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COVER PHOTO:
Climber Derek Zatcovich of Portola Valley, California, prepares to take down a 200-foot douglas fir. He's wearing a Blair "Back-A-Line" modular saddle with built-in back support. (Photo courtesy of Donald Blair.)
OUTLOOK

TCI EXPO '93 is a must. You won’t believe it until you see it. Without a doubt, TCI EXPO '93 in Cleveland will be the biggest assembly of tree care tools, equipment, supplies and support services ever put under one roof; more than 100 exhibitors covering almost 90,000 square feet, which is more than two acres or two football fields. That’s a lot.

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The trade show isn’t the only reason to go to TCI EXPO '93. There is also an excellent two-track seminar program. One track is geared toward management and the other toward field operations. Bring other management or sales people, supervisors, foremen or tree workers along with you. There are seminars for everyone. The more people you bring and the earlier you register, the less expensive registration becomes.

The speakers are an interesting combination of professionals from the tree care industry and academia. ISA recertification credits will be available for many of the seminars, as will pesticide recertification credits from many of the states. Several of these seminars are FREE.

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In the beginning, man climbed trees and he saw that it was good, but he kept falling out of the trees and he saw that that was not so good.

By Don Blair

As seemingly basic to the process of large-scale tree maintenance as a rope and saddle are now, it's apparent in studies of the archives of arboriculture that this "good idea" took a long time to evolve to its present state of development and acceptance.

Millard F. Blair climbed from 1911 until he was 78 and never used a rope and saddle. He did carry a 3/8-inch manila handline for raising and lowering tools, but he never felt the need to tie in. He did fall once, from a palm tree. The good news was he landed in a hedge which broke his fall and reduced his injuries to a mildly broken wrist. The bad news was the hedge was a pyracantha on the grounds of a convent. His language summoned the nuns who called an ambulance and forgave him of his blasphemy.

Orvy Reeves worked for S.P. McClenahan in the 1920s. Working without a rope and saddle, he had the misfortune to fall out of a tree. Although not hurt too badly, he was knocked cold and unable to work for the rest of the day. To add insult to injury, he found his pay docked for the time he was out of action.

Lem Stout recalls in his memoirs that in 1917 he was the first Bartlett man to use a climbing line, a full 10 years after F.A. Bartlett had established his tree expert company.

It wasn't as if climbing aids were unheard of. In a paper published in the Journal of Arboriculture (January 1993), H. Dennis Ryan III refers to an English publication that as early as 1759 recommended the use of lines as an aid to pruning, but offered no specifics.

By the 1930s, the English were recommending the use of a safety belt in tree work, stressing that the device was not to be viewed as a sign of cowardice. Meanwhile, on this side of the Atlantic, Ohio arborist Karl Kuemmerling was encouraging the use of the double bowline and the tautline hitch.

Still, it seemed to take a long time for these concepts to catch on. Eventually, rope and saddle climbing was adopted. Until then, however, the use of climbing spurs was widespread, even though spurs were recognized as detrimental to living trees. Cries against the use of spurs have been recorded back as far as Tree Pruning (1881) and the 1913 USDA Yearbook of Agriculture.

Wooden sectional and extension ladders were also widely used, a common practice being to tie ladders into the tree. In this manner, oaks towering more than 90 feet could be pruned. Ladders were also tied horizontally to create catwalks for easier access.

The suspension harness

With emotions strongly against the use of spurs and ladders an expensive and cumbersome method, arborists continued to search for the ideal climbing system: something that would be lightweight, inexpensive, easy to use and afford safe access to all parts of the tallest trees.

Nothing could have been simpler than fashioning the suspension harness from the climbing line. The system was self-renewing, as the rope was shortened to remove line worn by the tautline hitch, and the climber would fashion his harness from different sections of the rope. Of course, it weighed no more than the climbing line itself. And it was versatile as climbers fashioned their rope saddles from the single bowline, double bowline, French bowline and Spanish bowline, as well as the more-or-less standard bowline on a bight. Len Kamp, an arborist from Berkeley, California, even demonstrated how he would add a sheepshank to his waistbelt portion to provide a couple of
"D-rings" for a lanyard. Lightweight, strong, inexpensive, it is no wonder that the bowline on a bight has remained in the industry for more than 70 years. Due to product labeling requirements, current ANSI recommendations have relegated the bowline on a bight to standby emergency status, such as an aerial rescue.

The bowline on a bight did, however, prove to be deficient in several important areas such as versatility and comfort. Any harness fashioned from the climbing line restricts the climber in recrotch options. As a result, some of the veteran climbers were perhaps more expert at picking a route that would allow them to do their work without backtracking.

Comfort was another important consideration. A 1/2-inch rope doesn't provide much comfort when working suspended. Many veteran climbers, therefore, relied as much on balance and as little on the harness as possible.

The saddle arrives

Somehow, someway, somebody got the idea to add padding to the legstraps. Next the bowline on a bight was cut loose from the end of the climbing line and fashioned into the classic rope-strung saddle. Bartlett Manufacturing Co. first advertised one for sale in the summer issue of Trees Magazine (1942). The style was also known as a 3-piece saddle and the Kansas City style.

Although perhaps not as popular as it once was, and with changes from manila to synthetic rope and the addition of waistbelt D-rings, the rope-strung saddle is still in use today after serving nearly seven decades.

Also adopted at about the same time, with a centuries-old heritage among seafaring men and steeplejacks, the bosun’s chair was one of the earliest and most common forerunners to the modern seat-type saddle. One of the earliest uses of the bosun’s chair was in suspending an arborist engaged in tedious cavity work. The Ashley Book of Knots (1944) illustrates the tautline hitch and correctly classifies it as a variation of the magnus hitch. The camel hitch and steeplejack’s safety-belt hitch are also variations, each using a different combination of “up and down” turns to accomplish the ease of movement and security of the knot when placed under a load that each occupation required. Ashley shows a bosun’s chair as the seat.

Variations on the bosun’s chair ranged from fashioning the seat from a barrel stave to the curved back of a captain’s chair.

Although bosun’s chairs were probably homemade through the course of their popularity, an ad for a commercially marketed chair appeared in the 1942 issue of Trees Magazine. Offered by Permalawn, the Safe-T-Seat featured the finest in hardwood, top-grade leather and New Bedford maritime grade manila rope. All that plus handmade craftsmanship for only $10. Saddles made of leather or webbing began to evolve from the bosun’s chair in an attempt to offer comfort without the bulkiness of the rigid wooden seat.

Farrens Tree Surgeons adopted seat-type saddles immediately after World War II (J.L. Argo, Hugh Tyer). By the early 1950s, seat saddles of cotton webbing or leather became more popular and by 1959, Fruit Growers of Chester County, Pennsylvania, was advertising the use of nylon in the construction of its saddles.

Although saddles have been commercially available for at least 50 years, many arborists preferred to make their own belts or have them custom made. Some beautiful examples of the saddle maker’s art applied to climbing harnesses are part of the collection at the Museum of Arboriculture.

My first saddle was a handmade rope-strung belt. A popular West Coast variation of the three-piece, this saddle was the forerunner of the floating D-ring saddles that have become so popular since Sierra Moreno Mercantile introduced them in 1980.

Troy Payne was still using the Nolan Tree Company standard when he came along to teach me the ways of the Euc Man. A lineman’s belt and little else, the suspension harness was fashioned by threading a climbing line through the left D-ring across the rump and through the right D-ring. Working suspended meant having a 1/2-inch rope that could feel like a hot knife digging into your hips. The advantage of the lineman’s belt was the superior back support it offered when the worker leaned against a flipline.

Early saddles did not commonly incorporate waistbelt D-Rings. I think that this stems from climbing styles that were developed around the bowline on a bight and the bosun’s chair, neither of which made...
The Noonan saddle

use of waistbelt D-rings.

I recall going to Western Tool and Hardware in San Francisco in 1974 to see “store bought” saddles. Primarily a lineman’s supply house, Western stocked dozens of variations of linemen’s belts and two tree saddles. One was a seat saddle and the other was the Keith Davey style. The Davey belt was made of red transmission belting in the legstrap style. Basically a variation of a 3-piece, webbing replaced the rope leg loops in an effort to make the belt more comfortable. There were no D-rings for a flipline. We’d add them if desired by riveting on D’s

The floating D legstrap design

salvaged from old flea market lineman’s that sold for $5.

I remember looking at the dozens of lineman’s belts and the two lone tree saddles. In my heart, I felt that arborists should have their own store with their own tools. I also felt that saddles could be improved from when I began climbing.

Ed Hobbs began his work in developing the Bry-Dan - so named after Hobbs’ two sons - saddle in 1970. So advanced and unique both in suspension concept and material, the Bry-Dan has not been equalled or improved upon in its class even after 20 years. To appreciate how far ahead of its time the Bry-Dan was, people were still climbing with the bowline on a bight, barrel stave bosun’s chairs and other designs that dated back to when Hobbs built a harness out of cordura and ballistic nylon cloth and padded the 6-inch waist belt with closed cell foam. Using separate, articulating leg straps, the system was so unique that Hobbs was granted one of the few patents awarded a saddle. Also unique to the Bry-Dan at the time was the use of suspenders that made the belt a full-body harness. Primarily intended to help support the weight of a chain saw, the suspenders also kept an injured climber from falling through the belt if he were flipped upside down.

I first used a Bry-Dan in 1977 at the ISA Jamboree Finals in Philadelphia. People joked about it and said it looked as though I were putting on a parachute. I told them it had a Euc Man’s parachute built in that opened on impact. After 20 years of parachute jokes, it appears that the future of harnesses in many industries is moving toward full-body types. I remember being eyed by a fellow as I put my climbing gear away after competing in that 1977 Jamboree. He watched as I

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coiled my climbing line, checking every inch of it for nicks and abrasion. He noted that I carried all my climbing gear in a lineman's type tool bag. As I shucked out of my Bry-Dan, U.S. Army Master Sergeant William F. Shultz (ret.) and owner of S&S Tree Service (Fayetteville, North Carolina), introduced himself and asked if I had served in the military. I asked him why he'd ask and he said that I was as careful with my gear as if I had been in Special Forces or an Airborne unit (he had served in both). I hadn't, but I've always taken his question as a compliment regarding my conduct as a professional.

My personal contributions to the history of tree saddles began in 1976 when the Euc Man met the Jazz Man, L. Dean Stringer and his organization, in Lee's Summit, Missouri. With his support and the craftsmanship of Deloris Parker, who has been making safety equipment by hand since 1952, we began to evaluate saddles and build them as we thought they should be built. Our first effort was an improved version of the Davey belt, which had been discontinued. In succession we improved the seat saddle as the Noonan, reinvented a rope-strung as the floating D leg strap saddle for Utility Tree Service, and innovated the seat type with a floating D. All of these belts used the standard 3-inch waistbelt. In 1982, Allan Klier asked me to mate a seat to his favorite lineman's belt and the modular system of wide back and interchangeable parts was conceived. Since then we've mixed and matched the best of many saddles to create a modular full-body harness-type saddle. My most recent innovations have been to work with Back-A-Line Corporation to develop a series of modular saddles with orthopedically correct back support. Through all the innovation, please keep this thought: Your climbing gear is your life! Care for it with respect. Keep it clean and out of harm's way.

