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OUTLOOK
By Robert Felix

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Readers let us know what's on their minds.

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You can benefit from brainstorming.

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FOR THE LOVE OF TREES
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QUALITY STUMP GRINDERS
By Peter Gerstenberger
The editor writes about his visit to J.P. Carlton Co.

LIGHTING THE LANDSCAPE
By Shaw James Hazen
Special lighting effects can add drama and excitement to almost any landscape while still being practical.
Working safely should be a way of life.

You are about to become more highly regulated by the federal government. The Occupational Safety and Health Administration has just published a new standard for the electric utility industry. Included is a section that requires employers to certify that their employees have been trained to work safely around hazardous conditions. If your employees work within 10 feet of electrical conductors and they are not trained to do so, you are in violation. If you believe that they are trained to do so, you must be able to document that training or you are also in violation.

Congress, with the support of OSHA and others, is considering legislation that would require you to establish a joint management/labor safety committee to manage your safety programs. Larger companies may have to hire a third party to certify that a firm’s safety program is adequate. Further, more severe criminal and financial penalties will be included in the legislation.

The tree care industry, in general, and you, in particular, are going to be carefully scrutinized by OSHA officials. OSHA already has one special emphasis group looking at tree care personnel working near electrical conductors and another group looking at tree worker fall protection systems.

What does all this matter? Except that you should keep abreast of legislative changes that affect the industry, none of this should make a major difference. After all, we wrote the book on tree care safety - ANSI Z133 - before OSHA was even created. We know that tree care can be dangerous and we all know, or we should know, how to work safely. So what’s the big deal about OSHA requirements?

As an industry, we have our own safety requirements that either meet or exceed OSHA’s requirements. The problem is that, as an industry, not every firm takes the time to teach its employees how to work safely. Too many make excuses for not having a good safety training program in place. If an accident happens, the pain, suffering and consequences could be unbearable.

On the other hand, those of you who are safety conscious have nothing to fear. For you, safety is not occasional; it’s a way of life that you teach and practice. Unfortunately, you may still have an accident because someone didn’t pay attention or got careless. But my hat’s off to those companies who do teach, practice and enforce safe work habits. Many of you should be very proud of yourselves.

Safety doesn’t hurt. It prevents unnecessary suffering, reduces workers compensation insurance premiums and increases profits. In my opinion, safety should be a habit, a way of life.

Robert Felix, Publisher
You want a stronger business.
Have you considered a stronger saw?

To the average citizen, a chain saw is a cutting tool. No more, no less. But if you depend on it for your livelihood, a saw is more than just a cutting tool. It’s a business tool. Which is why you should take a good, hard look at Shindaiwa. We manufacture high-performance chain saws for professionals. People who demand the rock-like reliability, low weight, easy starting, and smooth power few saws deliver. Ours do. From the all-new, 4.5 cubic-inch 757 to the compact 300S, every Shindaiwa is built for maximum cutting efficiency, minimum cost of ownership. It’s the result of flawless construction. Small displacement, high output engines. And engineering tolerances normally reserved for Formula One race cars. For added protection, you’re backed by a national network of independent servicing dealers. So visit one soon. Because if you’re running a business, shouldn’t you be running the strongest business tools as well?

Please circle 36 on the Reader Service Card
By Shaw James Hazen

Irrigation, lawns, firewood, landscape maintenance and recycling can all be ancillary profit centers for tree care companies. Many firms diversify to include such services for several reasons: to fill in their schedules, to train new employees, to interact with customers more frequently, to enhance marketing opportunities and to increase intimacy with customer property. Low start-up costs often make such ventures even more attractive.

Perhaps a key element lurking under the veil of "profit diversification" is change. As Socrates, the famed Greek philosopher, said: "Change is the greatest aphrodisiac." While tree care is in general exciting and challenging, there is always room for some change. In this respect, landscape illumination is both challenging and exciting. While it is somewhat of a second cousin to tree care, it is a major departure from the roar of the chipper-and-chain.

One is free to experiment in ways that are unheard of in other realms of the industry. Creativity reigns supreme in this domain. Much work and experimentation are accomplished at night, which can be either a blessing or curse, depending on weather, workloads or employee regulations. While entering the lighting center presents its own unique set of obstacles, it also provides a peek behind the looking glass. Imagination and art replace science and physics. We can wax creative in the land of the luminous and allow our viscera to dominate for a moment. We can enter our customer's brain and create his dreamscape - the ultimate challenge.

Why illuminate? To see, of course. What do we need to see and why? These should be the first two questions that are addressed. Ferret out the customer's agenda and educate him on the possibilities and feasibilities of his desires. In 400 A.D., Emperor Constantine ordered the streets of Constantinople to be lit with thousands of candles so as to approximate daylight. While an interesting endeavor, the practice wasted time and material. Undoubtedly, it served little but the indulgence of his own ego.

In London, circa 1800, with the discovery of natural gas, the streets were well lit in an efficient manner, making them safer and more interesting for travel. Ego vs. efficiency. Why not both? Lighting can be an awesome venue for one's perspective of the environment. Things change at night. People change at night. Why not be able to have your environment change at night too? Flip a switch, dial a dimmer, and bingo, you are on the other side of the looking glass. Ego, art and change all at the end of your finger.

The aesthetic aspect of landscape lighting notwithstanding, there is the pragmatic side as well. Fully seven-eighths of our sensory perception is...
derived from sight alone. Our sensory input at night can dwindle to one-eighth of its potential without the intervention of the light bulb. With illumination however, certain endeavors are not only made possible, but practical. Quiz your customers about their nocturnal habits and desires. Educate and demonstrate to them the three types of garden lighting.

Focal glow focuses attention on an item and helps develop an interest in the subject.

Ambient luminescence is open and even. The effect is low in contrast, natural and useful for working and travelling within the area of illumination.

Play of brilliants advertises the movements of light and/or water in a given area.

The following are descriptions of lighting techniques that the installer should get to know intimately and the customer should be made privy to. Many of the techniques are mutually exclusive, but many are interrelated.

Downlighting - A general term for lighting from above. This technique emulates natural sun/moonlight. The results are soft and filtered as long as the source is obscured.

