go Together  
By Elmer Pyke

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By Dr. David Shetlar  
Brush Cutters: Cutting a Clear Path to Profitability  
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TREE CARE INDUSTRY – DECEMBER 2006 79
Call me Richard.

This is my official notice that I will no longer prune large hedges. I have been trying to retire from this particular chore for a number of months, but I kept making exceptions.

My last exception was a 15-foot-high by 15-foot-wide leylandi cypress hedge that stretched 200 feet around a property. It needed to be reduced to 10 feet high to regain a water view in a seaside community in Washington state.

Due to topography, there was no way to use a bucket truck or ladders. It had to be done the old-fashioned way – two sheets of plywood and a prayer. If you have never done this, don’t.

The method involves cutting a section of the hedge the correct height, placing a sheet of plywood on this cut, then climbing onto this sheet that is allegedly supported by the cut ends or branches. From there you leapfrog the sheets of plywood until you run out of hedge. This is a thoroughly unsafe practice for two obvious reasons:

1. You are working on a surface about as stable as a rowboat in rapids.
2. There is nothing holding you onto this board except gravity.

I knew better, but, it was an old friend who asked me to do the job and she was very anxious because neighbors were complaining of their lost views. The project went smoothly enough, until I was two-thirds finished.

I should mention, for reasons of stability, it is important to sit or kneel in the center of the plywood sheet. But the day was long and knees get sore, so I was sitting on the edge of the plywood sheet with my pole saw like Huck Finn fishing on a summer afternoon.

Then it struck.

My plywood raft shifted forward and began its plunge into the dark interior of the leylandi hedge. My life flashed before my eyes. It was boring.

I tried to correct my listing ship, but the balance of gravity had shifted and there was nothing holding me to the plywood sheet. I was stuck like an undigested morsel of meat in a primeval carnivorous conifer.

There was nothing left but to move sideways. I chose what I hoped was the right direction, and began a sort of swim/climb/crawl maneuver. After 15 minutes or more of wriggling through this tangled mass, I emerged from the sea of green, but I was faced with one more problem. I was about three feet above the ground.

I could not go back. There was no room to turn around. There was nothing to do but to continue head first out of that hedge like a worm out of an apple. I wriggled my head and torso free, then slowly fell and somersaulted onto the ground, once again in full view of the hundreds of windows of potential clients.

After moving my truck so the company name was not so visible, I returned to the scene and finished the project with what little dignity I could muster.

All in all, a few scratches, bruises and acute embarrassment are small prices to pay for throwing all my common sense overboard.

Richard R. Hefley is an ISA certified Arborist (really) and owner of Gardens By Design In Nordland, Washington.

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