User's guide to tree saddles

Although a variety of models and brands and features of saddles is currently available, except for the Bry-Dan, they still are all virtually descended from the bowline on a bight or a bosun's chair. In
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- **Chain Saw Selection & Maintenance** - Helps you match the chain saw’s horsepower, weight and bar length to specific arborist tasks. The maintenance portion includes information on selecting and sharpening saw chain.
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- **Electrical Hazards & Trees** - 23 minute video reviews the proper tools, techniques and equipment necessary to work safely in proximity to electrical hazards.
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In my opinion, a tree saddle should be equipped with waistbelt D-rings for use with a positioning lanyard. A climber should not, however, rely solely upon spurs and a flipline when performing removals. The climbing line should be tied around the trunk several feet below the lanyard strap as a backup in case of accidental cutting.

1. Fit and sizing a saddle - Regardless of the style of belt you choose, proper fit is essential to comfort and safety. Most climbers prefer the D-rings to be about one inch in front of the hip bones. Belts should never be ordered by waist size, but by D-to-D size. To obtain the correct D-to-D size, measure from hip bone to hip bone and add two inches. A belt made for the proper D-to-D size will fit correctly with the buckle tongue engaged in the center hole. This allows several inches on either side to adjust for summer jeans and winter overalls. Sizing is expressed like this: Small - D18; Medium - D20; Large - D22; XLarge - D24.

The D size is the most critical to a correct fit. Even if the belt is marked SM, MD, LG, know what the D size is.

2. Tree saddle styles
   Seat type - Descendant of the bosun’s chair, also known as a buttstrap style. Still available in its original “suicide style,” it is possible for a worker to slip out of it or find himself hanging from his armpits. I strongly recommend seat type saddles equipped with auxiliary leg straps to hold the buttstrap comfortably in place.

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Some people find them restricting as they have a tendency to pull your legs

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you twist from side to side in accessing the tree. Saddles with a more stationary tie-in point seem to want to "fight" with you as you shift position.

A disadvantage is that although the design takes a lot of strain off the back, it places all of the body weight into the back of the thighs when hanging suspended. Many people say that takes the most getting used to. Also, some climbers just aren't comfortable with the intrusion of load-bearing leg straps between their legs.

Those who have never worn a floating D-ring saddle have expressed fear that they might be dumped on one side or the other unexpectedly. In practice, it doesn't happen. The D-ring seeks the center of gravity. As long as you want to work suspended in an upright position, that's the way you'll sit. Don't forget that when hanging suspended, your climbing line is dead vertical and under enough of a load to provide a stable handhold to shift right, left or upright.

**Seat type** - This saddle style combines the suspension dynamics of a seat saddle with the maneuverability of a floating D.

**4. Full body harnesses** - More popular in Europe, Australia and Canada, full-body harnesses incorporate suspenders in much the same way as the Bry-Dan. Some belts also incorporate a secondary chest tie as well as a dorsal ring to use in retrieval or aerial rescue. The French firm Petzl recently conducted a series of tests with the University of Lyon to study the effect of falls on a worker wearing Type I and Type II harnesses. They discovered that a worker wearing a full-body harness with the attachment in back and falling head downward is subjected to violent rotation at the moment the fall is arrested. The cause is the distance of the tie-in point from the worker's center of gravity. Whiplash injuries of the cervical column can be provoked by the high angular accelerations involved. These rotations are minimized with a tie-in point close to the center of gravity, as with sit harnesses that tie in at the waist. (Source: Petzl Product Guide)

**5. Custom options**

Many climbers add suspenders to their belts, primarily to relieve some of the strain on the hips when carrying a chain saw. Carabiners are also added for tool transport. I have seen climbers with carabiners hanging from suspender loops; belt pouches bulging with everything from bee bopper to water bottles; about all they are missing are smoke grenades to mark their position in the tree. Another popular accessory is a snap-in back pad insert designed to increase the comfort zone of standard 3-inch saddles.

**Parting thought**

A French article on extreme skiing discussed the techniques involved in skiing down impossibly vertical slopes at incredible speed. After the guide had instructed his students in the skills required to turn and maintain control, he passed on this admonition: "You realize, of course, monsieur, you must not fall!" Falling a long distance in a Type I harness upside down will probably give you a serious whiplash. Falling a long distance backward and upside down in your average tree saddle will probably break your back or slip you out of the belt when you arrest. You must not fall!

Donald F. Blair, arborist, author and lecturer, owns and operates Sierra Moreno Mercantile Co., Big Pool, Maryland.

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Climbing saddles, lanyards, ropes and other climbing gear can be grouped in one category - OPE - occupational protective equipment. OPE is as easy as ABC.

A simple rule to follow when assembling an OPE system is the A-B-C Rule. All personal OPE systems are made up of three major components: (A) anchor point, (B) belt and/or harness and (C) connecting device. For example, the OPE system for an arborist would be (A) tree (B) saddle, (C) climbing line and/or lanyard.

Merely wearing a saddle and other safety equipment does not make you safe. The care, inspection and proper use of OPE is the user’s constant responsibility. Use proper work practices in accordance with ANSI-Z133.1 and other applicable standards. Do not violate safety rules.

Equipment is designed and built for a specific purpose and making do with something else can be dangerous. Use safety equipment for only its intended use. If the proper equipment is not on hand, don’t make do with incorrect equipment or improper work procedures.

Remember, no OPE system is complete without all three components. It is imperative that a competent person select OPE system components to fit the specific job requirements.

Anchor points. Construction standards go into great detail on structural requirements that don’t apply to tree maintenance. When selecting a tie-in point, you want to be sure that your tie-in point in the tree is strong enough to support at least 500 pounds in case an aerial rescue becomes necessary. Be sure the crotch selected is open enough to prevent binding and always tie in around the main body of the trunk or limb. If the side branch you’re tied in to were to break, you’d want to slide down the trunk until you caught the next limb.

Belts. Your belt, saddle or harness is the nucleus of the OPE system. Always check that all buckles are properly closed before each use.

Never attach foreign objects to D-rings. They prevent or falsely indicate snap-hook engagement.

Never punch additional holes in or alter any belt or harness. Always wear the right size. (See main story for sizing.)
Only attach connecting devices that meet industry standards.
(Note: Be sure to read the section on routine inspection procedure.)

Connecting devices. The connecting devices in tree climbing are the climbing line, lanyard and any snaps or carabiners used in the climbing method. Ascenders and prusik loops would also be considered connecting devices when they are being used to attach you to your climbing line.

Safety
Always attach the snap hook to the proper anchor point for the intended use of the proper D-ring belt, saddle or harness. For positioning with a lanyard, use designated side D-rings. For suspension, use designated D-ring(s) on seat assembly.
Snap hooks attached to D-rings should have less than 5/8-inch throat opening. Never attach ladder hooks onto D-ring.

Note: Some climbers carry their chain saw from a ladder snap, but that is different from what we’re discussing here.

Locking snaps are so strongly recommended that most manufacturers have discontinued non-locking snaps.
Do not rely on the feel or sound of a snap hook engaging the D-ring. Always check for proper engagement of the snap hook.

Never tie knots in lanyards. Knots can reduce the strength of the lanyard by as much as 50%.
Never use wire-cored fliplines near energized electrical lines or equipment. All lines should be considered energized.
Never disable locking keeper on hook, punch holes in or alter a connecting device in any way.

Never attach multiple lanyards together or attach a lanyard back onto itself.
Inspect and maintain all equipment. The inspector is the most important part of any inspection procedure and must be thoroughly knowledgeable in all applicable safety procedures and guidelines. Do not take shortcuts.

Under the ANSI A10.14-1991 Standard, users must be trained by a competent person before using climbing saddles, fliplines, buckstraps, lanyards, etc. A competent person is one who is capable of identifying existing and predictable hazards and is empowered to take prompt action to eliminate such hazards.

Inspection
Follow this routine inspection procedure. Before each use, check equipment for the following:
1. Unit is clean, free of burns, cuts, broken stitches, abrasions, kinks, knots, broken strands, foreign matter or excessive wear.
2. Splices that make up a lanyard must not be raveling.
3. Rivets on saddles are not bent, loose or missing.
4. Buckles, hooks, D-rings are not distorted or cracked.

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Hook keepers are free of burrs, functioning properly, clean and not bent.

6. If friction buckle, there are no sharp edges, cracks, distortion; see that outer bars and center bars are straight.

In addition to daily inspection, climbing gear must be inspected by a competent person at least twice a year. The date of these inspections must be recorded. All rope used as a component of or in conjunction with body belts or harnesses should also be examined by a competent person every three months or more frequently if used under adverse conditions or subjected to very hard wear.

Replacement

The best time to replace a piece of equipment is before it breaks.

No equipment lasts forever or is strong and safe indefinitely. Much equipment made in the past will not meet current ANSI and ASTM standards. If older equipment is used, be sure it is satisfactory. Doubtful safety items must be discarded before any possibility of failure.

The estimated life of most OPE equipment is five to 10 years from date of manufacture. Weather, heat, chemicals, wear, etc., affect useful life. The life of lineman's pole straps, flinals and other climbing lanyards varies widely, averaging from 12 months to four years.

Date your equipment with an engraving pen or permanent marker when you put it into service.

When in doubt, throw it out.
Kudos for Blair

“Patton, The Arborist?” by Donald Blair, published in the June 1993 edition of TCI, articulates a creative, fresh and comical approach to competing and surviving in the tree industry. In business today, as war surely was, leading and motivating people are critical to the success of any operation. So it is not surprising that we can look at great American generals for inspiration.

I have enjoyed Don Blair’s perspective of the tree industry, and his writings on Patton are no exception.

Alan Carey, executive secretary Connecticut Tree Protective Assoc., Inc.

Letters should be addressed to:
Tree Care Industry, Editor
P.O. Box 1094
Amherst, NH 03031

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Plan To Plan

By Brian Barnard

You own a small, aggressive professional tree care firm. The crew, including yourself, has been working very hard all summer. Business is great, but you’re tired, the crew is tired and the equipment is stressed. It’s peak season, but you decide to have dinner with the kids tonight, so you leave work promptly at 5:30. Exactly one hour later, the storm hits. As you grab your rain gear and head out the door of your now dark home, you tell the family where the flash light is and not to wait up. It’s going to be a long night.

A similar sequence of events happened in Cleveland, Ohio, on Wednesday, July 28. A violent storm crashed into the city with 92-mile-per-hour winds. “I saw four-feet-diameter trees ripped from the ground,” recalls Tom Mugridge, general manager for Forest City Tree Protection Co., Inc., in South Euclid.

Nearly 300 utility poles were destroyed and 150 main electrical feeders were down. Resulting power outages affected 300,000 residents in communities bordering Lake Erie, east of Cleveland. Trees were down everywhere, and the amount of work was literally overwhelming.

Devastating storms have wreaked havoc in every city and town one time or another. Who could forget Hurricane Andrew’s devastation in Florida, or Hurricane Hugo’s destruction in the Carolinas? What about the ice storm in Rochester, New York? The effects of the Midwest floods will be felt for years. As a professional tree care firm, your ability to respond to storm damage in a timely manner with men and equipment allows you to provide the necessary emergency assistance your clients expect. You must plan to plan.