Uplighting - Another general term meaning lighting from below; the results are unnatural yet spectacular in appearance. It is used to highlight key elements in the landscape or living environment. Use sparingly to avoid competition between elements.

Safety lighting - Usually downlit to provide better surface illumination while travelling on foot, bike or car. Guest safety and liability are good sales points for this technique. Security lighting (a subset of safety lighting) is designed to warn occupants of human and animal intrusions. Switching variations are of primary importance to this technique. At a minimum there should be at least one centrally located switching panel that is quickly accessible in the event of an intrusion. Time clock, photocell and motion detection switches are particularly useful in this regard.

Area lighting - Usually downlit to provide strong and even illumination. The technique is not particularly intriguing, but addresses the need for those who work and play after dark in their gardens. Use floodlights in lieu of spots and don’t over-illuminate or other garden attractions will be suppressed.

Diffuse lighting - Obtained by positioning a translucent object in front of the light source. Canvas panels, shades, globes, frosted glass, lathe work, trees or bushes can be manipulated to achieve this effect.

Moonlighting - A soft natural downlight that emulates the light of the moon. The higher and softer the light, the more natural and desirable the effect. As with most forms of lighting, the source should be as obscure as possible. An obscure source is particularly critical with this technique in order to achieve the desired effect.

Grazing light - While often used by bovine guests, its primary use is to accentuate the texture on a flat surface, the trunk of a large tree, an interesting wall or walkway, etc. The source should be positioned at an acute angle to the subject to enhance contrast within the subject. The source can be positioned from any angle as long as it is nearly parallel to the plane of the surface subject.

Crosslighting - Two or more sources intersect in an attempt to illuminate a subject more fully and evenly. Shadows are filled in, and the overall effect is softer and more natural than a single source. When downlighting, be sure to cross beams high overhead for best results.

Spotlighting - Hard and direct illumination accentuates contrast on a subject and is directed to key points of interest in the landscape. Entryways, statues, fountains and key trees are good candidates for this technique. Use sparingly so as not to overwhelm the senses.

Accent lighting - Refers to small, mainly low-voltage placements used to accent smaller and less important elements in the landscape. Sometimes used alone to illuminate smaller gardens and walkways, etc.

Silhouetting - This technique mimics a tree-lined ridge at sunset. The effect is bold and dramatic, but care should be taken to obscure the source. Pick a bold and substantial subject that will project well.

Shadowing - This is the opposite of silhouetting in that the subject is front-lit in order to produce a shadow against a flat surface. Choose a subject that is appropriate to a high-contrast projection of light. Stay away from busy or nondescript foliage and windy areas, which all lend to a muddy shadow.

Contour lighting - Serves to establish boundaries and perspective to elements in the landscape. Downlighting in a series is used most often to delineate walkways, lawn borders, retaining walls, and other natural and manmade borders.

Fill lighting - The term is also used in photography and applies to the use of a secondary light source that softens shadows, lowers contrast and enhances natural dimension. In landscape lighting, the fill source should be roughly 10% the wattage of the main source.

Background lighting - As the name implies, the background is the emphasis of the area. In turn, the foreground must be somewhat de-emphasized in order not to compete with the background vista. This is particularly effective when viewed from indoors.

Vista lighting - Requires low-key illumination so as not to compete with the vista. Hillside and lakefront homes often have their own spectacular views that cannot be altered or improved upon. Sometimes the careful framing of key elements such as large trees or architecture can compliment such a situation if done tastefully and with discretion and it does not override the key theme. Any accent lighting should be kept low to the ground and low in intensity so as not to distract one’s focus.

Perspective lighting - Provides dimension to an area by emulating a tunnel effect. The foreground must be lightly lit, with a high-wattage light at the end of the “tunnel” in order to focus on the background. Walkways, corridors and row trees are excellent choices for this technique.

Water lighting - Obscuring the source is particularly important with this approach in order to eliminate glare. Bear in mind that dirty water doesn’t show well when uplit from inside the pool. Sus-

TREE CARE INDUSTRY - FEBRUARY 1994
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ROOTS, Inc. has a promotional flier to increase your sales to new clients, and enhance the programs offered to existing ones. It will be available to arborists for your spring mailings. The flier, pictured below, is a four-color, two-sided, glossy piece that will fit, unfolded, into a #10 envelope. Available at cost or as a co-op allowance with your distributor.

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pended particles reflect too much and exacerbate any muddy appearances. Point lights away from the viewing area to reduce glare and promote a frontlit effect. Installing a dimmer is highly recommended in order to fine tune the system and dial in the appropriate mood for the evening. Pool lighting can take on many perspectives and can emulate any or all of the aforementioned with just a dimmer in the circuit.

Mirror lighting - A subset of water lighting, mirror lighting can be effective and dramatic. If muddy waters have you singing the blues, try using water-reflected light in lieu of uplighting with a murky appeal. Try to showcase a large item close to the water in order for the effect to fly. Be sure that the water is as dark and wind free as possible in order to maximize the mirroring effect. Reflected icons should be as close to the water as possible and directly opposite from the viewing area. Subjects should be strongly uplit with an obscured source in order to maintain maximum reflectance.

While these techniques are excellent guidelines, many of them can be co-mingled or experimented with in order to achieve the desired effects. Fixture type, placement and wattage require much experimentation and experience in order to fully serve the customer. Always have a comprehensive array of portable fixtures on hand to accomplish field mockups.

It would serve arborists well to speak to local lighting dealers to ascertain prices, techniques and availability of various systems. Additionally, dealers may be a good source for new customers not only for lighting projects but also for mainstay work. System repairs and bulb changes may be a good training ground for new climbers and as a foot in the door for tree inspections and much future work.

Shaw James Hazen owns and operates Shaw Hazen Landscape & Tree Care in Orinda, California.
Underground Installation Pointers

Specialized equipment

Trenching can be used to install landscape lighting, irrigation, grounding for tree lightning protection, etc., or to prevent root graft transmission of infectious tree diseases. It need not be overly tedious or time-consuming. Various companies manufacture walk-behind trenchers, borers and cable plows suitable for this purpose.

Your skid-steer loader or hydrostatic compact tractor can be converted to a versatile trencher with a trencher attachment from Bradco. The model 612 mounts on the 3-point hitch of tractors with 20-30 PTO hp. It trenches 30-60 inches deep and 6-12 inches wide.