Being prepared

Forest City Tree Protection was surprised by the storm’s fury, but not enveloped in the devastation. Company owner Lauren Lanphear quickly realized that the equipment he had available would not be enough to handle the task. At 9 p.m. Lanphear called Mirk, Inc., for additional equipment. Mirk, Inc., is an equipment rental company located 60 miles south of Cleveland.

The Mirk, Inc., philosophy is simple: The more equipment they keep in readiness, the better they are able to respond to quick needs. Mirk keeps a large fleet of new and used rental trucks with buckets from 28 feet to 150 feet high. The company also offers truck-mounted cranes from five to 30 tons, as well as chip/dump trucks and trailer chippers.

By 9 the next morning, Forest City Tree Protection had a truck complete with a forestry chip box and a chipper sitting in the yard, ready to go. By Saturday, they had added a second truck with a 50-foot aerial lift unit, also with a chipper.

Besides the added equipment, Lanphear called another professional tree firm for assistance. Larry Holkenborg, owner of Larry Holkenborg Nursery, Inc., in Sandusky, Ohio, sent a seven-person crew, a crane, an aerial lift truck and a chipper for six days to assist in the cleanup.

“We were prepared because we have the luxury - or advantage - of belonging to ISA and NAA. Because of this, you know a lot of people who are willing to help you out in emergencies. You know people to call if you need help and you also know they will call you,” Mugridge says.
Sometimes, however, even the best plans can’t be carried out. In Florida last year, damage from Hurricane Andrew was so extensive that any preparations were useless. Bill Grubbs, owner of Golden Palm Landscaping and Tree Service in Miami, thinks of the destruction and all he can do now is laugh. “It was a little overwhelming. We had no phones or power for three weeks,” the Florida native said.

Still, he came up with a plan. He had communicated with other firms in the area and they divided the anticipated work areas. They determined before the storm who would go where, and they would communicate by mobile phone. All the planning was virtually worthless because even the mobile phones wouldn’t work after the storm hit.

“I finally got to a phone and called the NAA. It was comforting to talk to someone,” Grubbs says.

He knew other tree companies were trying to reach him but couldn’t. There were no hotel or motel rooms, as the utility company had rented them all before the storm. All the campgrounds were blown away, and there was no gasoline for equipment. “Anyone that came down here to help had to be self-contained,” Grubbs recalls.

Grubbs advises companies to get organized with other companies to prepare for emergencies. He was scheduled to meet at the end of last month with four other local firms to improve emergency response. Grubbs said this will give them a chance to “talk about what they learned other than the war stories.”

Before a storm hits, Grubbs recommends that all equipment be full of fuel, and that plenty of chain saws are available, with gas mixed for them. “A generator would have helped,” Grubbs adds.

Most important, Grubbs says, is to have cash on hand. “Put several hundred dollars in your pocket before you hide underneath the mattress in the bathtub,” Grubbs says with a serious sounding chuckle. “The banks will be closed, you can’t write checks and you can’t use credit cards.”

Like Lanphear, Grubbs needed equipment. “I should have called Miami Bobcat the week before the storm,” Grubbs says. After the storm, he had to wait some time to lease the Bobcat skidder he needed to clean up debris. He rented the skidder on
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Leaching, Inc., offers quick and efficient financial services nationwide and has been committed to the tree care industry for more than eight years. The firm's specialty is lease-purchasing programs for 2-to-5-year terms.

In the event of a disaster, Omni points out that leasing new or used equipment is an affordable way for an arborist company to remain strong and continue to prosper. Deferred payment plans and seasonal plans are available.

Leasing large equipment from Omni is different from leasing an automobile from a dealer. "When you get to the end of the lease, there is either a 10% buyout or a $1 cash buyout, rather than a 40% buyout some car leases have," says Brenda Foster, regional sales manager for Omni.

To lease a piece of equipment, the customer needs only to fill out a simple one-page credit application. The application consists of basic owner and company information, a bank reference and trade references. Upon approval, Omni will then contact the dealer to arrange for delivery of the equipment and payment.

Omni Leasing works with hundreds of dealers around the country to offer financial services for potential customers.

Storm emergencies take all the mental and physical resources a tree firm can generate. A responsible firm should have an emergency response plan devised and a good relationship with equipment dealers and leasing companies. This provides the opportunity to obtain additional equipment if the situation warrants.

Communicate with associations and fellow arborists to ensure quality tree care for clients after a storm. Your neighborhood could be hit next.

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President Signs Budget

By Brian Barnard

Last month President Clinton signed the $496 billion deficit-reduction package, and an additional flood relief funds bill at a level of $5.7 billion for fiscal 1993. The House originally passed a $2.8 billion version of the flood relief bill, but agreed to increase the level of spending. These funds not only cover flood victims, but extend also to communities hit by other natural disasters.

The final result of the president's deficit reduction package includes tax increases of $241 billion and spending cuts and other savings adding up to $255 billion. Although taxes were the highlight of the package, other notable provisions include increasing the public debt to $4.9 trillion to cover spending through fiscal 1995, and reductions on the amount of tax deductibility of lobbying expenses.

Lobbying expenses have always been regarded as a business expense, and therefore, deductible on annual federal income tax forms. The new budget package, however, calls for complete elimination of these deductions.

As passed, many of the tactics used by tree firms to communicate with congressional leaders will no longer be deductible. This includes lobbying at the state level. One clear exemption is local level lobbying, which will remain deductible. Because of the scope of this important tax change, all details have yet to be interpreted.

President Appoints Dear As New Director Of OSHA

President Clinton recently named Joseph Dear as Assistant Secretary of Labor for Occupational Safety and Health. From 1985 to 1987 Dear was research director of the AFL-CIO's Washington State Labor Council, specializing in workers compensation claims. He then directed Washington's Department of Labor and Industries until February 1993.

Dear was hired by OSHA on April 1 as a consultant, laying the groundwork for his appointment which took effect July 1.

Dear's position on OSHA Reform legislation (H.R. 1280, S 575) currently pending is unclear. The business community has met with Dear and Secretary of Labor Robert Reich to discuss the implications of the bill. As currently proposed, OSHA Reform increases criminal penalties for employers, and would require employers with 11 or more employees to develop labor-management safety and health committees.

The bill's chief sponsor, Sen. Howard Metzenbaum (D-OH), has indicated that changes to the bill may be necessary.

At hearings in July, labor groups encouraged Congress to be careful in placing regulation on employers, particularly in regards to labor-management safety committees. Some contend that prescription requirements for these committees would eliminate the flexibility needed to address employee involvement in safety issues.

At July 21 hearings, former deputy OSHA Administrator Frank White told the House Education and Labor Subcommittee on Labor Standards, Occupational Health and Safety that OSHA has never been given adequate resources to carry out its mandate.

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TREE CARE INDUSTRY - SEPTEMBER 1993
By Susan B. Haupt

Somebody once asked: "Why is there so much month left at the end of the money?"

Could this be you? Do you often find yourself wondering where your money went?

Knowing the answer to that question is an essential part of operating a profitable business. If you don't know, or aren't sure, you can figure it out from your existing records.

The cost of production labor is usually the largest percentage of a tree care company's total expense. This makes it an excellent place to start learning how your money is spent. These costs, often referred to as labor burden, are relatively easy to determine.

The information you need will be found in your payroll records and tax forms, and on your workers compensation and liability insurance policies. First identify your expenses; then analyze them.

Set up a production payroll worksheet similar to the sample below. It can be done either on a computer spreadsheet, or on a paper spreadsheet using a columnar analysis pad. It will show you what it costs your company to pay an employee $10 an hour after adding in your payroll costs.

This worksheet is a general outline and reflects payroll costs common to most states. However, state laws do vary. A few do not require workers compensation insurance. Some have requirements other than those used in this example. Make whatever changes are necessary on your worksheet because of variances in your state's labor laws.

### Using the worksheet

**Line 1**: Use the $10 figure in your initial set up. It will give you a basis for

<table>
<thead>
<tr>
<th>PRODUCTION EMPLOYEE PAYROLL COST WORKSHEET</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL PAY:</strong></td>
</tr>
<tr>
<td>1. Base Hourly Pay Rate &amp; Hours 2000.0</td>
</tr>
<tr>
<td>2. Overtime Premium (1/2 pay rate) 94.0</td>
</tr>
<tr>
<td>3. Holidays - No. 8 hr. days 64.0</td>
</tr>
<tr>
<td>4. Vacation - No. 8 hr. days 80.0</td>
</tr>
<tr>
<td>5. Year End Bonus or Award Program $400.00</td>
</tr>
<tr>
<td>6. Total Earnings $22,310.00</td>
</tr>
</tbody>
</table>

| MANDATED INSURANCE:                      |
| 7. Workers Compensation (not on OT Premium)| Rate |
| 8. Property Damage (not on OT Premium)    | 23.29% $5,086.54 |
| 9. Bodily Injury (not on OT Premium)      | 5.53% $1,207.75 |

| FEDERAL & STATE PAYROLL TAXES:           |
| 10. FICA                                 |
| 11. FUTA on 1st payroll dollars of $7,000.00 |
| 12. SUTA on 1st payroll dollars of $10,000.00 |

| OPTIONAL COMPANY BENEFITS:               |
| 13. Group Insurance per month - Company Percentage $560.00 |
| 14. Retirement/Pension Plan/401K $22,310.00     |

<table>
<thead>
<tr>
<th>TOTAL EMPLOYEE COST $38,000.13 divided by 2000 hrs. = $19.00/hr.</th>
</tr>
</thead>
</table>
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### Line 2: Enter overtime (OT) hours paid (which are also included on Line 1) and the premium rate (one-half of regular hourly rate). This is done because the charges for the mandated insurances are not calculated on this extra (or premium) dollar portion of overtime hours. Multiply the OT hours by the half-pay rate.

### Line 3: Enter the number of paid holidays you allow each year. Multiply the number of days by eight hours, by the base rate.

### Line 4: Enter the number of vacation days you pay each year. Calculate the same way as Line 3.

### Line 5: Add in the total of all bonuses: year end, safety, production etc., or -0- if none.

### Line 6: Add up all the dollars paid. This is the total gross pay your employee would receive for the year, as would be reported on the year-end W-2 Form.

### Line 7: Enter your workers compensation rate. You will find this in your insurance policy under the category #0106. The figure stated, i.e. 23.29, is the percentage rate charged on payroll in that category. Factor in your experience rating which is stated with a decimal point, i.e., 0.92 for a discount on the stated rate, or 1.08 for an addition to the rate (23.29 times .92 or 1.08). There may be additional costs, which you need to include. (Massachusetts tacks an additional 2.6% onto the insurance premium to support its Department of Industrial Accidents, sort of a hidden tax on companies.) Figure this (adjusted) percent on total earnings dollars (Line 6) minus overtime premium dollars (Line 2).

### Line 8: This is similar to Line 7 because your general liability (GL) insurance premium is based on payroll. The property damage (PD) rate can be found in your GL insurance policy. Each insurance company seems to list this a little differently. Either figure out the percentage cost or ask your agent. Calculate the same as Line 7.

### Line 9: The bodily injury (BI) rate is in the same policy as the PD rate. Some insurance policies state a combined PD/BI rate so you may not need Line 9. Calculate the same as Line 7.

### Line 10: The FICA, or Social Security tax, is 7.65%, including the medical portion. Enter the percentage of total earnings.