For more information on Bradco products and the name of the distributor nearest you, contact Bradco at 800-922-2981.

The height of sophistication is trenchless technology. Walk-behind boring units are scaled-down, lower-tech versions of semi-trailer-mounted machines that use laser-guidance systems to tunnel under rivers and roadways. These small, portable units can maneuver under natural obstacles in the home landscape like tree root systems. They minimize site disturbance and tree damage.

Vermeer recently announced the availability of an 18-hp walk-along trencher with optional boring attachment, the V-1850. Its compact dimensions allow it to work on jobs where access is limited. Since it is fully hydrostatic, there are not as many moving parts to maintain. Hydrostatics make the machine easy to operate, and releasing pressure on the machine’s safety bar stops it automatically.

The V-1850 trenches as deep as 48 inches, and at widths of four to 10 inches. The V-1850 has an optional Porta-bore attachment that easily bores under sidewalks and driveways. An additional option is the root cutter attachment with a maximum cutting depth of 14 inches.

Vermeer sells a wide array of trenchers and boring equipment. For more information, contact Vermeer toll-free at 800-829-0051. From outside the United States, call 515-628-3141.

The model L-2 mini cable plow from the Line Ward Corporation has a snap-in-place boring attachment. The bore is not guidable, but can be effective for up to 60 feet. A cable plow or slit trencher can install underground cable or irrigation pipe with minimal disruption to landscaped areas. The L-2 offers the versatility of trenching or boring in a walk-behind unit that can be transported in the back of a pickup.

For more information, call the Line Ward Corporation at 716-675-7373.
Precautions

When underground installations of any sort take place, it is best to avoid even shallow trenching under the trees' drip-line. However, that may be the very area the utility needs to reach. As was pointed out in last month's feature article "Trees and Construction," tunneling under trees or trenching radially can minimize damage to trees from utility installations.

When roots must be cut, they should be cut cleanly rather than torn. As a last resort, when indiscriminate trenching or excavation has torn roots, an arborist should cut damaged roots back cleanly to a lateral root with a sharp pruning tool. The arborist may also want to incorporate a suitable fertilizer mixture into the backfill to encourage root regeneration.

Always check for underground utilities before digging or trenching. Most areas have a Dig-Safe hotline number. Check your Yellow Pages or call your local utility.

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INDUSTRY INPUT

Two for one

I have been climbing for many years and developed a system of using two buck straps (or) adjustable length ropes. Each rope has a safety snap on one end and a regular snap on the other end - one rope is longer than the other and the ropes are of different colors.

In use, I am right-handed so I snap all four snaps to my left D-ring on my saddle. Sometimes I cannot throw a climbing line into the tree, so I have to climb until I can install the line. In doing so, I climb with one buck strap rope until I meet a branch and then I unsnap the second rope's regular snap and install it around the trunk, over the obstacle branch and snap in. Then I carefully unsnap the lower buck strap rope and proceed. In this way, I am always snapped in and not just holding on while getting around an obstacle.

When working down a removal trunk, I can be strapped in - yet the second buck strap rope can be looser and hang lower around the trunk as a safety precaution. If I should happen to cut my main buck strap rope, I am protected.

For stability, make the buck strap rope longer and wrap (it) twice around the trunk or go around, take (the) free end and cross over the rope snapped to you, then snap in. This offers more stability.

Further, take your time in what you are doing because after an accident, you have all the time in the world. I also say a prayer!

Tom Engler
St. Clair Shores, Michigan

Thank you

Thank you for sending me your magazine every month. I really enjoy it, and read it from cover to cover. A truly great magazine for people like myself - small business but learning all the time.

Tom Oryoll
Tom's Tree Service
Green Bay, Wisconsin

Letters should be addressed to:
Tree Care Industry, Editor
P.O. Box 1094
Amherst, NH 03031
Brainstorming
This Technique Can Be Key To Innovative Ideas

By Richard Ensman Jr.

Just suppose...
...your office is bogged down with a typing backlog, and the entire office staff gets together to discuss ways to solve the problem; or...
...sales are down for the quarter and your sales team gathers to discuss new promotional strategies you can use to push those lagging sales back up; or...
...your department is trying to come up with a catchy slogan for a new methods improvement program.

If you can visualize yourself and your co-workers struggling with these predicaments - or almost any common business problem - you can probably benefit from brainstorming. A time-tested series of problem-solving tools, brainstorming can unleash creativity and skills you never even realized you had.

Here are nine brainstorming techniques you can begin to use right away:

Classic brainstorming: Using classic brainstorming, you and your co-workers focus on a problem or need for a limited period of time - probably between 30 and 90 minutes. You generate as many solutions to the problem as possible, while a leader or facilitator writes them all down on newsprint or a blackboard. Quantity of ideas, not quality, counts and criticism is not allowed at this time.

The wrong way: Here, instead of generating good ideas or solving problems, you deliberately try to generate poor ideas or discuss ways to make your problem worse. Let's say you're trying to solve recurring customer complaints about service. Ask yourself: How could you infuriate every single customer you meet? How could you ensure that no first-time customer would ever want to buy from you a second time? By focusing on dramatically poor customer service, you may come to grips with the service issues that matter most to customers - and be better poised to solve your problem.

Role playing: Let's suppose you're an accountant trying to solve a thorny record-keeping problem with your co-workers. Ask yourself how someone in the purchasing department or in sales would handle a similar problem. Ask yourself how your colleagues in other firms or other industries would address the issue. By viewing the problem from a different professional perspective, you may develop a novel solution.

Metaphors: A metaphor is a word or phrase that symbolizes something other than its literal meaning. You can use metaphors as tools in brainstorming. Suppose, for instance, that you're seeking ways to energize your sales team. Visualize your sales team as a baseball team; how would you improve the performance of a baseball team? By applying metaphors to your production processes or your people, you'll gain a fresh outlook on the problems you face.

Word association: Instead of trying to generate concrete solutions or ideas, you simply generate whatever words or phrases come to mind. If you're discussing ways to improve the exterior appearance of your main office, your group might generate phrases like these: "Paint." "Texture." "Wash." "Lawn." "Manicure." "Outdoor carpet." Later, you can use these phrases to develop action plans and strategies.