### Line 11: FUTA, the acronym for federal unemployment tax, is also the same as last year and charged only on the first $7,000 paid each employee. The effective rate paid in most states is generally 0.8%. Some are higher. Use your state’s percentage of $7000.

### Line 12: SUTA, or state unemployment, is often charged on the same first $7,000 as FUTA. However, because of such high unemployment in the past few years, many states have a higher base. (Massachusetts is now $10,800.) The percentage rate for you to use is stated in your state’s employment tax reporting schedule. Your final figure will be your state percentage rate multiplied by your state’s dollar base.

### Line 13: Find the monthly cost per individual of your medical and other group
190 Trucks In Stock

(2) 1991 GMC Top Kick; CAT Diesel; 6 Spd. With RO 2863 Cranes; 14 Ton With Jib; 96' Hook Height; (1) w/8,000 Miles; & (1) w/13,000 Miles ........... $69,500 Ea.

(3) 1987 GMC 7000; V8; 4x4; w/Lift-All 51' Bucket ........... $25,500 Ea.

1989 Mack DM690S; 300 H.P.; 6 Spd.; w/R.O. 175-73 Crane; 16 Ton Cap.; 85'-37' Jib = 122' Hook Height .......... $69,500

(3) 1987 GMC 7000; V8; 4x4; w/Lift-All 51' Bucket ........... $25,500 Ea.

(3) 1986 Int'l S1600; 6.9 Diesel; Auto.; 23 G.V.W.; 15,500 Miles .......... $9,500 Ea.

(5) 1990 Ford F500; V8; 8 Spd.; w/Verallift 28' Bucket; 9' Utility Body; Onan 2 Cy! Generator; $7,500 Ea.

(6) 1985 GMC; V8; 6x6; Chip Box With Hi-Ranger 52' Bucket; Very Clean .......... $34,500

1985 Ford F600; 8.2 Diesel; Auto.; 28,000 Miles; 22 G.V.W. .......... $9,500

(15) HIAB; IMCO; National, Etc. Knucklebooms Unmounted Or Mounted .......... $4,500 And Up

(1) Royer Woodmen Brush Clearing Attachments; Diesel Powered .......... $9,500 Ea.

(3) 1980 Ford or Chevy; V8; 4 Spd.; w/Onan Generator; Heated Air; Comp. & Utility Bodies .......... $8,500 Ea.

22 TON KNUCKLEBOOM

1982 Ford; V8; 5 Spd.; w/Teco Salum 50' Bucket & Chip Box ...... $27,900

1988 Mack DM688S; 350 H.P.; 8LL Trans.; 20 Frt.; 44 Rears; Air Tag; 22' Bed; w/Cormach 22 Ton at 7 Knuckleboom Crane; 5,500# At 42' .......... $84,500

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Rental: Day - Week - Month ETC.

(1) 1993

(2) 1991 GMC Top Kick; CAT Diesel; 6 Spd. With RO 2863 Cranes; 14 Ton With Jib; 96' Hook Height; (1) w/8,000 Miles; & (1) w/13,000 Miles ........... $69,500 Ea.

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22 TON KNUCKLEBOOM

(1) Royer Woodmen Brush Clearing Attachments; Diesel Powered .......... $9,500 Ea.

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insurance premium. How much of that amount much does your company pay......25%?...50%?...zero? Use your figures: total monthly premium multiplied by 12, multiplied by the percentage paid by your company.

**Line 14:** Do you have a retirement plan? Use your own numbers to calculate this figure.

**Line 15:** To the total earnings figure (Line 6), add the company's cost for insurances, taxes and other dollar benefits (Lines 7 thru 14). This is the total cost to your company to employ this one person for a year.

**Line 16:** Divide the figure in Line 15 by the total number of hours paid from Line 1. The figure in this example shows that every dollar you pay of the base hourly costs you the company, an additional 90 cents.

You now have a good start on understanding how to analyze your costs. Keep in mind that this $19 figure is only the basic cost to pay one individual. It is not a billing rate. It does not include all the other costs that your billing rates have to cover: uniforms, hand tools, climbing lines and safety gear; employee education and training, licenses and certifications, sales expenses or administrative costs.

Also, it does not take into account the non-billable time lost on a job because of bad weather, equipment breakdowns and assorted other delays. Be aware that even a few hours lost each month will equal one week's pay per employee per year. In this example, that would cost you $760 for one employee: 40 hours x $19 = $760.

**Other costs**

In addition to labor costs, you should know your costs for trucks, chippers and chain saws, and for specialized pieces of equipment. You also need to figure costs for materials used in insect pest control and fertilizing, and for cabling, planting, etc. Your billing rates also have to pay for non-production expenses: sales, clerical and all other administrative costs. Don't forget to include your profit goal before income taxes. All these components need to be considered because they all affect each job's profitability.

If you want more information on cost analysis, The National Arborist Association (NAA) is an excellent source. The NAA has been providing its members with a series of Management Guidelines since 1991. Several of these guidelines have information similar to the cost analysis in this article. All have been a tremendous help for tree care company managers.

Some people enjoy working with figures; I am one of those people. So, I mean it sincerely when I say, "Have fun!"

Susan Haupt is president of Lobo Management, Inc., and a business consultant with 35 years tree care management experience. Her areas of expertise include accounting systems emphasizing cost analysis and management; company standards and policy; computers and software. She helped to develop "The Accountable Arborist," a complete job management and accounts receivable software system. Her address is Jug End Road, P.O. Box 261, South Egremont, MA. Phone: 413-528-5030.
Complying With DOT

By Wyatt F. Hammond

When it comes to safety regulations, the arborist must remember three organizations: OSHA, EPA and DOT.

The U.S. Department of Transportation, DOT, issues the Federal Motor Carrier Safety Regulations (FMCSR). “Wait a minute,” you say. “I am not a motor carrier.” It doesn’t matter. Any type of business - including those in the tree care industry - is required to comply when it operates motor vehicles that are over 10,000 pounds gross vehicle weight and cross state lines during commerce.

The trucks that carry equipment to the job site and the people who drive those trucks are subject to the FMCSR. The rules cover an employee’s qualifications to drive a commercial motor vehicle, the inspection and maintenance of vehicles, and the number of hours an employee is allowed to work/drive.

Now you are probably asking why you should be concerned with these rules. An obvious answer is that safety leads to more productivity and better employees. A less obvious answer is that violators can be penalized.

Since a vehicle can be pulled over and inspected by State Police, violations can be discovered during travel. During these roadside inspections, brakes, lighting devices, wheels and tires, suspension, and exhaust will be checked for safe operation. The driver will also be checked for proper qualifications such as physical card, commercial driver’s license, and hours driving/working. If there are any violations, the vehicle or driver can be declared out of service, prohibiting further movement.

Violations of the FMCSR can also be found during a DOT safety audit. Under a mandate from Congress, DOT is auditing the safety records of firms that are required to comply with the FMCSR. Most for-hire truck and bus companies have already been audited, and DOT is now concentrating on private carriers, those companies not in the business of trucking but that operate commercial motor vehicles. When such an audit is completed, the company will receive a safety rating: satisfactory, conditional, or unsatisfactory. Safety ratings are public information and are available to insurance companies, customers and competitors.

There are two types of audits, the safety review and the compliance review. The safety review is the first audit to be performed on a company’s records and is used to determine if adequate safety con-
controls are in place. It consists of 75 questions covering eight areas of the regulations, and some of them require the company to produce documentation. Failure to answer the questions correctly or to have the required records could result in a conditional or unsatisfactory rating. Anything less than a satisfactory rating will result in a compliance review. Violations found during the compliance review will lead to fines ranging from $2,000 to $15,000.

The most important areas of the regulations concern driver and vehicle safety. To begin with, drivers must be qualified to operate heavy commercial motor vehicles. Proof of this qualification must be on file; there are more than 15 documents that must be maintained in a driver qualification file. Drivers must keep time records documenting work and driving time. Employers are required to control the hours that drivers work/drive by reviewing log books and time cards to ensure that violations are stopped. As the work hour rules can be complicated and at times difficult to comply with, they usually generate the most severe fines.

Vehicle inspection is not only important in complying with the rules, but also in maintaining safe operations. The driver must inspect equipment daily, and a copy of the most recent daily inspection report must be kept on the vehicle. Also, vehicles must pass an annual inspection, which must be performed by a qualified inspector. Documentation that the vehicle passed the annual inspection must be carried on the vehicle.

All of this is not so confusing as it may seem. Compliance with the regulations is a matter of having the proper safety controls and maintaining all of the necessary documentation. DOT regulates safety through paperwork; it is up to you to have safety in practice.

Wyatt Hammond is vice president of Trans Products in Dover, Delaware. The company specializes in forms and supplies for complying with the U.S. DOT safety regulations. A catalog of DOT safety products is available from Trans Products at no charge. Call 1-800-367-9100.
**INDUSTRY ALMANAC**

October 1-4
American Society of Consulting Arborists Annual Conference
Portland, Maine
Contact: 303-466-2722

October 22-24
New Jersey Shade Tree Federation
Featuring Dr. Al Shigo
Cherry Hill, N.J.
Contact: 908-246-3210

October 4-5
Turfgrass and Ornamental Pest Control Workshop
Columbus, Ohio
Contact: Jeff Lefton, 317-846-7020

October 4-6
ISA, Mid-Atlantic Chapter Annual Conference
University of Maryland
Contact: Matthew C. Anacker, 301-486-4561

October 4-8
Kansas Arborist Training Course
Manhattan, Kan.
Contact: Charles Edwardson, 316-943-9458

October 16
Maryland Forest Festival 1993
Anne Arundel County Fairgrounds
Crownsville, Md.
Contact: Will Williams, 410-768-0871

November 18-20
TCI EXPO '93
Cleveland Convention Center and Marriott Society Center Hotel
Cleveland, Ohio
Contact: 800-733-2622

December 1-2
Turfgrass and Ornamental Pest Control Workshop
Plymouth, Mich.
Contact: Jeff Lefton, 317-846-7020

December 14-15
Turfgrass and Ornamental Pest Control Workshop
Indianapolis, Ind.
Contact: Jeff Lefton, 317-846-7020

January 4-5
Turfgrass and Ornamental Pest Control Workshop
Turfgrass Technology Center
Columbus, Ohio
Contact: Jeff Lefton, 317-846-7020

January 15-16
Modern Arboriculture, Dr. Alex Shigo
Fort Lauderdale, Fla.
Contact: Anita Ayhens, 305-473-2955

January 20-22
Mid-Am Trade Show
Chicago, Ill.
Hyatt Regency Chicago
Contact: Carol Stoker, 708-526-2010

January 27-29
New England Grows
Hynes Convention Center
Boston, Mass.
Contact: 617-431-1622

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**ENGINE COMPATIBLE** - No extra heat, causing engine overheating and premature failure.

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TREE CARE INDUSTRY - SEPTEMBER 1993 29
Mid-Am Trade Show Scheduled For January

The 1994 Mid-America Horticultural Trade Show is scheduled for January 20-22 in Chicago. Since the first Mid-Am Show opened its doors in 1973, the show has grown steadily to become one of the nation's leading horticultural expositions. More than 400 companies exhibit and 9000+ people attend Mid-Am. With its friendly yet business-oriented environment, the show is recognized as the best place for industry professionals to go to find out about everything the industry has to offer.