Risky options: Group members may be afraid to suggest unusual or risky solutions to problems; the fear of failure or group censure is often too great. Using the "risky option" technique, you openly invite wild and risky approaches to the problems you face. If you want to inject levity into the process, you can offer a prize to the group member who poses the riskiest option of all. After a short period of silence - and more than a little mum-
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Richard G. Ensman Jr. is a freelance author based in Rochester, New York. He specializes in business and management topics.
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OSHA Faces Reform

By Brian Barnard

Two bills that would reform the Occupational Safety and Health Act are pending in Congress, and the Clinton administration is also addressing the issue of OSHA reform.


The Democrats' package calls for sweeping changes of OSHA, such as expanding OSHA coverage to state and local government workers, requiring joint labor-management health and safety committees and expanding criminal sanctions for employers. The bills sponsored by Ford and Kennedy garnered letters of support from Secretary of Labor Robert B. Reich.

The cost of implementing Ford's and Kennedy's package has been considered a critical issue. When OSHA reform legislation was discussed in 1992, former acting OSHA Administrator Dorothy Strunk said it would require an additional $378 million for OSHA. The Agency has been appropriated $297.2 million for Fiscal 1994. Current OSHA head Joseph Dear recently told the Senate Labor and Human Resources Committee that the agency is conducting a new budgetary analysis of the legislation.

The Democratic-supported bill has generated opposition from Republicans, whose reform measures stress voluntary compliance rather than detailed employer mandates.

With the support of the White House and labor unions, the Democratic OSHA reform package may become reality this year. Republicans have a strong case against the sweeping proposals, most notably the high cost, and their arguments may delay or alter the bill.

Brian Barnard is the NAA's Government Affairs specialist.
Almost hidden in the peach orchards of rural Spartanburg, South Carolina, is the stump grinder manufacturing facility of the J.P. Carlton Company.

The humble, laid-back, jeans-and-T-shirt atmosphere of the J.P. Carlton shop disguises the fact that this growing company is turning out well built stump grinders.

In Carlton's back building, a burnout machine cuts frame parts out of sheet steel. Its electric eye traces an India ink pattern off a sheet of white paper. An arc cutter replicates the pattern on a $1000 piece of sheet steel. Danny Falatok, Carlton's president, recalls a humorous incident: "One morning I came in here to find a very expensive piece of steel lying in pieces all over the floor. We found a gnat crawling across the pattern. The machine had been trying to trace that gnat!"

Falatok, a careful and astute businessman, bought the burnout machine at a used equipment auction. He has since amassed an impressive collection of production machinery for turning out a high-quality product.

Falatok started his manufacturing company as an outgrowth of an earlier interest in doing tree work. Simple economics drove his decision to transfer his career goals.

"When I was still in high school, I got it in my head that I wanted to do tree work," Falatok recalls. "So I bought a pair of climbing spikes and started doing removals in the evenings. I was a stone mason at the time. One day, I met the guy who removed the stumps after I removed the trees. He made more money in one evening than I made all week."

Then and there, Falatok decided to start grinding stumps. "I found out he bought the machine here in town - it was made by Mr. Carlton here in Spartanburg. So I went over and bought one. That kind of phased out my tree work because I could make more money working by myself on Saturdays than I could with two or three of us cutting trees and hauling brush."

"Take a stump grinder, I don't care whose it is. If it stays together, you'll make money."

That first summer grinding stumps, Falatok set a goal of taking in $300 every Saturday. "There were two Saturdays that I didn't reach my goal," he recalls, "but there were a couple of days that I made almost $1000."

Those two high-income days prompted him to buy the company. "When I bought the business, I bought a piece of paper. Some of the patents go back to the '50s," he recounts. "The gentleman I bought it from was quite elderly and he passed away within a year of the sale, so I was on my own. I started building machines in the basement 17 years ago."

As the business grew, Falatok moved to larger quarters and then to his present location, where he has built four buildings over the years.

Carlton's sales increased steadily last year and the company is expanding its dealer network worldwide. Still, because Falatok puts emphasis on quality and reliability rather than on quantity, Carlton's output of units remains at modest levels. "We're still small enough that I know everything that goes on. The guys in the shop know that if something doesn't look right anywhere on that machine, it's not going out. If a customer calls and says that something's broke, we're going to sit down and talk about it - figure out what caused it to break, and how to change it."

At Carlton, changes in design and construction literally occur daily and a machine may undergo several improve-
ments in a few short months.

Given Falatok's history with the business, it isn't surprising that his favorite aspects of the job are talking on the telephone to customers and being in the shop. He is most comfortable discussing the technical details of the stump grinder's construction, and he likes to invite prospective customers into the shop to learn about the machines and how to maintain them.

**Quality is priority**

Falatok is the first to admit that his machines are more expensive than most, but Carlton machines compete on quality and durability. "I feel we're way ahead of everybody as far as technology," Falatok says. "The majority of our sales are to people who really understand what they are buying - we don't have a lot of first-time buyers."

Falatok lists several reasons his units cost more. They use more steel. According to Falatok, one of Carlton's large units weighs almost 2000 pounds more than its competition. He continues: "We've got counterbalance valves, direct drive off the hydraulic pump, highly expensive roller bearings on the cutter wheels and jack shafts...everything more than what's normal," he says. "On all our units, we build fenders out of quarter-inch plate. We sandblast all our machines, coat them with epoxy primer and paint them with Imron paint. Units are painted electrostatically. Paint is $100 a gallon. The special paint booth and other equipment we needed cost over $60,000. I could use a cheaper process, but why build a top quality machine only to have the paint fall off?"

One of the clearest examples of how Carlton has furthered stump grinder technology is the full-functioned wireless remote control that is available on some units. The same technology has been used on equipment like log loaders and potato pliers, either to separate the operator from a hazard area or to give the operator a better vantage point for viewing and controlling the operation.

The wireless units are designed to have a 100-foot range and to be water and dust-tight. A special operating frequency and unique encoding with eight three-position switches virtually eliminate interference from other transmitters like garage door openers or other remote control devices. Carlton also sells a cable remote control. Falatok feels strongly that either remote system isn't less safe than conventional controls, and that each type has its advantages. What makes any control unsafe is how it is used, and Falatok emphasizes that the operator has to learn to use and be respectful of a remote, like any other tool.