Plan now to attend. The Mid-Am Show will be held January 20-22 at the Hyatt Regency Chicago. For more information, contact Mid-Am at 1000 N. Rand Road, Suite 214, Wauconda, IL 60084. Phone: 708-526-2010. FAX: 708-526-3993.

A recent Mid-Am Show draws a large crowd.

Forest Service, ACRT Offer Urban Forestry Training

A federally funded pilot program in Urban Forestry is preparing young people for work in the tree care industry.

Last November, ACRT's Institute of Arboriculture and Urban Forest, in cooperation with the U.S. Forest Service, began a new program to provide vocational urban forestry training for the youth enrolled at the Golconda, Illinois, Civilian Conservation Center Job Corps, located in Shawnee National Forest in rural southeastern Illinois. The Center is a residential educational and vocational training facility operated by the Forest Service for the U.S. Department of Labor's Job Corps. The Center serves disadvantaged, unemployed and under-educated youth between the ages of 16 and 21 from seven Midwestern states. The Forest Service provides housing, meals, health care and clothing for these young men and women as well as instruction in general education toward a G.E.D. certificate and vocational training.

ACRT established the pilot training program in urban forestry, which currently enrolls 24 students. The training is designed to develop skills in identification of trees, insects and diseases; pruning, National Arborist Association standards; topping for removal, roping and rigging of trees; integrated pest management; plant health care and fertilizing; safety and aerial rescue; transplanting and after care; cabling and bracing and lightning protection; working in proximity to energized electrical wires; safe use and proper maintenance of chain saw and other equipment.

All students are trained to operate a bucket truck, chipper, sprayer, etc., and to climb a tree using a safety rope and saddle. The progress of all trainees is monitored and evaluated by experienced instructors.

For more information, call ACRT instructors at U.S. Forest Service, Job Corps, Civilian Center, Golconda, at 618-285-6601 to arrange interviews, or ACRT corporate headquarters at 800-622-2562.
While this study guide has been developed for use by candidates for ISA Arborist Certification, it has also been immediately recognized as an invaluable addition to any reference library. With over 160 pages of information and nearly 200 illustrations and photos, it provides ready-reference for arborists on all levels. The guide is housed in a handsome 3-ring looseleaf binder with each chapter separated by tabbed reference dividers.

The study guide is intended to serve as a recommended program of study. It is not intended to be the only program of study to obtain certification. The narrative portion of this guide is general in nature and serves as a primer.

Each chapter of the guide contains: objectives for study; list of new terms; narrative with illustrations/photos; workbook section; other suggested sources of information; challenge questions; and sample exam questions.

Chapter topics include:
- Tree Biology
- Tree Identification
- Tree/Soil Relations
- Water Management
- Tree Nutrition and Fertilization
- Tree Selection
- Tree Installation and Establishment
- Pruning Concepts and Techniques
- Cabling, Bracing and Lightning Protection
- Problem Diagnosis and Management
- Construction Management
- Climbing Techniques and Working In the Tree
- Safety
- Glossary

Noteworthy comments from a few professionals:

"The study guide is a great step in the right direction. Arborist certification is helping to raise the professional standards of the industry."
—Don Blair
M.E. Blair Tree Experts

"This long-overdue guide fills a gap in the literature available to arborists. It will be a great educational tool."
—Donald L. Ham
Immediate Past ISA President

"... a good basic text for anyone interested in tree care and excellent preparation for the arborist certification exam."
—H. Dennis P Ryan III
Professor of Arboriculture
University of Massachusetts

"The guide is thorough, well-organized and representative of the high standards of ISA. I strongly recommend it for all arborists."
—Bill Kruidenier
Executive Director, ISA

The cost of the study guide is $60.00 for ISA members, $90.00 for non-members. Add $10.00 to obtain the ANSI Z-133 Safety Standards (referenced in text). It can be ordered prepaid from ISA, P.O. Box GG, Savoy, IL 61874-9902, USA, or FAX VISA/MasterCard orders with card number and expiration date to (217) 355-9516.

See us at TCI Expo
The Forestry and Industrial Equipment Division of Blount, Inc., introduces the Hydro-Ax 411E feller-buncher. This addition to the Hydro-Ax Series E line provides exceptional power and stability in a smaller-sized feller-buncher. The 6BT Cummins 6-cylinder, 140 hp diesel engine permits maximum productivity over a variety of terrains. The engine provides 32% more torque, so the saw and shear attachment run more efficiently. For more information, contact Blount, Inc., Forestry & Industrial Equipment Division, County Road 45 South, P.O. Box 568, Owatonna, MN 55060. Phone: 507-451-8654.

Circle 61 on the Reader Service Card

A valuable tool is available to detect decay and/or voids in a tree to help determine if the tree is hazardous. Tests at the Karlsruhe Nuclear Research Center in Germany have shown that Metriguard's Model 239A Stress Wave Timer can be used to evaluate a tree with minimal invasive damage. Typical stress wave velocities in a number of healthy trees of many species were recorded for reference; defects were also examined, showing slower velocities. For more information contact Metriguard, Inc., P.O. Box 399, Pullman, WA 99163. Phone: 509-332-7256. FAX: 509-332-0485.

Circle 62 on the Reader Service Card

Mirk, Inc., now provides a complete truck package for the tree care professional. One of two body styles available, this 15-cubic-yard rust resistant steel body comes complete with a "back-pack" style tool compartment, hydraulic dump hoist, trailer hitch package including light hookups and combination pruner/ladder compartment. The chassis is a Ford F700 with a Cummins 170-hp diesel engine, a 5-speed manual transmission and a 23,160-pound GVWR. Available for rent, lease or purchase. For additional information, contact Dick Williston, Mirk, Inc., 7629 Chippewa Road, Orrville, Ohio 44667. Phone: 216-669-2000.

Circle 63 on the Reader Service Card
Echo, Incorporated, introduces its newest chain saw - the CS-3900. Its 39.6cc, 2-cycle engine and ProFire Electronic Ignition, combined with an all-purpose diaphragm carburetor and accelerator pump provide smooth power flow in any approved operating position. A standard 16-inch bar and chain are part of the unit, but an 18-inch version is available. An automatic oiler ensures smooth, trouble-free cutting and longer chain and bar life. The CS-3900 has a two-piece vertical crankcase/cylinder design that results in higher engine rpm for faster cutting and good power-to-weight ratio. For more information, contact Echo Incorporated, 400 Oakwood Road, Lake Zurich, IL 60047. Phone: 708-540-8400. Circle 64 on the Reader Service Card

An economical PTO-driven disc-style brush chipper has recently been introduced by Vermeer Manufacturing Company. The 606 runs off the power take-off of the tractor and features hydraulic feed for controlled brush feeding. The hydraulics are controlled by an easy-access manual feed control bar. The feed table height reduces unnecessary stooping or bending. A 2-way discharge chute directs chips away from the operator. The infeed table measures 60 inches to the pinch point of the roller. The cutting disc cover is bolted down to help prevent "early" entry. A lock pin holds the disc when replacing cutting knives. The discharge chute and protective housing open to repair or replace cutting knives. For more information, contact Vermeer at 800-370-3659. Circle 65 on the Reader Service Card

Olathe Manufacturing, Inc., introduces the 837TG tub grinder. Its 9-foot opening is large enough to accept a wide range of materials, but still small enough to be towed with a one-ton truck. The tub and discharge system are on a single control so that the discharge augers and conveyors are synchronized with tub rotation for the material being processed. The 837TG's Hydraulic Tile Control System lifts the tub forward to an angle of 38 degrees for open access to both sides of the hammer mill, screens and augers. The 837TG direct drive mechanism incorporates a hydraulic coupler to increase the durability of the drive system by isolating the engine and clutch assembly from the hammer mill. For more information, contact Olathe Manufacturing, Inc., 913-782-4396. Circle 66 on the Reader Service Card

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Tree trimmer, fulltime Casper, WY. If you like the great outdoors, this job's for you! Enjoy great fishing and hunting in big wonderful Wyoming during your leisure time. Two to 3 years residential pruning experience preferred. Please send complete resume & references to: Oil Capital Tree Service, 1220 E Yellowstone St., Casper, WY 82601. Phone: 307-234-5474.

Bartlett Tree Experts seeks entry level and experienced sales representatives for employment opportunities within the Midatlantic states. Education in arboriculture, ornamental horticulture or forestry preferred. Backed by the Bartlett Tree Research Lab, we have been providing scientific tree care since 1907. Competitive compensation and benefits package. Interested candidates send or fax resume and letter to Bartlett Tree Experts, c/o Alan H. Jones, 1185 Five Springs Road, Charlottesville, VA 22902. FAX: 804-971-1331. Office: 804-971-8086.

Established tree care firm is looking for an ambitious, motivated salesperson. This person must be experienced in the tree care industry. The qualified individual will be responsible for sales and supervision of work. Certified arborist preferred, but will train the right individual with tree care experience. Base salary plus commission, sales vehicle, medical plan and profit sharing available. If you meet qualifications, please send your resume to Taylor Tree, Inc., 172 Neelytown Road, Montgomery, NY 12549.

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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.

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.


Experienced arborist to work in sales and production for established company in Chicago's northern suburbs. Total compensation package available. Call Vince Winkler at 708-531-1181.

Sales - Palm Beach, Fla. Large tree maintenance firm looking for aggressive salesperson to sell long-term contracts in professional tree care. Must have background in horticultural or service ind. sales. We supply excellent salary, commission, car and growth opp. Call now! Arbor Care, 407-431-0485. Attn: Paul Jacob.

We've advertised twice and found two good men to add to our team, so here we go again. Fast growing full service quality tree care company looking for ambitious, highly motivated arborist. Must be experienced in all aspects of the tree care industry. Preferably have a degree in horticulture/arboculture and be a personable type. Responsibilities will include sales and supervision of work force. Please send resume with work and sales history to

HORTICULTURAL MANAGERS

The Maryland National Capital Park and Planning Commission, Montgomery County Department of Parks has immediate openings for two Horticultural Managers.

Position No. 3324 - Meadowbrook maintenance facility seeks a motivated and highly experienced individual to manage a variety of horticultural programs within a 28,000-acre county park system. This position manages programs in horticulture, IPM, arboriculture and golf course maintenance through the park system. Oversees a 60-acre nursery which produces woody and herbaceous plants. We seek a person with strong management skills and a proven record of personnel management and team building for this challenging and professionally rewarding position.

Position No 3260 - This position is being readvertised. Those who previously applied need not reapply. Incumbent needed to direct the operation of a 50-acre display garden, including two conservatories and 11 specialty gardens. Manage McCrillis Gardens. Direct the Horticultural Education Program for the public. Knowledge and experience with the management of display greenhouses: budget preparation: and experience in the field of public horticulture is highly desirable.

Both positions require Bachelor's Degree in Horticulture or related field, and six years of relevant horticultural experience, or Master's Degree and four years of such experience, at least two years of which involved supervision or management of other people; or an equivalent combination of ten years education and experience. Valid driver's license or the ability to acquire one required. State pesticide certification required within six months of employment. We offer a competitive salary range, $35,410 to $54,055 per annum, and excellent benefits package. The Commission is an Equal Opportunity Employer, and encourages applications from minorities, females and persons with disabilities. A separate response is required for each position.

The Maryland-National Capital Park & Planning Commission
6611 Kenilworth Avenue, Suite 103
Riverdale, MD 20737
Attn: Recruiter, Horticultural Manager (indicate which position no.)

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1984 Ford, 370 V-8 engine, 52' Hi-Ranger (48PBRI), flat deck, tool boxes, cab guard, tool lines, $18,500 (US). Phone: 519-945-4385 (days); 519-969-5451 (evenings). Winsor, Canada.

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The Quad Arborist software package focuses on being your faucet instead of a drain. It is especially useful with the marketing of your business as well as the other basics - accounting, proposals, work orders, invoices, statements, customer tracking, and reports. This makes the Quad Arborist unique. One customer told me that just one of our marketing features (the work order handout) boosted his sales not by thousands of dollars but by hundreds of thousands of dollars.

So if you want to get money from your computer instead of spending money on your computer, give me a call at 215-326-5507. We will be glad to send you a demo copy of our new Windows Version of the Quad Arborist software package.

Sincerely,

Dave Bell
Quad Technology, Inc.
191 S. KEIM ST., P.O. BOX 643
POTTSTOWN, PA 19464 • 215-326-5507

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68 hp diesel hydraulic drive, 26 working hrs.; 1993 Rayco 1620 Super Jr., 9 working hrs. Call any time, best after 5 p.m., southern Illinois. Phone: 618-377-5176.

1992 Rayco 1670 (106 hp) diesel stump grinder, good condition, $14,000; 1990 Rayco 1670 (80 hp diesel), $11,000; other new and used Rayco's and new Woodchuck chippers, Tree Barber Supply - 1-800-448-7297 (Wayne). Jackson, MS (Matthew 16:26)

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Sawdust And Manhattan

By Dave Lewis

In the fall of 1980, I was working as a foreman-estimator for Trees and Gardens, a tree care company in eastern Queens, New York. Our work was a mix of city contracts and serving the residential sections of Queens, Nassau and Brooklyn. Once in a while we would do a job in Manhattan.

The following story is about one such foray into the city. A call had come in for an estimate for the removal of an Alanthis tree. The location was a Spanish restaurant just off Times Square. I drove in on Saturday to avoid the traffic.

At my destination, I descended a half flight of stairs and walked into a bustling matinee crowd. A well dressed gentleman rose from the bar and greeted me. Perhaps my cap and fatigue jacket set me apart from the theater crowd.

The owner took me to the back of the restaurant, which opened onto a patio. There amidst tables and chairs stood a 22-inch Alanthis rising from a small brick planter and spreading over a roof of greenhouse glass. The tree was dead. Stone dead. The boom and bucket truck would be no help. It was time for rope, saddle and rigging. And six sheets of plywood for good measure.

The owner accepted the bid, which was higher than usual, but there was very little that was usual about this job. We set a date for morning, before the restaurant would open. At least there would be no worry about dragging brush through a crowded dining room.

The day came and our crew set out: Joe, our lead climber; Gus, the ground man; Bobbie, our cheerful new hire; and myself. The look on everyone's face when they saw the tree was one of utter disbelief. I endured comments on my ability as an estimator, the most charitable being that I belonged in Bellevue Hospital.

By this time several of the kitchen staff and waitresses were at work, getting ready for the luncheon trade. Over the years I've learned that a good crew loves two things - good tools and an audience.

We set to work. In the narrow space between the greenhouse and the brick wall of the adjacent building we put up a ladder and passed the plywood sheets up on the glass roof. Soon we were at the tree. Setting the ladder against the tree, Joe was quickly up in the first forks, about 15 feet from the apex of the greenhouse, or 30 feet from the base of the tree. The tree was weak, but light. The crotches were nicely angled and with a sling line and short butt rope we soon had the branches down and off the roof.

Now we had a 40-foot stick, about 25 feet over the plywood protected glass. The wood was definitely not hinging material, more like snap, crackle and pop. Joe flip lined higher and we held our breath. He got into a half decent position, rigged and folded over a 5-foot piece. That was the worst; soon we had the rest down.

We were in the restaurant now, the waitresses having moved several tables away from the tree. From the ladder tied to the truck, Joe carefully sectioned off 2-foot rounds. The owner wanted a 3-foot stump left, which was fine with us.

As the sawdust settled, the owner thanked us, told us we had done a good job, and tipped the crew 50 bucks.

Dave Lewis owns and operates Lewis Tree Service in Rock Springs, Wyoming. He holds a bachelor's in history from the University of the New York and enjoys returning to the city for a visit.

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 or school 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.
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Practical Rigging
An American Arborist Supplies sponsored article
By: Ron Danise
SUPPLYING THE NECESSARY TOOLS

Over the months, we have devoted a great deal of time writing about friction apparatus available to the tree industry. These apparatus have ranged from simple devices to very complicated block systems and hauling cams. Modifications have made it possible to use only a couple of tools today in situations for which you needed several tools in the past. Such is the case with the newly invented Ratcheting Bollard® from Charlotte Rigging Supply (CRS).

For the many difficult removals in which I have been involved, I have always relied heavily on the Bollard Friction Brake® to give me a wider platform in order to concoct rigging scenarios. The logical progression with the friction brake started out as a large 6 inch drum and was eventually scaled down to a 4 inch drum, offering more mobility and about 20 pounds less weight than the 6 inch drum. The next logical step was to incorporate a one-way directional winch into the 4 inch unit to give lifting capabilities when needed. And although many fellow arborists have inquired about such a feature, it was not until now that all of the bugs have finally been worked out and we are able to make it available.

One of our priorities when perfecting the development of the Ratcheting Bollard® was its reliability. We designed the lifting capability so that the gear mechanism is completely shielded from sawdust and other foreign matter by a mounting plate. All of the moving parts are actually up against the notch in the tree and completely enclosed when in use. As in the original Bollard Friction Brake®, the rope tails straight down to the device, the option to use the alignment pins and the cross arms is still available, and the directional running of the rope has not been changed. The unit can still be run from standing almost anywhere. Those who have used their trucks for lifting limbs will really appreciate this benefit.

When it's necessary to lift a limb over a building, it can be done by cranking the one-way directional winch with the 35 inch removable handle. It is important that the wraps are not piled up on top of each other so that the rope remains free-running when the limb is lowered. I find that having this feature incorporated into the unit is particularly handy when working with the Live Oaks in the Charleston, N.C. area. These are very large trees in which some of the limbs are two or three feet in diameter and growing closer than eighteen inches above the rooftops. Even cutting smaller pieces can leave enough stretch in the rope that the limb can end up 6 inches into the roof. The benefit of the lifting effect offered by the Ratcheting Bollard® will give you more positive control and more options.

Of course, as in any new piece of equipment, there will be some practice needed to gain the full benefit of its capabilities. Because of the amount of leverage available, normal rope tensions may not apply in a particularly demanding lifting situation. I strongly recommend being overly cautious when selecting your ropes until you've had enough experience with the Ratcheting Bollard® to feel comfortable with its strength.

The built-in ratcheting feature will give the inexperienced rigger a new playing field and the experienced rigger a new universe in which to play.

The new Ratcheting Bollard® will only be offered through a small distribution network. I encourage you to call American Arborist Supplies with any questions you may have regarding its performance and capabilities. As always, our goal at CRS is to offer state-of-the-art rigging apparatus and custom-built first quality tools and gear for the serious rigger. Please note: all rights reserved; patent pending.
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November 18-20, 1993
Cleveland, Ohio — Cleveland Convention Center
Opportunity IS KNOCKING

Opportunities Galore!

This year's TCI EXPO is the most opportunity-filled trade show yet! Everyone in the tree care industry benefits from attending TCI EXPO '93. Here are just a few of the opportunities:

- Educational opportunities for field personnel and supervisors through informative demonstrations and seminars.
- Educational opportunities for management through five invaluable management track seminars.
- Buying and information-gathering opportunities from over 110 manufacturers and distributors exhibiting at TCI EXPO '93.
- Networking opportunities with fellow arborists from around the country!

World's Largest Tree Care Trade Show!

TCI EXPO '93 truly is the world's largest trade show for the tree care industry. In response to demands from attendees and exhibitors, this year's trade show has been expanded to three days. You'll see the latest in equipment, meet personally with factory representatives, and pick up information to help you make smart buying decisions. There is NO CHARGE for admission to the trade show.

Live Demonstration Opportunities!

See new climbing techniques, rigging and aerial rescue demonstrations, and a lightning protection installation in the trade show area. All tree demonstrations will be conducted by ISA Jamboree champions Ken Palmer and Butch Weber. Cincinnati Gas and Electric Company will also put on their life-size electrical hazards and trees demonstration each day. Leading tree and soil-injection companies will also demonstrate proper injection techniques in a separate area. There is NO CHARGE for attending these demonstrations.
IN NOVEMBER!

Shrub Pruning Opportunities!
Be sure to see the separate display of before-and-after examples of shrub pruning on the trade show floor.

Twin Track Seminar Program Opportunities!
To provide your field personnel and managers with the latest tree care technology AND management information available, we have structured an expanded seminar program. All speakers are professionals and/or well-known experts from the tree care industry, presenting a variety of topics relevant in today’s market. Managers are encouraged to bring key employees to take advantage of this unique opportunity. Please refer to the TCI EXPO ’93 Schedule of Events for more details.

ISA Certification & Recertification Opportunities!
Many of the seminars provide valuable preparation material for the ISA Certification Test to be given on Saturday, November 20. A special Certification Preparation Session will be held for those who have pre-registered to take the exam. Several seminars also provide ISA recertification credits. To pre-register, you must write or call:

International Society of Arboriculture
P.O. Box GG, Savoy, IL 61874-9902
(217) 355-9411

Pesticide Applicator Recertification Credit Opportunities!
Several programs will provide pesticide applicator recertification credits for arborists in selected states. Two of these seminars are FREE.

Group Discount Opportunities!
Share the wealth of information by bringing one or more employees with you. You’ll earn a $6.00 discount per person per session. If we receive your registration before October 14, 1993, we’ll take an additional $3.00 off each session you attend! See page 6 for details.

Unlimited Access Opportunities!
Instead of limiting yourself to individual meetings, you can gain access to everything TCI EXPO ’93 has to offer by purchasing a TCI GOLD CARD. You must register before October 14, 1993, to purchase the Gold Card — the most economical way to attend the full complement of seminars. No additional discounts are available with this package, but if you are bringing employees who are not purchasing Gold Cards, they are entitled to the same group discounts as general attendees.