A full-functioned wireless remote control adds $1500 dollars to the machine's price tag. As Falatok admits, "It's not going to be for the first-time buyer." However, he feels that operators who have experienced some of the shortcomings of conventional swing-out controls will appreciate this option.

Falatok sums up his philosophy for success this way: "If you listen, you'll learn. You don't have to be big or small to listen to your customer, to look at their machines after they've been in the field two or three years to figure what's working, what's worn, if they've had to put any welds on it... when you deal with as many people as we do, and if you have any kind of conscience, when something breaks you take it home and take it to bed with you. We've made our own luck."
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Bob Davis has lived and worked on the same stretch of land for all of his 62 years. The 200-acre farm, located 10 miles southeast of Nebraska City, Nebraska, amid picturesque rolling hills, has been in the Davis family for more than 125 years. When Chris Aden, general manager of The National Arbor Day Foundation’s Arbor Day Farm, approached him about donating trees for a special tree transplanting project, Davis didn’t think twice.

“My father was one of the early conservationists, not unlike J. Sterling Morton,” Davis says, adding that he enjoyed the idea of contributing to the enhancement of Arbor Day Farm, located at Nebraska City. “I’ve loved my life here, and donating trees is a little like sharing the land that I love.”

The tree transplantation project is part of a larger landscaping plan underway at Lied Conference Center, the newest addition to Arbor Day Farm. Opened for the first time last fall, the conference center is designed to accommodate small meetings, large conferences and families stopping overnight, according to John Rosenow, executive director of the National Arbor Day Foundation.

Trees donated by residents of Nebraska City and surrounding farms and communities are becoming what is being called the “parking lot arboretum,” a sophisticated landscape design that serves functional, educational and aesthetic uses.

“Besides muffling noise from cars, this type of landscape helps purify the air from exhausts and counters the heat island effect,” Rosenow explains. “We will also use this project to show thousands of visitors each year that trees planted beside and within parking lots can be both aesthetically pleasing and an important energy conservation tool.”

Davis offered 40 Scotch and Austrian pines to the project. More than a dozen other families, along with Davis’ contribution, donated a total of 160 trees, including a wide variety of evergreen and deciduous selections, to the project. Another 40 cherry trees, now planted elsewhere on the Arbor Day Farms grounds, will be moved to Lied Conference Center. More than 150 nursery trees, plus numerous shrub varieties, will complete the planned arboretum.

Urban foresters, landscape design consultants and others have been involved in the development of the parking lot arboretum from the initial planning stages of Lied Conference Center.

Vermeer Charitable Foundation, Inc., of Pella, Iowa, provided a grant to hire a certified nurseryman and his Vermeer TS9400 hydraulic tree spade, which digs a hole 94 inches in diameter to move the larger trees. The trees are from six to 16 inches in trunk diameter, and from 15 to 30 feet high. The tree spade looks like a creature out of a Steven Spielberg movie when set in motion. The tree spade’s four, 9-foot long blades resemble medieval shields and operate independently from one another, yet together “hug” the specified tree, and swoop 65 inches deep into the earth around it. The tree and thesoil containing its roots are then lifted and transported to its assigned space at Lied Conference Center. The tree is continuously misted while it is out of the ground.

“Survivability was the primary factor in deciding which tree varieties and sizes would be moved,” Rosenow says, adding that topsoil management and drip irrigation systems will help the transplanted trees thrive and mature.

“The contributions from Vermeer and the generous tree donors have made this project enjoyable, as well as successful,” Rosenow says. “It’s a real community project.”
Of Arbor Day

Replanting Kotzebue Forest, Above The Arctic Circle

By Matt Tyrala

Heritage trees, landmark trees, historic trees. Some of them have local, regional or even national significance. All of them have interesting stories behind them.

If being the only tree in a community of 3,000 souls qualifies for one of these designations, then here is a story to be told.

This exotic tree was located in Kotzebue, Alaska. How can an Alaskan grown white spruce, planted in Alaska be exotic? Well, not only was it the only white spruce, but it was the only tree of any kind within several thousand square miles of the town.

This tree was planted more than 20 years ago on the wind-swept rolling hills of the treeless tundra country bordering the Chukchi Sea in northwestern Alaska, above the Arctic Circle. Next stop west...Siberia!

Shortly after World War II, with the onset of the Cold War, the Distant Early Warning (DEW) Line System was set up across Alaska and Arctic Canada. One of these sites, called White Alice stations, was constructed high on a bluff on the outskirts of Kotzebue. Although these sites are automated now, for many years they were manned and maintained by the U.S. Air Force, which still administers them.

The story goes that during a tour of duty at this station, a homesick serviceman decided to plant a tree to help relieve his loneliness. Later, a white picket fence was built around the tree and a sign proclaimed it the “Kotzebue National Forest.”


Like most arborists running small companies, I wear different hats for different occasions and tasks. As the only practicing arborist in Alaska, I preside over the daily operations of the only full service tree company in the state. In this role, I wear my commercial arborist Aspen Tree Surgery hat.

I am also a volunteer arborist and executive director of the non-profit corporation Alaska T.R.E.E.S., Inc., founded in 1992 to initiate, promote and support tree-related community service projects, primarily in the Anchorage area but also statewide.

The vandalism to the best known landmark in Kotzebue was a very real loss to the community. So, when I heard of it on the news, I decided that replacing the tree would be a worthwhile project for Alaska T.R.E.E.S. to undertake.

Because of the extreme climate along the shores of the Chukchi Sea, I selected a tree grown in a small nursery near the community of Nenana, deep in the interior of Alaska on the Tanana River. This area has the harshest environment in Alaska where nursery stock is grown. The ambient air temperature in winter around Nenana can fall to 70 degrees below zero with wind chill factors that can surpass minus 150 degrees.

The tree I chose was a nicely branched native white spruce...
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six and one-half feet tall and approximately 10 years old. Before digging the tree, we loaded the vascular system with water and coated the bark and foliage with an anti-desiccant spray to protect it from excessive moisture loss due to the strong winds in Kotzebue.
To protect the tree from damage by the freight handlers, it was balled and burlapped and then potted. We also bound the limbs like a cut Christmas tree. Because we wanted the tree to travel upright, we were limited to an overall height of nine feet, including the pot.
On September 4, 1993, the tree was dug and then trucked 50 miles north to the Fairbanks Airport, where it was loaded on the flight to Anchorage. Here it would be transferred to another aircraft for the trip to Kotzebue.
In Kotzebue, I was met by the station agent for Alaska Airlines who transported us to the planting site in an air cargo delivery van. Alaska Airlines donated the freight costs for the tree.
In addition to myself, the tree planting crew consisted of the Kotzebue city manager and the all-female staff of office personnel.
With the planting and dedication of the tree completed, we congratulated ourselves on a job well done. And then, all too soon, it was time for me to depart rural Kotzebue and head back to the city.
It may be that after participating in such an unusual project, all other tree plantings will seem anti-climactic and routine, but I will always have memories of this special community service project and the stuff of a good story.
And another layer of history has been added to "Kotzebue National Forest": a tree with a story as unique as the land where its shadow now falls.
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March 9
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Contact: Julie Nicoll, 708-932-8443

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1. What is the common term for the hard, sometimes impermeable soil condition which results on the sides of receiving holes sometimes dug with smooth tree spades?
   a. Hazing
   b. Glazing
   c. Fraggling
   d. None of the above

2. What are four of the most common mistakes made when digging and transporting trees using tree spades?

3. To increase tree survival, it is not necessary to center the tree when digging a tree with a tree spade.
   a. True
   b. False

4. Research indicates that the sides of the planting hole in the top eight to 12 inches should be loosened up and flared out a minimum of two to three times the diameter of the root system to allow better root establishment into the surrounding soil, especially in poorly drained clay soils.
   a. True
   b. False

5. Planting holes should be amended with backfill containing at least 33% organic matter for best root re-establishment.
   a. True
   b. False

6. A larger ball size may be needed for what type of trees?
   a. Hard-to-transplant species
   b. Trees expected to receive minimal care
   c. Trees planted on exposed sites
   d. All of the above

7. Research has shown that up to ____% of a tree's original root system may be lost during transplanting operations with a tree spade.
   a. 25-30
   b. 50-60
   c. 75-80
   d. 95-98

8. Although moisture deficits definitely can cause tree mortality, excessive moisture and poor drainage are the more likely problems in urban sites.
   a. True
   b. False

9. Although larger trees are generally preferred by many citizens for an "instant landscape," research has shown that smaller diameter trees establish more quickly and can actually outgrow the larger planted trees in many instances.
   a. True
   b. False

10. In general, the final height of the soil ball after planting should be slightly lower than the surrounding soil, especially on poorly drained sites.
    a. True
    b. False
11. Research has indicated that wire baskets need not be removed because the root tissue can and will grow around the wire.
   a. True
   b. False

12. After transplanting, most of the new root growth is located “interior to” or “back away from” the cut surface of the root. It is, therefore, not necessary to loosen the adjacent soil next to the soil ball.
   a. True
   b. False

13. Irrigation of recently planted trees should occur from the time of planting until the tree is established, which can be determined by
   a. the return of the normal green color to the leaves;
   b. the return of twig and trunk caliper increase to that which occurred prior to planting;
   c. the use of tensiometers;
   d. all of the above.

14. When a tree is properly planted, you should be able to easily see the tree buttress or “trunk flare” at the base of the tree.
   a. True
   b. False

15. In general, newly planted trees should be staked for more than one year after transplanting to assure good root anchoring.
   a. True
   b. False

ANSWER KEY

1. (B)

2. (1) Digging too large of a tree with too small of a tree spade;
   (2) Not centering the tree when digging the root ball;
   (3) Not tying the branches in and covering the tree with a tarp or burlap during transport to prevent desiccation;
   (4) Not watering the tree 24-48 hours before digging and leaving the receiving hole open to dry out.

3. (B) Centering the tree is essential in saving as many roots as possible.

4. (A)

5. (B) Research has shown excessive organic material incorporated into backfill can cause harmful moisture buildups and oxygen starvation to the roots.

6. (D)

7. (D)

8. (A)

9. (A)

10. (B) The soil ball should be slightly higher than the adjacent soil to compensate for soil settling and possible oxygen starvation to the roots.

This test was compiled by Chris Carlson, a professor and director of Horticulture Technology at Kent State University’s Salem, Ohio, campus.
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ACRT Offers Programs For Municipal Tree Workers

The ACRT Institute of Arboriculture and Urban Forestry has announced special continuing education curricula for municipal tree workers. These courses were developed by arborists with decades of municipal and urban forestry experience, and stress the specific skills needed by municipal tree workers.

Most of the courses are three to five days long, although 1- and 2-day specific subject courses are also offered.

The institute’s regular weeklong Basic and Advanced Arborist courses are conducted every month at the institute’s headquarters in Kent, Ohio, or on-site in the sponsoring municipality. All courses combine classroom study with an emphasis on field training.

The Basic Arborist course, designed for new urban foresters and climbers, covers such subjects as pruning, climbing techniques, cable bracing, ANSI Z133.1 safety standards, working around electrical hazards, and the structure, functions and identification of trees.

The Advanced Arborist course covers insects, tree diseases, the selection of pesticides and fertilizers, IPM (Integrated Pest Management) techniques, the latest theory on tree decay (CODIT), tree liability and hazard assessment, and tree selection for specific environments. This course is for supervisors, crew leaders, foremen and people preparing for the International Society of Arboriculture’s Certified Arborist or civil service examinations.

The ACRT Institute also offers 1- to 5-day courses on specific subjects. These courses are customized to the particular needs of the sponsoring municipality and include such subjects as tree trimming, pest management, chain saw safety, aerial rescue, hazard tree identification and electrical hazard awareness. On-site courses require at least 10 students, according to ACRT President Richard Abbott.

For course information and costs, contact the ACRT Institute of Arboriculture and Urban Forestry, 227 N. Depuester Street, P.O. Box 219, Kent, Ohio 44240. Telephone: 800-622-2562; FAX: 216-673-3205.

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Davey Resource Group Awarded ISA Research Project

The Davey Resource Group has been selected to conduct a project for the ISA Research Trust which will assess the status of municipal tree management programs throughout the United States.

With original funding being provided by the USDA Forest Service, the Davey Resource Group will survey communities of all sizes to determine the level, source and use of tree care funding; tree maintenance costs and approaches; tree inventory costs and benefits; planting programs and costs; pest management practices; disposition of urban tree residue; and partnerships with public and private groups.

Following the survey, a written report will be prepared summarizing, both quantitatively and qualitatively, the activities and costs associated with urban forest management. An electronic, interactive report will be developed that foresters can use on a personal computer to search for specific information related to urban forest management. The computer program will allow users to determine how their municipal tree management programs compare to the national average, plan for budgets, planting requirements and future maintenance. Both the written and the electronic reports will be offered, free of charge, to municipal arborists and urban foresters.

Scheduled for completion in September, the Municipal Tree Management Project is another example of how the ISA Research Trust is working to advance the arboricultural and forestry professions.

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We are a full service arboriculture firm with offices in the Midwest and the East Coast. With our continued expansion, we are seeking qualified arborists for production, plant health care and sales positions within our company. We consider safety, quality, production and communication to be the foundations of proper tree care. If you believe the same and wish to make arboriculture a career, we would like to hear from you. Send your resume with salary history to Carol Demski, c/o The Care of Trees, Inc., 2371 S. Foster Ave., Wheeling, IL 60090. Phone: 708-394-4220.

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Outside sales position opening - Please send resume or contact us at Western Tree & Landscape Supply. Sales position includes aerial trucks, chippers, stump grinders, small arborist and landscape tools. C/O Mike Hutnick, 7627 Fair Oaks Blvd., Carmichael, CA 95608. Phone: 916-944-4439. FAX: 916-944-4467.

Experienced foreman to fill sales/supervisory position with established tree service in Fort Lauderdale, Florida. Call Way Hoyt at 305-561-9514 or send resume with salary history to Tree Trimmers & Assoc., Inc., 4301 NE 13th Terr., Fort Lauderdale, FL 33334.

Professional tree care company est. 1970 looking for ambitious, highly motivated arborist/tree climber for year-round work. Must be exp. in all aspects of tree care. Certified arborist a plus. Must be personable and have a drive for customer satisfaction. Incentives for approved educational courses. Let's continue to grow together. Send resume and salary requirements to Musser's Tree Service, 3444 Roundtop Road, Elizabethtown, PA 17022 or call 717-533-4458.

Arborist/climber needed to share in climbing and estimating. Strong background in pruning and heavy removals. $25,000, plus. Send resume. Beaver Tree Service, 3600 Columbia Parkway, Cincinnati, Ohio 45226.

Large established full service tree company in the Baltimore Metropolitan area looking for an assertive person, preferably with B.S. or Assoc. Degree in Arboriculture or related field. Year-round work with generous medical and pension plan to work with spray and fertilization programs with future in sales and management. Salary negotiable depending on experience. Send resume with salary history in care of Tree Care Industry, Box C, P.O. Box 1094, Amherst, NH 03031-1094. All resumes held in confidence.

Attention tree sales professionals, Sacramento, CA. Leading arbor services company seeks 3-5 year experienced arbor services professional to sell tree maintenance services. Must have proven track record, computer skills, business development experience. Rewards include salary, travel, incentives, commissions, company car, protected large territory. Full benefit package, including 401K program. If you meet these qualifications, fax resume to: 916-381-7285. Replies held confidential.

Arborists, field representatives, climbers, technicians. Ira Wickes Arborists, one of the oldest and most respected companies in the business, is looking for high-quality people to.
help us continue to grow. Excellent compensation, benefits, incentives. Please send resume or contact us at Ira Wickes Arborists, 11 McNamara Road, Spring Valley, NY 10977. Phone: 914-354-3400.

Climber/foreman/sales rep/mechanic/spray tech: Well established, quality oriented, full service tree company seeks career minded self starters who are team players. Ideal applicant is well-rounded and able to perform a combination of above tasks. Enjoy steady, year-round work, pleasant working climate and splendid beach community. Send resume with salary history/requirements to Arbor Tree Experts, Inc., 1440 Southern Blvd., Virginia Beach, VA 23454. Phone: 804-425-1995. Attn: Carry.

Experienced climber/foreman wanted to manage crew. We are a fast growing, quality oriented company in the Chicago North Shore. Minimum 3 years experience, CDL and self-motivation required. Excellent compensation and benefits available. Please send resume and contact The Kinnucan Company, 28877 North Nagel Court, Lake Bluff, IL 60044. Phone: 708-234-5327.

Attn. professional tree persons: Tired of the cold? Palm Beach County's tree health professionals are looking for motivated, knowledgeable people. If you are thinking of moving to SE Florida, give us a call. CDL a plus. DFWP 407-968-1045.

Sales & production management. Medium sized company with loyal client base in central NY looking for energetic, self-motivated, ambitious arborist to work in sales and manage production. Profit sharing and ownership position possible. Applicant must possess a strong arboricultural background. Send resume & salary history to Cascadilla Tree Care, Inc., 8 Bostwick..-.

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Order Form

Please use this form to order Ropes, Knots & Tree Climbing and/or Tailgate Safety.
Mail this form and payment to: National Arborist Association, The Meeting Place Mall, Route 101, P.O. Box 1094, Amherst, NH 03031-1094.

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NAA members: @ $60 ea. = 
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Rates: $50 per inch (non-NAA members), $45 (members), (1-inch minimum), payable in advance, due the 20th of the month two months prior to publication. Send ad and payment to: Tree Care Industry
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All of the appropriate elements of the ANSI Z133-1994 are included.

NAA’s video training programs make actual on the job training much easier. After viewing an NAA video a trainee can go into the field with basic background information. Repetitive viewing of NAA’s video training program re-enforces the training provided in actual work situations.

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The ROPE, KNOTS & TREE CLIMBING video program will be available in March 1994. To order please fill out the order form on page 34 or call the National Arborist Association Hotline at 1-800-733-2622.

The National Arborist Association
P.O. Box 1094, Amherst, NH 03031
Phone 1-800-733-2622 Fax 603-672-2613
A Dark and Stormy Night

By Peter J. Haupt

It was late on a Friday afternoon in mid-December. The weather was typical for New England: heavy, wet snow, high winds and extreme cold.

My brother, Erik, and I were alone in the office when the phone rang at about 4:30 p.m. The woman caller told me that a large tree had fallen on her house and she asked if we could send a crew up to remove it.

I took down all the information and said we would call her right back. I discussed the situation with Erik, who returned her call and told her we would have a crew up there right away.

"It looks like you and me," Erik said. That made sense. He and I together have more than 40 years experience doing tree work. We have been in countless storm damage situations under all types of weather conditions.

We headed out with our log loader and the 70-foot aerial lift. Even though our vehicles are 12-to-15-ton trucks, I doubted that we could make it to the job in such severe and hazardous weather conditions. And night was closing in fast.

After a long, slow, slippery trip, we finally arrived at the house and the woman came running out to greet us. Erik talked to her while I walked around to the back of the house to view the damage. I couldn't believe my eyes; a 32-inch-diameter poplar tree had blown over and gone through the roof.

We maneuvered the lift into position to begin removing the tree. After making a difficult cut, Erik got the trunk to drop off the side of the house neatly. Meanwhile, I was trying to illuminate the area with our hand-held and truck flood lights.

Once the trunk was removed, I went inside. The old house had been beautifully restored as a bed-and-breakfast inn. I brought my chain saw inside and went to the second floor to clear the damage, which was just as severe inside as it was outside. The roof had buckled and tree sections were mixed with pieces of roof rafters. Plaster was scattered everywhere.

While Erik worked outside, I cut branches free from the roof and from inside the house.

The woman, who was very pregnant, insisted on helping as I struggled to pull branches from the roof. She told me that the room where the tree hit was the nursery for their baby. She said the baby was a couple of weeks late and that her mother had told her that babies were always late for a reason. I said that this tree damage was a pretty good reason.

Erik and I worked for a couple of hours to clear the tree from the house. Then I climbed through a hole in the roof and helped Erik spread a tarp to protect the house until repairs could be arranged.

Even though we were cold, wet, hungry and tired, the appreciation shown by the couple and the satisfaction we felt made it all worthwhile.

The couple were surprised to learn that Erik and I were brothers and owned the company. We jokingly replied that we only send our best for the most difficult jobs.

The baby, a boy, was born a few days later. I have often thought how lucky it was that he delayed his arrival.

If you are ever traveling through the Berkshires and need a place to stay, stop by the Parsonage On The Green in Lee, Massachusetts. It has been restored and newly repaired. And the trees are interesting to look at, too.

Peter Haupt and his brother, Erik G. II, own The Haupt Tree Company, Inc., in South Egremont, Massachusetts.

Do you have a story for From the Field? TCI will pay $100 for published 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 or they will not be considered for publication. Articles and photos must be received by the first day of the month for the following month's issue.
Non-productive time eats into profits. Lost time accidents cost plenty in lower productivity and increased insurance premiums.

Take charge of productivity and lost time prevention with the NEW TAILGATE SAFETY PROGRAM from the National Arborist Association.

**NAA's NEW TAILGATE PROGRAM:**
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The National Arborist Association
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A few months ago, a salesman from a company from which I purchase steel stopped by to see if I needed anything. Because it was raining that afternoon, a few local tree men stopped by as well. One of them was asking me about ascenders and I was answering his questions as well as I could. When the steel salesman asked me why I took the time and encouraged questions of these men since I don't do retail sales and would not directly benefit by selling the tools discussed, I told him that I get a lot more out of talking with field people than I do with salesmen. He was gone in about five minutes.

In fact, many great ideas are developed as a result of two people talking over a problem. Most of the problems discussed in the shop deal with climbing and rigging and how to make those dangerous jobs safer. How to get into a tree safely and efficiently is always a topic of discussion. One way is with the use of ascenders and cams. C.M.I. and Gibbs both make good ascenders. Many skilled climbers use an ascender and feel they get good results with it. They like the safety margin the ascender offers them, not to mention the resting place if they get tired.

This brings us to a use of cams and ascenders which makes them so indispensable that it is hard to believe that any tree company has not invested in them already. The worst part of any job is the clean-up, especially when the temperature hovers around 95°. We have all done jobs where the tree is in the backyard and we can't get a truck closer than 100 yards away. Getting the brush from the tree to the truck is a job best done with your head, not your back. By running a heavy line from a nearby tree and using a couple of small blocks and the ascender, you can lift a couple hundred pounds and just roll them out on the blocks to your truck.

If you have a little imagination, it is a simple job to throw a line over a tree near the truck, and by using a set of small blocks and an ascender, rig a gin pole boom to help load trunk sections with very little effort.

Ascenders and descenders are two different types of tools. Ascenders have cams which grab the rope and descenders use friction to hold or slow the movement of a load. A lot of what you can and cannot do depends on how well you understand your tools.

There are several types of descenders: figure eights with ears, figure eights without ears and the new rigging bar, a new product currently being patented. The rigging bar will allow you to use larger ropes and three-stranded ropes more easily and quickly. They will be available at American Arborist Supplies. Please call them for additional information.
Tree health, environmental protection, and new product registrations aren't the only discussion topics featured at Mauget tree care seminars. Each Mauget seminar includes time to answer your questions. Your concerns about the environment, diseases, insects, nutrition, pruning, spraying, wounding, and product performance are important. Mauget seminars provide the most practical and most useful information for you to use in your business. Learn about the re-introduction of FungisoI debacarb fungicide. Mauget micro injection utilizes a closed system to protect the environment.

Annual seminars are open to all Green Industry firms -- owners, managers and applicators. Call your Mauget distributor about a seminar in your area. Current dates and locations are below:

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- Feb 25, Milwaukee, WI

**Guardian Tree Experts**

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- Feb 22, Gaithersburg, MD

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- Feb 24, Novi, MI

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- Western SD, Wyoming
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- (605) 342-7644
- (800) 658-5457
- Feb 24, Rapid City, SD
- Mar 8, Wyoming

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- Feb 25, Milwaukee, WI

**Pruett Tree Service**

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- Oregon, Washington
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- Mar 8, Albany, NY
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