EXPONDING ON EXPO

Comments From Last Year’s Attendees:

“I enjoyed TCI EXPO ’92 because of the opportunity to learn from the experiences of other tree care professionals. It often takes just a brief conversation with a colleague to confirm an idea you may already have or set off a light bulb for a new way to provide a valuable service to a client. TCI EXPO provides that opportunity.” — Kevin P. Carr

Guardian Tree Experts, Inc., Rockville, Maryland

“Although health and safety has been legislated for most of us, we welcome and appreciate any input from the NAA regarding the sector-specific accreditation training process. TCI EXPO helps to deliver programs which satisfy some of our training needs. We will be back.” — Arthur Marlow

Complete Tree Service Co., Carlisle, Ontario, Canada

“TCI EXPO is a great learning experience. The equipment, seminars, and especially the climbing and aerial rescue demonstrations were all terrific.” — Paul Portsmore

Sequoia Tree Service, Wyckoff, New Jersey

“We had six of our staff at the seminars. They all brought back ideas to improve our company. The large trade show had many new products and good buys. The demonstration area attracted many viewers to watch proper techniques for tree work. The TCI EXPO gave our company the team effort boost, from office staff to field personnel.” — Randy Owen

Owen Tree Service, Inc., Attica, Michigan
**Who Will Be Exhibiting At TCI EXPO '93?**

Over 110 companies will have their wares on display at TCI EXPO '93! Admission to the tree care industry’s largest trade show is FREE, but you must have an official TCI EXPO '93 badge. Mail your Registration Form early so we can make up a badge for you.

Once inside the exhibit hall, you'll be overwhelmed by the more than 90,000 square feet of exhibits covering all aspects of the industry - exhibits to help you make informed buying decisions that will increase the productivity, performance, and profitability of your firm. Whether you are looking for trucks, aerial lifts, chippers, stump grinders, climbing rope, chain saws, or other arborist equipment and supplies, TCI EXPO '93 is your opportunity to find it all in one place!

**Some Of This Year’s Exhibitors:**

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Alltec Industries  
American Arborist Supplies  
American Intercool, Inc.  
American Safety Utility Corp.  
AmeriQuip  
Arbor Care Equipment  
ArboTech, A Stahl Subsidiary  
Artistic Arborist Inc.  
Asplundh Tree Expert Co.  
Bandit Industries  
Bartlett Manufacturing Co.  
Bishop Company  
Blackhorse Services Co.  
Brown Manufacturing Corp.  
Bryan Equipment Supply  
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Ciba-Geigy Corporation  
Corona Clipper Co.  
Creative Sales, Inc.  
The Davey Tree Expert Co.  
Detroit Diesel Corporation  
Deutz Corporation  
The Doggett Corporation  
DSR/Kat-Du Stumper  
East Hill Manufacturing Corp.  
Engine Center, Inc.  
Engine Distributors Inc.  
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Faaco Saw Works  
FMC Corp.-Machinery Group  
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Fox Manufacturing, Inc.  
Gracce-Sierra Horticultural Products  
Grass Roots Nature’s Way Inc./Green Pro Services  
Green’s Manufacturing  
Grow Gun Corporation  
Growtech, Inc.  
Hal’s Safety Equip. Corp.  
Haybustar Manufacturing Inc.  
Hercules Engine Company  
Hodges Mfg., Inc.  
Holian Mfg./General Cable Co.  
Husqvarna Forest & Garden Co.  
Independent Protection Co.  
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McCulloch Chain Saw/ Central Power Systems  
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Veermere Manufacturing  
Well Industries  
Wis-Con Total Power Corp.  
Wood/Chuck Chipper Corp.  
Yale Cordage, Inc.  
Zenith Cutter

**SCHEDULE OF**

**THURSDAY, NOVEMBER 18, 1993**

7:30 AM: REGISTRATION OPENS

7:30 AM-10:15 AM: COFFEE BREAK - Registration Area

8:30 AM-9:55 AM: Seminar 1 - AERIAL RESCUE AVOIDANCE Mr. Donald Blair, M.F. Blair Institute of Arboriculture

The tree care industry places a great deal of emphasis upon aerial rescue. As important, prudent and necessary as it is, Don Blair would prefer to work for a company with a pro-active aerial rescue avoidance program than for one with a non-existent accident prevention policy but great aerial rescue training.

His message is that aerial rescue avoidance is an ongoing commitment by all concerned with the process of tree care: the employer, supervisor, crew leader, climber, ground worker and equipment operator, and you!

Donald F. Blair is a skilled arborist and communicator. He serves on the ANSI Z-133 Committee representing the California Arborist Association. He served on a committee to Cal/OSHA from 1979 to 1984 and consulted on the National Arborist Association’s Aerial Rescue video training program. He owns Sierra Moreno Mercantile, and is an innovator of equipment for safety and increased productivity.

9:57 AM: TRADE SHOW OPENS

Opening the show and giving his slightly off-center views on the world of tree care will be “Lorenzo,” the wacky European horticulturist known for his slightly loony weekly gardening tips on Cleveland’s 1420 WHK radio station. Along with moderator Robert Felix, Lorenzo (actually Lauren Lanphere of Forest City Tree Protection) may touch upon such topics as “Topping Trees For Fun And Profit,” “Scale—Nature’s Art Form,” and “Using Napalm For Pest Control.” Then again, he may not.

4:00 PM-5:00 PM: Seminar 2 - Management Seminar - WHAT MAKES A TOP SALESPERSON Mr. Hal Becker, The Becker Group

Hal Becker became the Xerox Corporation’s top salesperson in a sales force of 11,000 at the age of 22. Six years later, he founded Direct Opinions to help companies in various industries achieve success through telemarketing. The company grew to offices throughout the United States and Canada conducting two million calls annually. In 1990, he sold his company so he could dedicate more time to the many lectures and seminars he conducts around the country. His seminars, geared to both experienced and inexperienced salespersons, incorporate serious selling methods with pure fun.

Seminar 3 - Field Operations Seminar - CREATING WILDLIFE HABITAT Mr. Fred Clark

Many tree care customers are likely to be receptive - and willing to spend money - to manage their backyard for wildlife. According to this speaker, an opportunity presents itself to the arborist willing to take a broader view of landscape maintenance.

Fred Clark is currently with the Wisconsin Department of Natural Resources, and previously was a foreman, production manager, sales representative, and manager with several prominent tree care companies. His article by the same name appears in the October issue of TCI.

6:00 PM: RECEPTION FOR ATTENDEES - Marriott Society Center Ballroom

Beer, soft drinks & snacks provided. Cash bar for other beverages.

8:00 PM: RECEPTION ENDS
FRIDAY, NOVEMBER 19, 1993

7:30 AM: REGISTRATION OPENS

7:30 AM-8:30 AM: COFFEE BREAK - Registration Area

8:00 AM: Seminar 4 - FREE Pesticide Recertification Seminar - INTEGRATED CONTROL OF TOP TREE DISEASE PESTS Dr. Chuck Powell, Plant Health Advisory Services

A popular presenter two years ago, Dr. Powell will discuss some of the most serious disease complexes in today’s urban landscape, together with effective, integrated control measures. This free seminar carries ISA Arborist recertification credits as well as pesticide applicator recertification credits for most states.

9:00 AM-10:00 AM: Seminar 5 - Management Seminar - FINDING DIAMONDS IN THE ROUGH Mr. Spence Rosenfeld, Arbor-guard, Inc.

Spence Rosenfeld founded Arborguard, Inc., a highly successful medium-sized landscape care business in Atlanta. His management methods are innovative - and extremely effective. Join him as he walks his audience through his company’s comprehensive employee development program.

Seminar 6 - Field Operations Seminar - TREE FERTILIZATION & SOIL AMENDMENTS Mr. Randall MacDonald, Roots, Inc.

Environmentally sound programs will be essential for tree care businesses to survive and succeed through the '90s and beyond. Randall MacDonald applies the latest technology and knowledge of tree physiology to create tree treatments that are right for the times. This seminar carries ISA Arborist recertification credits.

10:00 AM-10:15 AM: COFFEE BREAK - Outside Meeting Rooms

10:15 AM-11:15 AM: Seminar 7 - Management Seminar - USING YOUR BANKER Mr. Greg Skoda, Skoda, Minotti, Reeves & Co., Certified Public Accountants

Arborist firms need solid business plans and appropriate financial backing to flourish. Greg Skoda will explain, in non-accountant’s language, how to best work with a banker, and much more. His firm, recognized as one of the 50 most distinguished accounting firms in the country, specializes in helping small, privately held companies.

Seminar 8 - Field Operations Seminar - TREE PROTECTION & MANAGEMENT Dr. Tom Perry, Natural Systems Associations

Construction-related tree damage is a leading cause of tree decline and tree loss. This widely respected speaker will explain and illustrate how the arborist can take steps to mitigate or prevent tree damage, and help the arborist recognize the signs of construction damage and provide remedial care. This seminar carries ISA Arborist recertification credits.

11:15 AM: TRADE SHOW OPENS

11:30 AM-3:30 PM: DEMONSTRATIONS - Demonstration Areas

4:00 PM-5:00 PM: Seminar 9 - Management Seminar - UNDERSTANDING CASH FLOW Susan Haupt, Lobo Management

Numbers are an Arborist’s friend, especially in difficult economic times. Susan Haupt is a numbers specialist who speaks from an Arborist’s perspective. She is senior vice president of a well-established and prosperous New England tree care company as well as a business consultant with 35 years tree care management experience. Cost analysis and management are two of her areas of specialization. She helped to develop a complete job management and accounts receivable computer software system.

Seminar 10 - Field Operations Seminar - ANSI A300: THE NEW STANDARD FOR PRUNING Mr. Tim Johnson, Artistic Arborist, Inc.

A national consensus standard for tree pruning, when it is released, will provide uniform criteria for tree pruning and thereby improve the quality of tree work across the country.

Tim Johnson, chairman of the committee writing the standard, is also a highly respected commercial Arborist. He will explain the full significance of this new standard. This seminar carries ISA Arborist recertification credits.

5:00 PM: TRADE SHOW OPENS FOR CLEVELAND GARDEN CENTER ATTENDEES

6:00 PM: RECEPTION FOR CLEVELAND GARDEN CENTER MEMBERS ONLY

7:00 PM: TRADE SHOW CLOSES - SPEAKER STARTS

GARDENING AROUND TREES CAN BE LETHAL-COMPROMISE IS ESSENTIAL Dr. Tom Perry

Dr. Perry, a horticulturist with Natural Systems Associates of Raleigh, NC, goes into detail about tree root structure and how everyday activities, even planting flower bulbs, can seriously damage the roots. He also touches upon proper mulching, watering, fertilization, and other tree topics. An entertaining, fact-filled presentation that should not be missed. Open to the general public.

SATURDAY, NOVEMBER 20, 1993

7:30 AM: REGISTRATION OPENS

7:30 AM-8:30 AM: COFFEE BREAK - Registration Area

8:00 AM-9:00 AM: Seminar 11 - FREE Pesticide Recertification Seminar - INSECTS & MITES ASSOCIATED WITH STRESSED TREES Dr. Dave Shetlar, Ohio State University Extension

Many of the insect and mite pests that attack urban trees are opportunists searching for a stressed and susceptible tree. Dr. Shetlar will discuss some of the most serious tree stress-insect complexes as well as integrated control measures.

This free seminar carries ISA Arborist recertification credits as well as pesticide applicator recertification credits for most states.

9:00 AM-12:00 NOON: Seminar 12 - CERTIFICATION PREPARATION SESSION Mrs. Sharon Lilly, Expert Tree Service

This special three-hour preparatory session is open only to those who have pre-registered to take the ISA Arborist Certification exam at EXPO. Sharon Lilly is currently the Certification Liaison for the Ohio Chapter of ISA, and was instrumental in the development of certification exams and test procedures.

9:00 AM-10:00 AM: Seminar 13 - Management Seminar - FINDING NEW CUSTOMERS Mr. Richard Proudfoot, Pruett Tree Service, Inc.

Marketing...Advertising...Promotion...Image. Dick Proudfoot has great expertise in each of these areas, owing to his having owned and successfully operated ten different businesses. He is the general manager of Pruett Tree Service in Portland, Oregon, and a sought-after speaker for arboriculture groups around the world.

Seminar 14 - Field Operations Seminar - HANDS-ON SHRUB PRUNING Dr. H. Dennis P. Ryan, III, University of Massachusetts Stockbridge School of Arboriculture

This hands-on, limited enrollment session will take place in a landscaped section of the trade show floor. Dr. Ryan, Professor at the University of Massachusetts Stockbridge School of Arboriculture, will show students how to head back, rejuvenate and shear deciduous and evergreen shrubs. This seminar carries ISA Arborist recertification credits.

10:00 AM: TRADE SHOW OPENS

10:30 AM-2:30 PM: DEMONSTRATIONS - Demonstration Areas

1:30 PM: ISA CERTIFICATION TEST

3:00 PM: TRADE SHOW CLOSES
Free Admission

Admission to the trade show is free, but all attendees must be registered and receive a TCI EXPO '93 badge in order to gain entrance into the exhibit hall. If you do not pre-register, you must sign in at the Registration Desk upon your arrival.

Seminar Discounts

The basic price per seminar for TCI EXPO '93 is $32.00 per session. You can significantly lower your seminar costs in several ways. By registering early (before 10/14/93) you can earn a $3.00 discount off your per session cost. Bringing an additional member of your firm can earn an additional $6.00 off for you and the associate or associates. That is a total of up to $9.00 off the base seminar price for registering early and bringing one or more associates.

You might also elect to purchase a Gold Card. The card allows unlimited access to all seminars for one price. Additional employees who are not getting Gold Cards are entitled to the same discounts as general attendees.

Registering

Begin by photocopying the blank registration form on the facing page. Use these copies to register additional employees from your firm. Next, fill out the top of the registration form and circle the number of each seminar you wish to attend. Count the number of seminar hours indicated next to the seminar titles. Record this number in the space provided and begin your calculations. Once you have determined your final seminar cost, mail the completed form with your check or credit card information to the TCI EXPO office at P.O. Box 1094, Amherst, NH 03031-1094.

Also, make sure you:

Photocopy the completed registration form for your records—this will serve as a record of the seminars you chose;

Mail all registration forms together by October 14, 1993 to earn the early registration discount and avoid long registration lines;

Complete the checklist on the back page.

Hotels

This year's host hotel is the Marriott Society Center located at 127 Public Square. It is across the street from the Cleveland Convention Center. Rooms have been reserved at the Marriott but space is limited. You must make your reservation before 10/25/93 to receive the preferred rate of $80.00 per night (single or double). Please make your reservations early by calling 1-800-831-4004 and be sure to mention you are attending TCI EXPO '93 to receive the preferred rate.

We have also arranged for a special rate at one alternate hotel, a ten minute walk from the Convention Center. The Holiday Inn Lakeside City Center at 1111 Lakeside Avenue is offering a rate of $60.00 per night (single or double) for reservations made before 10/16/93. To make a reservation call 216-241-5100. Please mention you are with TCI EXPO '93 when contacting this hotel. Besides the hotels listed above you may wish to look into other available accommodations more distant from the Convention Center.

Airline Information

The official carrier for EXPO '93 is United Airlines. The airline is offering EXPO attendees 10% off the unrestricted BUA coach fare or 5% off the lowest applicable fares, including first class. This special offer applies only to attendees of this meeting, and applies to travel on domestic segments of all United Airlines and United Express flights. The same discounts are also available for attendees traveling to or from Canada in conjunction with EXPO '93. These fares are available through United's Meeting Desk for travel between 11/15/93 and 11/23/93.

To obtain the best fares or schedule information, please call United's Specialized Meeting Reservations Center at 1-800-521-4041. Dedicated reservationists are on duty 7 days a week from 7:00 a.m. to 1:00 a.m. EST. Please be sure to reference the EXPO '93 ID number 534 YQ. You or your travel agent should call today as seats may be limited. Tickets will be mailed by United or you can pick them up at your local travel agency or United Airlines ticket office.

As a United meeting attendee you qualify for special discount rates on Hertz rental cars. Mileage Plus members receive full credit for all miles flown for this meeting.

If you have any questions regarding registration, feel free to call TREE CARE INDUSTRY at 1-800-733-2622 and we will be glad to help.
**REGISTRATION FORM**

Name ___________________________ Phone ___________________________

Title ___________________________ Company ___________________________

Address ___________________________ City ___________________________ State __________ Zip __________

**NOTE:** Please use a separate form for each attendee.

**SEMINARS**

Circle the number of each seminar you wish to attend. **Be careful not to pick two seminars which occur at the same time.** Count the number of seminar hours indicated next to the seminar titles. Record this number in the space below marked total seminar hours.

<table>
<thead>
<tr>
<th>Date</th>
<th>Seminar Title</th>
<th>Seminar Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOVEMBER 18th</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1 - 8:30 am</td>
<td>Aerial Rescue Avoidance</td>
<td>1 hour</td>
</tr>
<tr>
<td>#2 - 4:00 pm</td>
<td>What Makes A Top Salesperson</td>
<td>1 hour</td>
</tr>
<tr>
<td>#3 - 4:00 pm</td>
<td>Creating Wildlife Habitat</td>
<td>1 hour</td>
</tr>
<tr>
<td><strong>NOVEMBER 19th</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#4 - 8:00 am</td>
<td>Integrated Control Of Top Tree Disease Pests - FREE SESSION</td>
<td>0 hour</td>
</tr>
<tr>
<td>#5 - 9:00 am</td>
<td>Finding Diamonds In The Rough</td>
<td>1 hour</td>
</tr>
<tr>
<td>#6 - 9:00 am</td>
<td>Tree Fertilization &amp; Soil Amendments</td>
<td>1 hour</td>
</tr>
<tr>
<td>#7 - 10:15 am</td>
<td>Using Your Banker</td>
<td>1 hour</td>
</tr>
<tr>
<td>#8 - 10:15 am</td>
<td>Tree Protection &amp; Management</td>
<td>1 hour</td>
</tr>
<tr>
<td>#9 - 4:00 pm</td>
<td>Understanding Cash Flow</td>
<td>1 hour</td>
</tr>
<tr>
<td>#10 - 4:00 pm</td>
<td>ANSI A300: The New Standard For Pruning</td>
<td>1 hour</td>
</tr>
<tr>
<td><strong>Special Evening Session For Cleveland Garden Center</strong></td>
<td>7:00 pm Gardening Around Trees Can Be Lethal - Compromise Is Essential</td>
<td>FREE</td>
</tr>
</tbody>
</table>

| **NOVEMBER 20th** |                                                                               |               |
| #11 - 8:00 am  | Insects & Mites Associated With Stressed Trees - FREE SESSION               | 0 hour        |
| #12 - 9:00 am  | Certification Preparation Session                                            | 0 hour        |
| #13 - 9:00 am  | Finding New Customers                                                       | 1 hour        |
| #14 - 9:00 am  | Hands-On Shrub Pruning                                                     | 1 hour        |

**TOTAL SEMINAR HOURS**

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**THE GOLD CARD**

If you will be attending more than 5 seminars or would like unrestricted access to all seminars, then our Gold Card registration best suits your needs. To purchase a Gold Card registration, you must register before **October 14**. Check "Yes" in the box below and enter $160 on the **TOTAL COST** line. You are done!

I wish to buy a Gold Card Registration: □ YES □ NO

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**REGULAR REGISTRATION**

Regular Registration is for you if: 1) you will be attending 5 or fewer seminars; 2) you will be attending 6 or fewer seminars and registering an associate with your firm; or 3) you will be attending 7 or fewer seminars, registering an associate and registering before **October 14**.

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**CALCULATE YOUR COST**

**Basic Cost**

Multiply your total seminar hours by $32 and enter the amount on the **Basic Cost** line.

<table>
<thead>
<tr>
<th>Basic Cost</th>
<th>$ ___________________________</th>
</tr>
</thead>
</table>

**Discounts**

- **Early Bird Discount**
  - If you are registering before October 14, 1993 deduct a discount of $3 for each seminar hour you registered to attend. Enter the amount of your discount on the **Early Bird** line.
  - **Total Discount $ ___________________________**

- **Multiple Attendee Discount**
  - If more than one person from your organization is registering for seminars, deduct a discount of $6 for each seminar hour you registered to attend. Enter the discount on the **Multiple Attendee** line.
  - **Total Discount $ ___________________________**

**Total Cost**

Subtract your **Total Refund** from your **Basic Cost** line. This figure is what you pay for your registration.

<table>
<thead>
<tr>
<th>Total Cost</th>
<th>$ ___________________________</th>
</tr>
</thead>
</table>

Check enclosed for $ ____________ Please charge my Visa/MasterCard

Credit Card # ___________________________ Expiration Date ___________________________

Signature ___________________________

Mail the original form, with your check or credit card information to:

TCI EXPO '93, PO Box 1094, Amherst, NH 03031-1094

If you have any questions, please call TCI at 1-800-733-2622.

**NO REFUNDS AFTER NOVEMBER 1, 1993.**
A FEW FACTS ABOUT CLEVELAND

Located on the southern shore of Lake Erie, Cleveland is Ohio's largest city, with a metro area population of over 3 million. Founded in 1796, Cleveland is a sophisticated city with a multitude of things for visitors to see and do. Fine dining opportunities abound, such as the Watermark Restaurant, Hyde Park Grille, Li Wah, and Top of the Town, 38 stories high in the Galleria Tower, to name but a few. Exciting nightspots along the lakefront's Flat's area and renovated Warehouse District offer a variety of vibrant blues, jazz, dining, and comedy opportunities. A world-class symphony orchestra adds to the city's cultural life, while major sports teams, such as the NFL Browns and the NBA Cavaliers, provide a different style of entertainment.

CHECKLIST
For Registration Form:

I have:

☐ Made a photocopy of the original form to give to additional members of my firm.
☐ Filled out the form completely.
☐ Taken advantage of all entitled discounts.
☐ Double checked all cost calculations.
☐ Made a photocopy of the completed form for my records.
☐ If there are multiple attendees from my company, enclosed a copy of their form(s).
☐ Enclosed a check or credit card information.
☐ Mailed registration form before October 14, 1993 for discounts.

OTHER TCI EXPO '93 HIGHLIGHTS

Celebration '93
Come help us celebrate the opening day of EXPO. Socialize with exhibitors and fellow arborists at the Marriott Society Center Hotel Ballroom. As our guest, enjoy complimentary beer, soft drinks and a variety of snacks. There will be a cash bar available for other beverages. The celebration is on Thursday evening, November 18th from 6:00 to 8:00 pm.

Coffee Breaks
Complimentary coffee service will be provided during the opening day registration and in the registration area from 7:30-8:30 am thereafter. Coffee will also be served between seminars on Friday morning. There will be concession stands in the Exhibit Area during Trade Show hours for refreshments and snacks.

See you in Cleveland!

TCI EXPO '93
P.O. Box 1094, Amherst, NH 03031-1094
800-733-2622 FAX: 603-672-2613

Write or call for more information: