Are you watching good money go down the drain?

Call 1-800-ARBORS-1 and find out how to cut your insurance costs without cutting your insurance coverage. Our tree-insurance pros will tailor your coverage to your precise needs – and save you as much as 30% off what you’re paying now!

Even if the forecast is for sunny blue skies, call Albiez today. Because it doesn’t have to rain for you to get soaked on your insurance.

Call 1-800-272-6771

Albiez Insurance Agency

Arborists Insurance Specialists

Workers Comp  General Liability  Business Auto

Please circle 3 on Reader Service Card
Simon-Telelect Hi-Rangers have been used throughout the tree care industry for many years and are known for their high quality and durability. Through extensive discussions with Arborists from around the country, we have developed a new aerial device that provides maximum user benefits while minimizing downtime and maintenance.

The new Simon-Telelect Hi-Ranger XT-52 offers:
- 42.2 ft of side reach in the work zone
- 57 ft of working height
- 135 degree lower boom
- 270 degree upper boom
- Direct acting hydraulic cylinder articulation system
- Low storage height

If you're looking for an aerial device to meet your XT raordinary requirements, look no farther than the Simon-Telelect Hi-Ranger XT-52.
OUTLOOK

Our Responsibilities

The headline of the news story in the March 7 New York Times read, "Inspection Never Came for Tree That Led to 4 Deaths." The tragedy occurred in Laurelton, Queens, New York the day before. Four elementary school children were crushed when a 65-year-old, city-owned silver maple toppled on their school bus in high winds.

The story was picked up by Associated Press, so you may be able to find information in your local newspaper.

Undoubtedly, this case will play itself out in civil court, and perhaps even in criminal court, for some time to come. Was this an act of God, as New York Mayor Rudolph Giuliani declared shortly after the incident, or could this tragedy have been foreseen and averted had the tree received the attention of a professional arborist? The account said that the tree hadn’t been trimmed in 15 years. Some of its roots had been cut to allow sidewalk repair. Neighborhood residents had been calling authorities to have the tree tended to. Apparently, the tree had been inspected a year before the accident, but what that inspection found is anybody’s guess.

My point is this: As arborist professionals, we carry a huge responsibility on our shoulders to our clients and the public. Tragedies such as this one cannot always be foreseen, but many of the signs of imminent as well as eventual tree failure can be readily observed and quantified to help form responsible treatment decisions. We must always be vigilant and willing to apply the knowledge we have to help avert catastrophes.

Sharpen your tree hazard diagnostic skills by reading “Risk Assessment Guidelines for Hazard Trees” on page 34.

Sadly, most people do not share our awareness of the seriousness of tree hazard conditions, nor do they understand that an arborist is a true professional with the ability to make accurate diagnoses and prescribe treatments. We need to be pro-active about communicating to others what for us is self-evident. Get behind your local, state, regional and national associations’ efforts to promote the importance of proper tree maintenance.

Within 36 hours of this tragedy, the National Arborist Association broadcast faxed a press release to over 1000 media outlets around the country urging readers to have their trees checked by a trained professional. Within a half hour of the broadcast, we were already fielding inquiries. It’s sad that it takes a tragedy like this to spur public interest, but if the publicity can help prevent similar incidents, then it is justifiable.

Remember that being a professional is both a privilege and a responsibility. Sometimes, lives literally depend upon your decisions.

Peter Gerstenberger
Technical Editor

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

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GET A GRIP ON
THE BEST THERE IS
Introducing 16-Strand
Samson BlueStreak™

An all new 16-strand climbing line which is truly a breakthrough in rope design. It is constructed with our newly developed "ProGard Finish-Tension Process"

At Samson, we've spent a lot of time listening to the people who have strong ideas about what they want in a climbing rope: professional arborists. What we learned lead to the development of the highest quality 16-strand climbing line you can buy. Extensive field testing indicates that, even brand new when most climbing ropes are slippery, BlueStreak was easy to climb. Exceptional strength, high visibility and extreme durability make BlueStreak the professional's first choice. It is ideal for the "footlock" climbing technique and is available in popular lengths with eye splices as well as short "split tail" lengths.

Firm and round, it holds knots exceptionally well, and the braided construction keeps it non-rotational for great control. The distinctive color pattern makes climbing line identification quick and easy, for increased security on busy job sites.

You now can get the best 12-strand and the best 16-strand climbing ropes from one source, Samson. True Blue and Blue Streak, matching colors and unmatched quality and performance.

Samson offers a full line of professional Arborist products: climbing and bull ropes, prusik lines, climbing tails, spliced climbing lines and accessory cords. All are proven in the difficult world of the professional arborist, and all are available through your local Samson Arborist products supplier. Just ask for BlueStreak, or contact Samson directly for more information.

Identified by alternating blue and white strands with a trademark red and green internal I.D. marker.

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Available Put-ups: 600' reels, 150' and 120' polybags
Landing Commercial Clients
By Phil Nilsson
Only with an aggressive approach will you break into the commercial markets. That means more than putting an ad in the yellow pages. Don't miss this step-by-step way to start small and work your way up.

Strategies for Reducing Soil Compaction
By Dr. Tom Smiley
Researchers from the Bartlett Labs share methods and results from experiments on ways to reduce soil compaction and promote the growth of healthy trees.

Risk Assessment Guidelines for Hazard Trees
By Ed Hayes
An easy-to-use field guide for recognizing hazard trees
Day After Day, Year After Year, They Just Keep Working.

Dependable. Easy to maintain. Built to work hard and never take a day off. Altec’s complete line of tree care equipment provides you with superior performance and maximum productivity. Our LR Series and LB Series aerial devices combine smooth, efficient maneuverability with working heights to 60 feet, making them the tree care industry’s preferred choice. Altec’s new WhisperDisc Chipper is designed with the same commitment to excellence as our proven Whisper Chipper. And all Altec equipment is backed by an unsurpassed warranty. Give us a call for more information. 1-800-958-2555.
How to Land Commercial Clients

By Phil Nilsson

Landing commercial accounts is like bringing in a big fish. It takes care, patience and a knowledge of the best places to troll. Some of these fish can be very big indeed. I know of one company that won a contract with a major city for 140 parks. Of course, you need the capability and the manpower to do the work, but there is just no end to the possibilities. It takes an aggressive approach to break into the commercial markets, which means more than putting an ad in the yellow pages. A $100,000 commercial account won't find you that way. You have to go to them, because as far as they are concerned, they won't hand over that size of an account to a company they know nothing about. Start small and work your way up. To do that, you'll need to answer four questions:
1) Who are the commercial accounts?
2) How do I find these people?
3) How do I reach them?
4) What do I charge?

The Harbor office complex in Palo Alto, Calif., is kept in shape by Arbor Care of San Jose.
While many municipal cemeteries are cared for by town employees, private cemeteries also require the attention of professional arborists.

1) Who are the commercial accounts?

I am sure there are others that could be added to this list, but here's mine: airports, amusement parks, apartment complexes, auto dealerships, banks (especially ones with lots of branches), boat yards, botanical gardens, cemeteries, churches, condominiums, convalescent homes, day care, elderly housing, factories, fast food chains, food distribution centers, fraternal organizations, funeral homes, golf courses, golf driving ranges, highway departments, historic sites, hospitals, hotels, landscape contractors, little league fields, military bases, mulch suppliers, miniature golf courses, natural gas providers, office parks, park and recreation departments, private beach clubs, private roadways, public storage, public libraries, railroads, race tracks, reservoirs, restaurants, retail malls, retirement communities, schools and universities, ski resorts, summer camps, tennis clubs, telephone companies, theme parks, U.S. government properties, vacation resorts, veterans hospitals, warehouses, water treatment plants, wildlife preserves, YMCAs and zoos.

In other words, if a property has a tree, it is a potential account. You have to decide who you are going to target, which customers you feel comfortable in dealing with have the capability to deliver the services to, and those who will hire you. Choose your customer type rather than let the customer choose you. If you advertise in the yellow pages, what you are really saying is that you are leaving it up to chance. Don't leave it up to the customer to come to you, target an area. Become the specialist on retirement communities or strip malls. You can't target every market without a major marketing effort, so choose where to start.

2) How do I find these people?

I would highly recommend you use a PRO-CD Select Phone program, which consists of five CD ROM disks. There are about 100 million names on the PRO-CD Select Phone System, all regionalized. Dial in your state and go down an SIC business identification code listing to find funeral homes or
Cover Story

The Smell of Money

"Who wants to be around a water treatment plant? In Middletown, Conn., we have a water treatment plant that has a budget of between $200,000-300,000 just to maintain the grounds. It’s an ugly place, but it’s beautiful as far as the trees and landscaping are concerned. You have to put a clothespin over your nose to get close, but it is well-funded. Why? Because those dollars are coming from taxpayers, and the managers don’t care, as long as the bidding process is competitive.”

How do I reach these people?

On occasion they will reach you, but why let that happen? Why leave your whole financial future to the possibility that the phone is going to ring? It’s not the customer’s responsibility to know that you exist in business.

IS ENGINE VIBRATION CHIPPING AWAY AT YOUR EQUIPMENT?

Switch to John Deere engine power.

John Deere engines are balanced to run with minimal vibration, so they’re easy on your wood chipping equipment and on your maintenance budgets. Plus, John Deere engines offer the best balance of reliability, fuel economy, quiet operation and smooth-running performance. To make your next chipper last longer, ask for John Deere power.

Please circle 24 on Reader Service Card

8 TREE CARE INDUSTRY - APRIL 1997
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Prentice Loaders Models P90 and 120 with Telstick, 1985 thru 1990. Installed on your chassis or ours. Call for more information.

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Brush Bandit Disc Chippers Models 100, 200, 250. Gas and diesel powered. Also, Woodchuck Diesel Chippers.

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LARGE SELECTION
FLAT BEDS AND
CHIP BOX UNITS
INCLUDING AN 80' HI-RANGER.

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FAX 414-691-4644

To reach commercial accounts, you have to convince the manager that you are capable of doing his job, which has everything to do with image.

Let's take a look at some of the methods of reaching commercial accounts. Direct telephone solicitation, direct mail and direct canvassing: That sounds like a drag, but you can get all of this stuff right off the PRO-CD program. I looked into all of the mailing programs. I spent a lot of money on direct mail, and I can't afford to have the wrong program. PRO-CD is the best marketing telephone address program in the United States. It costs about $100.

Cover Story

It's up to you to remind people—especially past customers—that you're still capable and willing to perform services. Look at McDonald's. I can't believe the advertising level McDonald's has—every day, night and day, billboards. Why? Do you think people will forget about them if they don't advertise? They don't chance it, and they are a lot better known than your business. The question is, how well does your advertising work and what does it cost? If you spend $10,000 on an advertising program and end up with $5,000 worth of work, you have a problem. You need to target your market.

You have to let your people know that you are out there. How? By being an active marketer. The commercial market wants energy brought to it, and a lot of confidence as well. If you humbly walk up to a commercial account with your head down or try to negotiate with some of these very sharp business people, they won't have the patience for it.

Remember, everybody that you deal with in a commercial market has to answer to somebody else. They are almost afraid to hire you, thinking that if you don't do the job their boss is going to complain... They did a crummy job... They overcharged us... They didn't complete the work... The trucks look shoddy... Why did you hire these people?

To reach commercial accounts, you have to prove that you're capable of doing his job, which has everything to do with image.

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Lease It To Experts

"The very first tree I tried to bring down myself was at my own house. It missed the chimney by about 6 inches. That was when I decided to leave this work to somebody else. As a landscaper, I subcontracted all the tree work because I know it requires definite expertise."

"To reach commercial accounts, you have to prove that you're capable of doing his job, which has everything to do with image."

"Let's take a look at some of the methods of reaching commercial accounts. Direct telephone solicitation, direct mail and direct canvassing: That sounds like a drag, but you can get all of this stuff right off the PRO-CD program. I looked into all of the mailing programs. I spent a lot of money on direct mail, and I can't afford to have the wrong program. PRO-CD is the best marketing telephone address program in the United States. It costs about $100."
• **Mailings**

I am a firm believer in direct mail. It takes seven mailings for someone to remember your name. A lot of people get into direct mail and make the mistake of getting discouraged when they send out one mailing and little happens. For every hundred people you mail something to, only 2.5 respond by buying something or inviting you out to do a bid. So, you have to mail consistently.

Pick out some targets. Who are the people you want to work for? Do you want to work for large industrial sites? Do you want to deal with large condominiums? Do you want to deal with government properties? Once you pick out a target where you think the best profitability areas might be for your company, why go after the low-ball work? You will get work. If you advertise, put your cards out there and make calls, you will get work.

• **Newsletters**

The people that you should send newsletters or brochures to are not only the people who you already do business with. Even though you should spend 60 percent of your ad budget on your existing customers—you can’t grow a business if you don’t retain your customers—experts say you should spend 40 percent of your budget on potential customers. Send Christmas presents, birthday cards, newsletters. Visit their property. Get out there.

With a good mail-list program you can come up with a direct telephone solicitation program. It has the phone number, the contact person and the address with a zip code. If you don’t want to operate in more than a 25-mile range, you can dial in, point and click. You can make a direct mailing by just generating those same names from that criteria you picked into a mailing list, and sending out brochures.

There is another program you can use in conjunction with PRO-CD that will give you a street map. After you select the criteria, say golf courses or park superintendents, you can call, make an appointment and plan your day using the shortest routes.

• **Get on the bid lists for cities and towns.**

There are certain restrictions, but if you can’t get on the bid list in your own hometown there is something really wrong with your company. Hometowns often offer preferences. As a citizen of a town, you may be given the opportunity to reduce your bid to get the job.

• **Spy on the competition.**

Spying on the competition is a wonderful thing. Get up in the morning and follow a Chem Lawn truck to every account. Write down every address they go to. In your area, if you go out to the larger tree companies, follow their trucks. Hey, you’re trying to earn a living. This is serious business here. I have people spying on me. I once saw someone with a pair of binoculars at one of our sites. I went up to him and said, “What are you doing here? Are you bird watching?”

He told me the truth. He said, “I’m try-
Cover Story

ing to find out how long this job takes.”

• Cold calls
You will have doors slammed in your face. I used to walk into companies cold. I hate cold calls because I got a lot re-

• What do they want?
A professional company. You need to look like UPS. Having broken-down trucks and employees in dirty T-shirts walking around with cigarettes hanging out of their mouths are not going to help you in commercial mar-

• Competitive pricing
There are very few companies out there who can afford to overpay on anything. They want to see three or four bids that are competitive, so you have to know your numbers. I don’t know what you charge, but from an accounting point of view you are selling time. All service industries sell time and equipment, but mostly time, be-

• Attentive service
If you don’t perform to the contracts, commercial people who have no patience whatsoever. They don’t want to

You Can Sell
“Almost any kind of advertising works. Even if you try to sell ice cubes to an Eskimo, you would probably find one Eskimo who would buy ice cubes from you because he is probably too lazy to go outside his igloo with a hatchet and scrape off some ice.”

Tree Management Systems, Inc.
"SOFTWARE FOR GROWING ARBORISTS"

Plant Health Care Software

Just Released January 1997
Developed by
Jon Garner
Tree Management Systems, Inc.
&
Dr. Clifford Sadof, Entomologist
Purdue University

With this exciting software you can:
• Maintain Customer Information
• Inventory Customers' Plants and Trees
• Record Plant Health Care Visits with Ratings for: Plant Quality, Agent Ratings, and Natural Enemy Rank
• Record Treatments
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TREE CARE INDUSTRY - APRIL 1997
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As soon as a person comes to work, puts the key in the ignition of a truck and turns on the motor, your direct costs start: gasoline, depreciation, payroll. Everything starts with the employee driving out to the customer’s account and operating the equipment.

You have to know your direct costs, especially in the commercial market, because when the potential client is sitting there with a contract on the table and a potential client says to you, “Gee, can we do something with this price?” you need to know your costs. I used to look at cost and profit on an hourly basis. There was no way that I would come out of any contract without a 30 percent profit. If it were lower, I wouldn’t take the work.

There is no way that I would let a client pick me based on price. That’s what happens when clients use the yellow pages. In the commercial sector, yellow pages customers who only want a price over the phone are just price shoppers.

Running a green industry business is not easy. You have to be an accounts receivable clerk, salesman, mechanic, psychiatrist and a mommy, daddy and loan officer to the employees. This is hard work. So, if you are going to bid for these jobs, make sure there is profit in the job, especially with the commercial people.

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go? Have plans to buy a sailboat and not be able to do it? Time is money. If you are going to give away your body—which you definitely give in a physical business like landscaping and tree work—you must have something to show for it.

To know whether you are making money, you have to know your costs when you put out these proposals. If there is no profit in it, leave the contract on the table and walk out the door. You might as well be going fishing than to do jobs at a loss or even a marginal profit.

For every hour that someone is working for you, you should be making $10. How much money can you make working by yourself? Maybe $500 a week? You must sell other people’s time to make a lot of money, because you only have so much of your own time that you can sell. I always looked for a 30 percent profit.

I used to go into jobs knowing the number of hours it would take to do the work. If your costs per hour are $20, you want to charge $30 times the number of hours it will take to do the job. I’m going to charge $240 a day for every employee. These numbers are old, and might be low, so adapt them accordingly. I don’t care what tasks the workers are performing. We’re selling time. If I couldn’t get my price, I didn’t want the contract. Know what your lowest price is. If you can’t get it, close your folder, say thanks for the opportunity and walk away.

I would come down $2 an hour for a big contract that would stabilize cash flow and keep everybody working. Otherwise, I was not interested, because there are a lot of fish in the sea. Your job in the commercial market is to find the right fish.

When property managers asked to reduce a contract price, I used to have a hit list ready. I would say “Look, this specification calls for pruning shrubs at the executive parking area three times a year. Let’s cut that back to two times.” Those are the kind of strategies you need, because with commercial people—even though you are the low bidder—they are still looking to get your price down.
Rather than give them a price reduction, negotiate. Try to come up with something that is going to be advantageous to you. You put in less work, but maintain your profit percentages.

If you don't know what your costs are, start with a financial statement. If you don't have a financial statement, you should get one, because a financial statement is a numerical presentation of the physical events behind the business. If your accountant can't tell you what that means, you ought to get another accountant. On April 15 when the IRS has your return, you should also know what it costs to operate per hour.

Conclusion

When I had my landscaping business, I would get up at daybreak every Sunday morning and just drive around Connecticut, taking a different road each time. Of course, I was looking for commercial properties and new site developments. If I saw a bulldozer and a construction trailer, I would pull in. One hundred new houses means 100 landscapes and the rest of it. Get, over to that construction trailer, introduce yourself to the site superintendent, offer your services, let him know that you are available. Save him the aggravation of going out and getting another company. Sure, other companies will offer bids, but so what? If you are not up, you are not in. You have to bid jobs to win them.

Large corporate properties can stabilize your work force. In the residential sector, on Monday and Tuesday you might have plenty of work and on Wednesday you don't have enough. Large accounts really stabilize a business because the dollars are much bigger, the work is more predictable, and there is a budget to work with so you have room to negotiate in these contracts. Go get that business!

Phil Nilsson is a green industry consultant with over 20 years experience in the landscape industry. He was a featured speaker at TCI EXPO '96, and has written over 39 books.
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Contact: 415-431-6428

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Climber’s Jamboree
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By Mark Garvin

Bruce M. Ladrigan, owner of American Tree Service, Inc., of Darien Conn., isn’t a traveling man. But then he doesn’t have to be: His tree care business is limited to a 4-mile working radius along the Connecticut shore. He can be so geographically constricted because he operates in a wealthy area and he has developed a profitable niche for himself.

Word has gotten around that Ladrigan will trim or remove trees without damaging the landscaping. To perform his delicate work he uses an ImpleMax Skidsteer Grapple on an ASV, a rubber-tracked machine that treads lightly on manicured lawns. “We drive it all over these million-dollar backyards with no problem,” says Ladrigan.

“This is a very congested area with no option for dumping anything,” notes Ladrigan. “Most wood and wood waste is trucked to upstate New York. But we have to get that wood to a place where it can be loaded into trucks.

“The machine with the grapple only exerts two pounds of ground pressure per square inch, which is “less than a little kid with sneakers on,” jokes Ladrigan. “In a straight line it really doesn’t cause any damage. When we have to turn, we put down two sheets of plywood and turn on them.”

The grapple device evolved as a result of direct feedback from the arborist industry. According to Will Callahan, president of ImpleMax, “We were building tractor grapples to mount on
three-point hitches when I got a call from an arborist who asked if we could put that grapple head on a skid steer instead of a tractor. He thought it would very useful in the tree care business. That’s where it all began.

“Over the next year, we took the grapple head that we manufacture for a small tractor and mounted it on a different boom that couples to a skid steer loader. The concept is so simple, but this device makes removing trees in residential areas much easier.”

What makes this grapple so useful is that the operator is not limited to clamping onto loads at a 90 degree angle. If there is only one way to grab a load, the operator is then carrying the material sideways with his loader, which makes it hard to maneuver through narrow spots.

With a grapple on a skid steer, wood can be snaked through narrow openings to access backyards. The wood doesn’t have to be cut into 8-foot lengths, and it can still be hauled past the house without knocking the windows out.

“When I was a teenager, I worked for an arborist,” recalls Callahan. “I never thought about something like this. They would shorten their loads because they had to fit them between ornamental plantings and other things. Now it is possible to pick things up to the full capacity of the loader and take it out.”

With loaders if you can’t lift it, you can’t do anything with it. With a grapple mounted on a skid steer, Ladrigan can drag material and is no longer limited to the lift capacity of the machine. If he wants to drag out a whole tree—and damaging the lawn is not an issue—he can grab that tree and pull it behind him. It becomes a horsepower issue instead of a lifting issue.

Now Ladrigan can skid a much larger trunk out. He has two options: He can grab a log and drag it or grab it an angle that will allow him to fit through a gate.

In late February American Tree Service was already booking jobs for July. It would appear that being able to travel across a lawn without leaving marks has taken Ladrigan a long way.

Mark Garvin is editor of TCI

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Strategies for Reducing Soil Compaction

By Dr. Tom Smiley

We started our research project on soil compaction with the introduction of soil aerating machines in the late 1980s. These machines were supposed to break up soil compaction with compressed air injected into the soil.

One of the fastest ways to check the effects of the machines was to study fracture patterns in our clay-loam soil. We injected air and a fill material from both the Grow Gun and the Terralift, then came back with a back hoe and dug up these sites. The fill material was fertilizer, a blue dye and a water-absorbing gel. This gel took on the blue color fairly well, so we could see the spread of the fractures in cross-section.
If you have ever seen these machines work then you know that the soil literally dances around these machines. It is very impressive. What we found was a single, saucer-shaped fracture pattern. In sandy soils, the manufacturer claims that you can achieve a vertical pattern of fractures, but in the clay soils where compaction is more of a problem, we didn’t achieve anything more than a saucer-shaped pattern.

As for other soil effects, we looked at bulk density and oxygen diffusion rates. Bulk density is sampled by putting a hollow probe into the soil, then taking the soil out and weighing it. The bulk density did not change in our study. All we were really doing was lifting up a big plate of soil and setting it back down.

The oxygen diffusion rate is a measure of the oxygen movement to a simulated root in the soil. We used a platinum-tipped probe about the size of a root tip. And if oxygen moves readily to that, that’s a very good sign. It means the roots can grow very well.

And again, we had only an improvement in the oxygen diffusion rate at the fracture line. So, if your roots were all right there in that very thin line, it would work fine. But they aren’t. They are above and outside of the fracture. So the bottom line in our study was that compaction did not appear to be reduced by these machines. The compressed air lifted a large area of soil, then set it right back down.

So, it didn’t look too good from the soil effects, but really the proof is in the growth response. We conducted an experiment with Aristocrat pear trees on the connector road between the Charlotte airport and Interstate 77. This was a pretty tough site. The trees had been transplanted two years before, and the soil had been well compacted by the construction people. We put in a number of different treatments, the Grow Gun, the Terralift, core aeration and fertilization with a standard liquid soil injector.

We watched these trees grow for a number of years. The result after three years was a straight line. None of the treatments did anything to improve the growth of those trees. As researchers, we don’t like that type of result. We like significant differences: either something really worked or it really didn’t work. In this case, we had no improvement. So we went to the City of Charlotte and asked Don McSwain and Marmon Thompson for another set of trees we could work on.

They provided us another very difficult site in the median strip of Highway 51 in South Charlotte. The trees had been transplanted two years before. The problem from the city’s perspective was that these trees really hadn’t grown in two years. We went to the site, looked it over and did some sampling. We dug inside the root ball and immediately outside the root ball, looking for root development. And you can imagine what we found. There were plenty of roots inside the root ball, but there were very few in the turf area outside the root ball. These trees had no root development outside the root ball, which made this a real good site for research.

We sampled the soil for bulk density, texture, organic matter and nutrient content—the whole spectrum. This was a sandy-loam soil that should have been fine for tree growth, but the level of organic matter was inadequate. The organic matter ought to be at least 3 percent. In this case, we were dealing essentially with a subsoil that had only six-tenths of a percent of organic matter. The bulk density...
was 1.56, highly compacted.

Few trees would have survived in this soil. If loblolly pines had been planted in this soil, about 10 percent would have survived. But Marmon Thompson and the people with the city who planted them knew what they were doing and selected very tough trees. He planted Aristocrat pears and crapemyrtles—very tough species.

Nutrient levels were also inadequate, as might be expected with a subsoil. Nitrogen, phosphorous, potassium were all very low.

We performed a number of different treatments. We didn’t restrain ourselves to just a few pieces of equipment. We wanted to try some new ideas and get better results.

**Wood-chip mulch:** This is one of the cheapest treatments available, since it utilizes a waste product from tree care operations.

**Fertilization:** We applied equal amounts of fertilizer to all treatments, including a soil-injected water solution and an air injection with the Grow Gun.

**Radial trenching:** This was a new idea that was just coming on line a few years ago. We dug trenches radiating out from the root ball into the compacted soil.

**Vertical mulching or drill-hole fertilization:** Drilling holes around trees is a standard treatment that has been around for probably 100 years.

**Rototilling:** This is something we could do on this site because we didn’t have root development away from the root ball. On established trees, we cannot do that treatment, which is too bad because it is a good one.

"Improper mulching is the flush cut of the ‘90s. You have all seen it. Up in Maine they call it volcano mulching. This is very bad for a number of reasons. It holds moisture against the trunk, which allows a large number of different pathogens to move in. Also, this is a great hiding spot for insects. And if you don’t keep that trunk dry, you encourage the growth of girdling roots."

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Soil Compaction

Soil amendment with organic matter: There are a lot of humic acid products on the market for tree care. We have tried various products in other studies with little positive effect. We thought this would be a good opportunity to try the products from Roots, Inc. Here we were dealing with very low organic matter level soils, so we figured if this product would work anywhere, it would work here. The products were added with high-pressure water, just as we do with fertilizer.

No treatment: We left some trees with no treatment at all as controls so we could measure the effects of our actions.

This experiment was done before mycorrhizae were commercially available. If we were to redo them, we would test with mycorrhizae as well.

Results

Wood Chips

Wood chips were put down in a pattern about 10 feet wide, which was from curb to curb in that median strip, and to a depth of about four inches. We used fresh chips right off the trucks. Many people are hesitant to use fresh chips, but several studies have looked at this and found they don't tie up significant amounts of nitrogen.

Of course, there are some places I wouldn't use fresh chips due to diseases. Any place there is an insect problem where the insect is attracted by the smell of cuts. For example, you can't use fresh pine chips under pine trees in areas with southern pine beetles since more beetles will be attracted to the tree.

If you cut down a tree that has Verticillium wilt, say a maple, ash or a number of other species, you should not be using those chips on other trees that are susceptible to verticillium wilt.

Once this material is composted, the story probably changes dramatically. With the pine beetles, certainly, it is fine to use those chips under pine after composting. With Verticillium, we aren't sure yet. Composting will probably bring the temperature up enough to eliminate the majority of those spores, but Verticillium does have a survival structure in the soil. We are not sure how that breaks down. In general, I would suspect it is safe to use composted chips from those species.

Remember, too, that with allelopathic species, such as black walnut, you should not put those chips under any species except black walnut because it will suppress root development. On the
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Soil Compaction

West Coast, redwood is one you have to be careful with. Some people try to import redwood bark into other parts of the country. Avoid it. For the same reason, don’t use grass clippings.

In other words, there are specific cases when fresh chips should not be used, but in general it is safe to use fresh chips.

Fertilization

We used a 28-9-9 slow-release fertilizer. The rate was six pounds of N per thousand square feet, on a 3-foot spacing, one-half gallon per hole, six holes per tree, eight inches deep.

Grow Gun

With the Grow Gun, we put down three holes per tree, using four to five pounds of isolite, a porous ceramic, and three cups of a 24-7-7 granular fertilizer. The isolite porous ceramic is supposed to retain water and improve drainage.

All nutrient levels were about the same. The only ones that weren’t fertilized were the mulch and control treatments. Everything else had the same six pounds of nitrogen per thousand square feet.

Radial trenching

Using a trencher, we dug 4-inch wide trenches, 12-inches deep, 6 feet long, 6 per tree. Here we needed something finer than bark chips so we could get it into the trenches. We added composted yard waste with a fertilizer to make it consistent with the other treatments.

We started right at the root ball and trenched out away from there. We have done this on mature trees, although with mature trees start outside the drip line and work your way in. When you start hitting roots 1/2 inch or larger, stop. In this experiment the roots stopped right at the root ball, so it was easy.

And in what was probably a mistake for research purposes, we had a little bit of the composted yard waste left over on every tree, which we used it as a mulch. It affected the results of the experiment.

Vertical mulching

Holes were spaced a foot apart, 2 inches in diameter, 10...
Mulch is an acquired taste. Many clients prefer turf around their mature trees. It is up to you to start encouraging clients to use mulch. Start with a small mulch ring, three feet in radius, and grow from there. It looks good, it's cheap, and it's effective.

Rototilling
The last treatment we tried was rototilling around the root ball and working mulch in. We rototilled around the root ball once, put down some mulch, rototilled that in and repeated the process. We went about four inches deep and added fertilizer.

Fortunately from our perspective, we had a drought the first year of that experiment. This resulted in large differences between treatments. Due to a lack of water, the trees were hurting in the first summer, which was good from an experimental perspective because we got some very quick, measurable results.

For our analysis that first summer, we rated the foliage on a scale from 1-10. The best ratings were obtained with the mulch treatment and the trench treatment. The trench treatment worked very well, in part, because we left some of that residual mulch around the tree. I don’t think the results would have been that good if we hadn’t left that mulch.

That first summer the mulch treatment was far and away the best. Why? There are several reasons that might explain this. We don’t think that those roots had enough time to grow a substantial amount in response to our treatments. Rather, it was a soil moisture response.

In the spring sampling, we had a 20 percent soil moisture reading, which is fine. In the summer, we went about six weeks without rain and soil moisture went way down. Most of the samples showed about 5 percent soil moisture, except for the mulch where we had 7 percent soil moisture. That 2 percent was enough to make a significant difference in the appearance of the trees.

Unfortunately, people in Charlotte saw how well some trees were doing compared to others and called the city, recommending that all the trees be treated in the same way. So the city did treat all the trees, which was very good for the trees but very bad for the experiment.

From there on, we had one other factor to contend with in that all the trees were mulched to the same degree.

The next summer, we saw differences in the flowering of the crapemyrtle, which is an indicator of plant health. Earlier flowering signifies a healthier tree. While mulch was still a good treatment, the trees now had time for their roots to grow. The roots grew where the soil was good, and
the soil was good on two treatments:

1. Rototilling, where we affected 100 percent of the soil that the roots could grow into out of the root ball. We got a tremendous response.

2. Trenching, where we affected 10-15 percent of the soil around the tree. We got a good response, but not as good as the rototilling.

We achieved lesser amounts of growth improvement with the other treatments. In the middle of the summer in the second year we saw good results on the crapemyrtle. With the pear, things were coming back. We did not have the dramatic differences as in the first year.

We also monitored trunk diameter growth for three years. With the pears, there was a difference in diameter growth in the second year. The number one treatment for growth differences was rototilling again. After that, both the mulch and trenching helped.

**Summary**

Many sites which we work on have problems we need to deal with. It is best to try to eliminate these problems before the areas are planted. This is the time to rip the soil and turn it over with excavators.

But if you cannot get in there first, keep several things in mind. Typically, soil compaction in most of these sites is not the only factor we are dealing with. Low levels of organic matter, low levels of nutrients and high levels of compaction all must be treated.

And because of the soil compaction, the fourth problem we have to deal with is water-holding capacity. Out on that highway median, when it rains there is a lot of runoff with a heavily compacted surface. Irrigation is something that has been shown to reduce the problems from soil compaction. Our other strategy, if we can't afford irrigation, is mulching to conserve moisture. This will eliminate raindrop compaction, where raindrops will come down and compact bare soil. If we can prevent that with mulch, and reduce evaporation from the soil with mulch, we are further ahead. It doesn't take a lot to do this. In our study, 2 percent more soil moisture gave us significantly more healthy plants.

Several studies, including one I have reviewed from California, confirm that a lot of these older treatments don't do a lot for soil compaction. What does help is irrigation. Some of these newer treatments, rototilling and trenching, seem to work very well. But on top of that, we have to be concerned about water.

The more soil we can affect, the better the treatments.

Dr. Tom Smiley is a plant pathologist at the Bartlett Tree Research Laboratories in Charlotte, N.C.
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ITT HARTFORD
How to Use These Guidelines

The guidelines presented here use visual assessment of external indicators to predict potential of tree failure. There are seven categories of structural defects and two categories of risk, moderate and threshold, or high risk. These are only guidelines! Potential to fail is a measure of risk. It does not mean a particular tree will fail or not. These guidelines are only intended to provide information needed to evaluate the potential to fail. But remember, every tree is different, so is every site. Site, tree condition and past history all play an important role in the development of tree defects. Common sense, experience and professional judgement are required of the trained tree inspector. It is up to the trained inspector to determine the risk potential. These guidelines were developed for field people and are intended to be easy to use.

These guidelines do not rate targets. There are many methods available for rating targets. Target ratings should be based on intensity of exposure to people.

During the past several decades we have witnessed a growing appreciation for the beauty and value of trees among the general public. In addition to providing shade, people now understand that trees improve air quality, provide a habitat for wildlife, increase soil protection and raise property values. People want trees, but they also want to be safe. This awareness of public safety, and the increasing knowledge base of arborists and resource managers, combined in the late '80s to bring forward guidelines used to identify hazard trees.

Trees have limits and defined life cycles. As trees become more massive, advancing in age, the signs and symptoms of structural defects become more evident to the trained eye. Dead wood, cracks, weak unions, decay, cankers, architectural and root problems appear. Guidelines can be written that describe levels of risk for each category of defect.

Trees fail in predictable patterns. Each species has a profile of tree defects. Learn the profile of defects for the species of tree that you work with. Each site also develops a pattern of defects for the species found on that site. Begin to look for these patterns.

Hazard tree programs are becoming common and important in high use recreation areas and in urban and community forestry programs. Hazard tree assessment is now a tool used to regenerate urban forests. Risk assessment programs for tree hazards is good tree maintenance. The goal of a hazard tree...
program is not to sanitize recreation sites or urban areas, but to provide reasonable public safety, and to maintain a renewable, diverse and multi-aged tree cover. The benefits include reducing exposure to liability, reducing future storm damage and the resulting costs of cleanup, and increasing awareness for management for what are not static, but constantly changing, resources.

Definitions

Hazard Tree: Defective tree with a target.

Target: Generally, these are defined areas where people are invited to move through, linger or stay. These include facilities and personal property.

Moderate Risk Potential: Non-threshold, discretionary defects. They may or may not result in eventual tree failure. Moderately weak unions and moderately poor architectural defects will eventually fail, and will increase in risk over time. Moderate cankers and decays can decrease in risk as additional wound-free wood is added. However, moderate cankers and decays on exposed sites—and with full crowns (sails)—may fail with significant loads (wind). Moderate defects are considered individually and in combinations. Combinations of moderate defects may or may not increase the risk of failure. For example, moderate cankers and decay in contact with one or more cracks would indicate the tree is failing (high risk). While a moderate root loss in contact with a stem decay or canker can remain a moderate risk.

High Risk Potential: Threshold level defects that indicate the tree has failed, is failing or is in imminent danger of failing. Action must be taken as soon as possible.

Seven Categories of Defect

Dead wood: Dead trees and dead branches can fail at any time. Dead branches or dead tops that have all ready broken off and “lodged” are especially dangerous.

Cracks: Cracks are physical separations of the wood fibers. Cracks indicate the tree has failed or is failing. Cracks are the component killers of defective trees. Wood fibers can separate in three basic ways. Cracks can form across the grain, in the up and down, or axial plane of the tree (radial cracks), and between the growth increments (ring shakes). These guidelines evaluate external cracks for the most part that are evident on the outside of the tree. Cracks are evaluated for the extent of compromise to the stem circumference. Any time that one-half or more of the tree circumference is structurally compromised, the tree can fail. Cracks should be evaluated for the extent to which they proceed into the tree and with what other defects they are associated. Branches with cracks are high risk. In addition, it is useful to understand the difference between seams, propagating rib cracks, shear cracks and tension cracks.

Seams: Seams can be indicators of internal defect or radial cracks but are covered by several layers of annual growth. They are in effect a repair of an internal defect or radial crack.

Propagating rib crack: Radial cracks that are opening and closing and forming a rib or a nose, rising off the tree surface. Propagating rib cracks can generally be assumed to be radial cracks to the center of the tree. Propagating rib cracks on opposite sides of the tree can generally be assumed to be radial cracks completely through the tree.

Shear crack: Serious radial cracks that generally form in the center of leaning trees. Shear cracks form in what are called the neutral fibers, where the shear forces are the greatest between wood that is under compression on underside of the lean and wood that is under tension on the upper side of the lean. A shear crack would indicate the tree is failing.

Tension crack: Fiber separation in the horizontal or tangential plane of the tree. The wood fibers are pulled apart by tension forces (the mass above is moving). Tension cracks are dangerous and catastrophic. The tree is failing!
**Hazard Trees**

**Weak Unions:** Weak unions are unions that have included or ingrown bark between two or more stems. There is no fiber attachment between the co-dominant stems. Weak unions are common in species with an opposite bud set, such as maples and ash. All weak unions will eventually fail. Weak unions are easy to evaluate. Weak unions with a crack, canker face or signs of decay in the union are high risk. Young trees with weak unions can be corrected.

In weak unions, the included bark within the union forms a wedge that leads to an internal crack. Where cracked unions continue to open and close and not fail, a propagating rib crack will form. Eventually one stem becomes sufficiently overloaded enough to fail. Unfortunately, trees that fail from weak unions leave the remaining stem with one-half of the stem circumference compromised or at high risk.

**Decay:** This category includes wood that is decayed or missing (cavity). The extent of tree decay in many instances can be the most difficult category to evaluate for risk of failure. Understanding how the process of decay works is vital to evaluating trees for defects. The objective is to determine if there is enough sound wood in the outer shell of the tree to support the tree. Studies have shown that tree failures resulting from decay occur when the sound wood in the outer shell is less than 30 percent of the stem radius. This works out to be a need for approximately 1 inch of sound wood for each 6 inches of stem diameter or root collar. In addition, the cavity can be one-third open and the tree can have a full crown. Always keep in mind that branches with decay are high risk.

There are many signs of decay, including cavities, holes, canker faces, branch...
stubs and fruiting structures (conks). Vis-
ual assessment of the extent of internal
decay can be a reliable means of predict-
ing potential risk.

There are several types of decay: brown
rots, white rots, soft rots, discolored wood
and wetwood. The brown rots are particu-
larly nasty, since they can fool the tree into
acting as if it is still structurally sound.
Brown rots may not produce any external
signs or symptoms. And there are several
problems that can result in continually
expanding decay columns—repeated an-
nual wounds, in-rolling bark
(rams-horning) at the edge of wounds and
cavities, propagating rib cracks and can-
ker rot fungi.

Invasive techniques such as increment
cores or drilling may be used to quantify
the extent of sound wood or decayed
wood. This must be done carefully and
with several considerations. Use an incre-
ment borer only when there are no other
means to estimate the extent of decay.
Make the hole where the symptom is most
pronounced. This is where the outer shell
will be the thinnest.

When evaluating a tree, it is helpful to
know something about the resistance to
decay of each species. Some species are
very resistant to decay while others de-
cay very quickly.

Learn from tree failures that result from
decay or from tree removals. The patterns
and extent of decay will be similar for
each species of similar age, condition, and
history of past disturbance.

Canker: Cankers are areas of missing,
dead or sunken bark. In all cases the wood
below the canker is affected to some ex-
tent. Cankers are evaluated for the extent
of compromise to the stem circumference.
Any time that one-half or more of the tree
circumference is structurally compro-
mised, the tree can fail. A moderate canker
or canker and decay where one-third to
one-half of the stem circumference is
compromised may fail, depending on the
size of the crown and the exposure.

Poor Architecture: Poor tree archi-
tectural problems arise from patterns of
structural weakness or imbalance. They
can occur when individual trees are
opened up from stands of trees and when
large, poorly tapered branches grow into openings. They can also be created. Mistreatments such as topping, flush cutting or a disturbance that results in tree decline can all lead to architectural problems.

Large epicormic branches poorly attached to decayed stems are the result of topping. As trees become over-mature for the site conditions, large old branches can begin to relax or subside. Epicormic branches that form on these branches result in trees on branches, which are known as harp trees. These will eventually fail as the load increases over time. As large over-mature trees begin to shed branches, it is a clear sign for the need to regenerate the tree.

All trees lean to some extent. When trees lean excessively, they may become high risk. Leaning trees with signs of failure are quite different. Compressed or buckling fibers on the lower or compression side of a leaning tree would indicate the tree is starting to fail. This is one of the bio-mechanical warning signals that can be seen in the bark. A tension crack on the upper or tension side would indicate very high risk and a failing tree. Leaning trees without signs of failure but with other moderate defects can place the tree in the high risk category.

**Root Problems:** When roots are severed there can be a significant loss of structural support. Leaning trees with recent soil-lifting, soil movement or soil mounding would be an indication the tree is failing. Small-diameter, lateral roots under tension actually provide the greatest anchoring support for the tree. The tensile (tension-pulling strength) of 2-inch diameter roots is very dramatic. If even one major supporting lateral root is severed, a tree with a large crown may fail in a storm.

The concepts of tree failure include Defensive Dieback, Compartmentalization and Adaptive Growth.

**Defense Dieback:** Trees react to energy stress! Trees can live for long periods of time by storing massive quantities of food, water and meristematic tissue, (epicormic buds). As long as these energy resources are in good supply and replaced each year, the tree does fine. However, with low energy reserves, a tree under stress may die back defensively, shedding parts (dead wood) in order to survive. What the tree can no longer feed or defend is cut off
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from nutrients. Trees can dieback to defined thresholds for that species on that site, but beyond that point the tree dies. If the stress is removed or treated before the threshold is reached, the tree can recover. **Compartmentalization:** Trees react to wounds! Decay is caused by wounds. Decay is the highly ordered process described by Dr. Alex Shigo in his model of Compartmentalization. Decay is confined to the wood present at the time of wounding. The tree reacts to the wound by creating a barrier zone separating the wood present at the time of wounding from the wood that will form after wounding. The wood present at the time of wounding will eventually be lost to a succession of micro-organisms. The wood that follows remains free of decay. This is how decay columns form! **Adaptive Growth:** Trees react to me-

### Risk Assessment Guidelines for Hazard Trees

<table>
<thead>
<tr>
<th>Defects</th>
<th>Moderate Risk Potential</th>
<th>Thresholds: High Risk Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dead Wood: Dead or without bark.</td>
<td>Single crack extending into stem.</td>
<td>• Any lodged branch. ▪ Any dead tree, top or large branch.</td>
</tr>
<tr>
<td>Cracks: A split through bark extending into the wood. Wood fibers are not fused.</td>
<td>Cavity or decay affects 1/3 to less than 1/2 stem circumference.</td>
<td>• Crack completely through stem. ▪ Two cracks on same stem segment with cavity or decay. ▪ Any large branch with a crack.</td>
</tr>
<tr>
<td>Weak Unions: Included or ingrown bark between stems. Wood fibers are not fused.</td>
<td>Canker or canker &amp; decay affects 1/3 to more than 1/2 stem circumference.</td>
<td>• Canker or canker &amp; decay affects more than 1/2 stem circumference.</td>
</tr>
<tr>
<td>Decay: Wood that is decayed or missing (cavity).</td>
<td>Any large branch unbalanced with respect to rest of crown or with sharp bend. Harp trees.</td>
<td>• Tree with excessive lean. ▪ Leaning tree with moderate defect, cracks or buckling fibers. ▪ Mature tree with history of branch sheds.</td>
</tr>
<tr>
<td>Canker: Area of missing, dead or sunken bark (mechanical injury or disease). Wood is affected behind canker.</td>
<td>One major supporting root severed to more than 40 percent of roots severed.</td>
<td>• Leaning tree with recent root-lifting, soil movement or soil mounding. ▪ Inadequate root support: more than 40 percent roots severed.</td>
</tr>
<tr>
<td>Poor Architecture: Growth pattern of weakness or structural imbalance.</td>
<td>▪ Poor Architecture: Growth pattern of weakness or structural imbalance.</td>
<td></td>
</tr>
<tr>
<td>Root Problems: Loss of structural support.</td>
<td>▪ Poor Architecture: Growth pattern of weakness or structural imbalance.</td>
<td></td>
</tr>
</tbody>
</table>

*Ed Hayes, Minnesota Department of Natural Resources, Division of Forestry, Rochester, MN, November 1996.*
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Hazard Trees

Suggested Readings


Minnesota Department of Natural Resources, and USDA Forest Service. 1996. How To Recognize Hazardous Defects In Trees. USDA Forest Service NA-FR-01-96. 20p.


Mechanical stress: A tree is a self-optimized, bio-mechanical, load-bearing structure. Its mass is evenly distributed over its entire surface. No single part is overloaded or under-loaded in a self-optimized tree. No part is made to fail more than any other. Loads must be transferred uniformly from the crown through the stem into the ground. Trees will fail where there is a weak link.

A tree is a chain of links of equal strengths. When you understand this, you will begin to understand the mechanics of tree failure. Wood is preferentially added to overloaded areas measured by the tree in order to restore a state of uniform stress. This is known as adaptive growth. In this case, the only symptom of tree defect is the addition of extra wood! This in effect is the repair response. The objective of the inspector is to determine if the repair has been made. If it has, leave the tree.

Other Considerations

Exposure and crown size: Trees in the open with full crowns have a higher exposure than trees in stands (groups) of trees. The guidelines given for tree failure are generally for full-crown trees as they exist in their natural setting.

Inspections: Inspections for structural defects are best done in the leaf-off season. Inspecting individual trees needs to be a systematic and complete process. Inspections should be done once a year and after serious storms. The first time through is the most time-consuming.

Documentation: Always document your evaluations and actions. Use a standard form that records the species, defects and treatment recommendations.

Treatment: Correcting hazardous trees can be as creative as your imagination and resources allow. Treatments include moving the target, re-routing traffic, pruning, reducing the crown, fencing, closing the area or removing the tree.

Training: Training is essential. A good training session can be completed in one day and must include a field session to evaluate trees. Learning and understanding can take several years.

Investigate and learn from tree failures. If you want to see how trees fail, take a walk in the woods.

Ed Hayes has been a forest ecosystem health specialist with the Forestry Division of the Minnesota Department Of Natural Resources since 1979.

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TREE CARE INDUSTRY - APRIL 1997
Don't Make a Mistake That Could Cost You Your Business

The tangled web of OSHA regulations is difficult enough to navigate for even the most well-meaning, compliance-conscious employer. From eye protection to lanyard lengths, there is much for an arborist to think about beyond the job at hand. Now consider the fact that although OSHA has targeted commercial arboriculture as one of the 13 most hazardous industries in the United States, it is not separated as a specific industry in Department of Labor statistics. Arborists have been lumped into the field of horticulture on OSHA's SIC code list, yet OSHA field inspectors consistently (and sometimes successfully) cite arborists under construction and logging standards—two standards under which arborists have specific exemptions—because the inspectors themselves too often don't understand the regulations they are enforcing. When all else fails for OSHA, there is always the General Duty loophole.

As the National Arborist Association and large tree care companies battle with U.S. government representatives over compliance issues, what happens to the crew foreman in the field who is trying to complete a job when the OSHA inspector shows up? The inspector writes out a hefty fine because a worker is missing gloves, steel-toed boots and an orange safety vest. The crew foreman knows better. He knows that steel-toed boots are required for loggers, not arborists, and that he could very well lose his arm if a gloved hand were to get dragged into a chipper. And an orange safety vest? Not required. He politely informs the inspector of the error, but the inspector believes he is correct, and any subsequent argument is not productive.

The foreman takes the citation back to his employer, who is now faced with a dilemma. Pay an expensive fine for a citation that she knows is incorrect, settle for a lesser amount or fight it all the way to court. Imagine the struggle. Paying a fine outright both admits guilt and is extremely costly. A lesser settlement still admits guilt, and fighting the citation is both time-consuming and expensive. Considering their available resources, employers often make the difficult decision to settle. Be aware that your local OSHA representative knows this, and might even count on it.

Unfortunately, the trouble only begins here. When an employer chooses to settle an improper citation, she is setting herself and the entire industry up for continued application abuse of OSHA standards. For instance, if an employer accepts a fine for an employee not wearing steel-toed boots, the next citation for the same violation will be considered a willful violation. In some cases, criminal charges may be brought against the employer where serious injury or fatality occur. Although the employer knows that arborists are not required to wear steel-toed boots, she has unwittingly set a precedent that she must now comply with: a logging standard that does not rightfully apply to her industry. She has also made it easier for OSHA inspectors all over the country to cite her colleagues in the same manner. Because the foregoing precedent has been established, if any of them choose to challenge OSHA, it will be more difficult for them to win.

Now more than ever, it is critical to be aware of OSHA regulations that apply to you, as well as those that don't. It is critical that every improper citation be challenged. OSHA must be made aware that if an industry is going to be targeted
because it is considered extremely hazardous, it must have a distinct identity in the eyes of enforcement officials. That identity must include real data on industry hazards, not assumed information based on work that is similar in appearance only. As an industry, every time we fight, we force OSHA to look at us and consider the fact that because tree work is different from construction, logging and horticulture, our safety needs demand different requirements. What is good for a construction worker on scaffolding could be dangerous to a climber in a saddle. Think for a moment about that gloved hand getting caught in a chipper.

If you are cited by OSHA, your first line of defense should be to call the National Arborist Association at 800-733-2622. Staff members are available to help you determine whether or not the citation and fine you received might be improper. Although the NAA will not interpret regulations, staff can identify specific regulations and recommend a course of action. Staff can also put you in touch with your colleagues who have experienced similar problems. There is one golden rule with OSHA: When in doubt, challenge. Your situation will not be made worse if you fight, but a lot of damage can be done, both to your company and the entire commercial arboriculture industry, if you accept guilt that is not rightfully yours.

Amelia Reinert is deputy executive director of the National Arborist Association.
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Successful marketing remains essential for the growth and prosperity of tree care businesses. Marketing makes your potential customers aware of your services and prompts them to make purchases. Few businesses prosper without active marketing.

However, no single marketing technique works for every tree care business in every circumstance. Successful ones use a variety of complementary techniques. You want to reach your prospects in numerous, different ways. That remains necessary because people respond to various marketing efforts differently. Moreover, your marketing program should fit comfortably with you—personally and professionally.

No one “right” marketing plan will prove suitable for every tree care business. Each business manager has his own comfort level with particular marketing channels. Some would do anything as an alternative to speaking before a group of potential customers. Others thrive on interpersonal activities. Start with what you know and enjoy the most.

Choose among the options available. Recognize the nature of your business, your location, short- and long-term goals, financial circumstances and personal business style. You don’t want to rely on a single approach to marketing. But neither do you want to spread your marketing dollars too thin by branching into too many arenas.

Use the ideas here as a spur to your creativity. Some tips may fit your needs “as is.” Others may be totally inappropriate for you. Still others may require fine-tuning to fit your particular circumstances.

For example, one business owner received a direct-mail solicitation containing a dollar bill that really grabbed his attention. He liked the technique but couldn’t afford $1 per letter. So, he copied the technique by attaching a dime to each letter. Use the ideas below as a spark for your own creative marketing efforts.

The ideas below will help orient your marketing efforts into some logical categories. But remember that the suggestions remain complementary. Don’t use one while excluding all the others. At the same time, recognize that a mix of different approaches may be appropriate for you.

Marketing “Rules of Thumb.”

♦ Repetition works. Repeat any marketing technique that is profitable. Since most people won’t pay close attention to your efforts, you will get tired of your message long before your customers. Persistence often pays off with higher sales and profits. Try not to reduce your marketing efforts when the economy slows. An ongoing effort can offset a potential decline stemming from general economic malaise.

♦ Stress benefits over features. Don’t focus on what you will do to a customer’s trees. Emphasize how your professional services will make the customer happier.

♦ A marketing plan differs from a sales plan. A marketing plan proceeds from a long-range strategy that may extend for one to five years. A sales plan covers shorter, more immediate periods. Of course, a firm’s sales plan should complement the long-term plan.

♦ Distinguish between publicity and advertising. You gain publicity for free when a printed publication or electronic media mentions your tree care company. Since the mentions come free from credible sources, publicity produces more impact than advertising. That doesn’t preclude the need for advertising, but your prospective customers recognize that you purchase advertising. Advertising makes claims at your command. This is not to suggest that advertising shouldn’t be part of your marketing program. It remains essential, but try to create opportunities for publicity that will complement your advertising efforts.

♦ Marketing Research. A look at marketing research proceeds from the premise that a better understanding of your market provides the premise for improving your marketing effort. Ask your customers in person, over the phone or in a follow-up postcard if they were satisfied with your work. Such queries proceed from the logical premise that your own customer base provides your best source of market research. Surveying your customers also remains the least expensive means of conducting that research. Ask your customers why they decided to hire you. This will help you evaluate the effectiveness of your marketing efforts. Some of the larger tree care companies have created marketing advisory boards that can include customers, suppliers and neutral members. Most people will view your request to serve as an advisor as an honor. A modest honorarium for each meeting will add a financial benefit to that honor.

♦ Image. A firm’s image has an important influence on its sales. That image develops from the collection of views of the nature of your operations. For example, using a street address instead of a post office box often makes a business more credible. Also, homeowners like to hire companies in their own towns. Develop a logo for your business if appropriate. Use it on all your promotional materials to create a consistent reminder of your firm. Your business card should become part of your firm’s image. Write a brief description of your tree care services underneath your name on the front of the card. This reminds customers of what you do. It also introduces your full
range of services to new prospects. Use different business cards for different markets or specialties. Distribute the card appropriate for each customer or prospect.

- **Don't be shy about asking for referrals.** Don't assume that existing customers know that you're looking for other customers. Most view the opportunity to provide a potential prospect as a compliment. Ask your landscaping and nursery colleagues for referrals. Provide referrals to them. Offer a discount or gift to a customer who gives you a referral as a token of your gratitude. The value of the gift should increase in accordance with the financial value of the referral. A profitable benefit from your request from the referral should reward the source.

- **Freebies.** Offer free samples of your service to charitable organizations. Make those offers and perform that work in a manner that maximizes the promotional benefits. As one opportunity, donate your product or service as a prize at a charity auction. Focus on charities that will probably attract prospects for your products. Even if they don't buy, your firm's name will become more familiar. The same benefit develops when you donate your product or service as a door prize for other organizations. That also holds true for donations to the fund raising efforts for your local Public Broadcasting Station (PBS).

- **Give away brochures.** You can prepare the brochures yourself, or use those produced by the National Arborist Association. Add something about your business in a cover letter or an insert inside the brochure.

- **Public Speaking.** Volunteer to speak at local Rotary and Toastmaster groups. You'll reach many prospects directly or by referral that will reward your efforts.

- **Written Promotions.** Develop a quarterly or monthly newsletter that you can send to your customers, prospects and sources for referrals. A regular newsletter keeps your name in front of your prospects. Moreover, a regularly published letter enhances your reputation as an expert and a professional in your field.

   Not all of these ideas will be useful for you. Use the ideas that you can use comfortably. Those ones that can help your business grow.

Bryan Milling is a banker and lecturer who has written extensively for trade and professional publications.
Are You (In)Sure You’re Safe?

The rising number of lawsuits filed against businesses alleging discrimination based on race, sex or physical ability has prompted an increasing number to purchase employee-practices liability insurance. Though such policies were almost unheard of a few years ago, more than 20 insurers have jumped into the $100 million market. Many businesses simply do not understand what is legal and what isn’t. For example, a law firm in Cleveland came up with five questions that under the Americans With Disabilities Act would be illegal to ask applicants during a job interview. In a sample survey, all 112 small businesses would have asked at least one of the offending questions. A sample question: “Have you ever filed a workers’ compensation claim?”

Do you ask this question when you interview applicants? Do you know which questions you shouldn’t ask?

How Does Your Loan Rate?

The volume of lending to small businesses tends to resemble an untamed river. During boom times, banks and other lending institutions deluge small businesses with financing offers. When the surge ends as riskier loans fail, as happened in the late ’80s, even the most creditworthy enterprises have trouble finding financing.

Computer programs that emerged after the last dry spell are helping banks gauge the riskiness of small-business loans. The new software allows banks to vary interest rates on loans under $100,000 based on what the computer indicates is the risk of default. With the end of semi-standard small-business loan rates, it has become more important than ever to shop around for the best deal. According to a recent Federal Reserve Board survey of banks, the average annual rate on loans of less than $100,000 was 9.61 percent in 1996. Some banks, however, reported rates as high as 18 percent. What constitutes a good deal today?

The Fed says that for the past 10 years the average rate was 1.8 percent above the prime lending rate. That number has dropped in recent years, however, and a company with a good credit history should be able to find a loan at 1.3 to 1.4 percent above prime.

Tax Filing ... A Phone Call Away

Did you know that depending on where you live, you may be able to file your quarterly payroll returns (Form 941) by phone? Individual taxpayers have been able to file simple tax returns in this way for years. In a pilot program underway in 15 states (Alabama, Delaware, Florida, Georgia, Indiana, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia and Washington, D.C.), businesses may use the phone to file their first-quarter payroll returns that are due at the end of April. If you do plan to file by phone, or if you plan to call to ask about the program, the IRS advises the lunch hour is the worst time to get through. Mondays in general are bad, too.

Higher Pay ... Less Play

As the economy keeps roaring ahead, small-business owners are finding it harder and harder to attract qualified applicants. And to keep their best employees, many are offering raises well beyond the rate of inflation. According to a survey of members by the National Federation of Independent Business, 32 percent raised compensation at the end of 1996.

On the other hand, vacation time is declining. The average number of days allowed the typical American worker has been eroding for almost two decades. Some of this slippage may be traced to shorter tenures, as employees hop from job to job and thousands lose seniority when corporations downsize. A study by Primark Decision Economics found that the average U.S. worker is now down to only 11.37 days a year of paid vacation.
Donations Needed

Dr. Lewis Charles Chadwick carved a career in horticulture that spanned 64 years. One of the founding fathers of the Ohio Shade Tree Conference, Chadwick distinguished himself at Ohio State University in the Department of Horticulture, Horticulture Extension and the Ohio Agricultural Research and Development Center.

During his career, he coauthored three books, including "The Modern Nursery" and "Ohio Trees." He was also a prolific contributor to numerous bulletins, and trade publications.

In recognition, the Lewis C. Chadwick Memorial Library has been established in Benin City, Nigeria. The area is primarily agricultural, and Benin City has a population of more than 500,000. Eventually the library will be housed at the Institute of Tropical Agriculture in Ibadan.

Supporters of the library are asking for donations of new and used books—in English—on scientific and agricultural topics. Magazines such as *Smithsonian* and *National Geographic* will also be gratefully accepted.

Please send donations of books or money to: Mr. Frank Dawson, Learn International, 423 East Fifth Street, Lancaster, Ohio 43130. Phone: 614-837-9933. Learn International is a 501-C-3 nonprofit organization.

A Crowd of Thousands

New England Grows, one of the youngest and fastest growing horticultural trade shows in the country, drew more than 10,000 green industry professionals to its fifth annual show.

At the show, President Randolph E. Wright presented the six New England states' Cooperative Extension Systems with educational grant awards that totaled nearly $25,000. The grants will be used to benefit the commercial horticulture industry in New England.

For more information, call 508-653-3009; Fax: 508-653-4112; E-mail: NEGrows@aol.com

New President

Salvatore A. Pezzino of Artistic Arboriculture in Huntington, N.Y., was elected president of the New York State Arborists at the annual meeting in January.

Also chosen were President-elect Thomas Mullaney, Bartlett Tree Experts, Vice-President E. Mark Barry, Greenspace Enterprises and Secretary-Treasurer Michael Grimm, Michael Grimm Services, Inc.
Wood-Mizer Products introduces its highest performing mill ever. The newest LT40 Super Hydraulic is capable of cutting speeds up to 60 feet per minute. Engine options include a 40hp turbo charged industrial diesel, 35hp gas engine or a 25hp electric motor. The mills are available in portable or stationary versions and can cut any log up to 36-inches in diameter or 21 feet long. Sawyers can load, clamp, rotate and level any log with a throw of a lever. Extra-wide, hydraulic roller toe boards compensate for log taper and allow easy log positioning. A “two-plane” clamp simplifies sawing of stressed logs. For more information, contact: Wood-Mizer Products, Inc., 8180 W. 10th Street, Indianapolis, IN 46214-2400. Phone: 800-553-1082.

Ronen Manufacturing offers high speed accumulating shear heads for skid steers, small loaders and excavators. The shear heads are excellent tools for any type of land or lot clearing, thinning, heavy brush cutting and many more applications. Available in 12 and 15 inch sizes, both models are manufactured with lightweight high-strength alloy steel to make it the lightest and most durable shear on the market. With its high speed and accumulating features, the attachment is the most productive shear available. For more information, contact Ronen Mfg. Inc. at 800-897-8269.

A high production alternative to trommels, the Morbark Disc Scalping Screen is a two-sort unit that is tolerant of the most contaminated material. Nine rows of 20-inch diameter scalloped steel discs mounted on solid shafts form the heart of this screen. As the discs rotate, material drops between the discs onto the undergrowth discharge conveyor, while oversized material is belt discharged to one side. Rocks, steel and large chunks of wood are rejected without causing damage to the mechanism. The screen can also be utilized in front of a grinder to remove contaminants before they can cause grinder damage. Production rates up to 200 cubic yards per hour can be reached, depending on material. For more information, contact: Dan Brandon, Morbark, 8507 S. Winn Road, Winn, Michigan 48896. Phone: 800-233-6065; Fax: 517-866-2280.
CEI unveils the new **Gladiator** double action stump cutter tooth. The **Gladiator**'s patented double head design results in longer tooth life and huge savings. Once worn, the **Gladiator** tooth is easily turned around and ready for more use. The **Gladiator**'s power bend extends far past the pocket, significantly reducing pocket wear and resulting in an unbelievable smooth cut. Securely locked in the pocket, the **Gladiator** will considerably increase your production with any size machine. For more information, contact CEI at 1-800-333-5234.

New from WaterRing is a system that conserves energy, conserves water, greatly reduces water requirements, conserves time and reduces frequency of caretaking. More trees and shrubs survive with proper watering. The unit is available in three sizes and capacities: 9 inch/1.5 gallon for shrubs, vines and large garden plants; 14 inch/3.5 gallon for trees and plants balled or in containers; and 36 inches/9.25 gallon for large trees in commercial containers, transplants and established growth. The water will trickle over the root area slowly and evenly. For more information, contact WaterRing Systems, Inc., 2729 West Olive, Rogers, AR 72756. Phone: 501-631-9464.

Novartis Turf & Ornamental Products announces the availability of Subdue MAXX, a new formulation that provides disease control at half the recommended rate of the original Subdue fungicide. Even at its low use rates, it delivers excellent control of such oomycete diseases as Pythium blight, Pythium damping off, yellow tuft in Kentucky bluegrass and downy mildew in St. Augustine grass. For more information, contact: Jerry Osborne, Novartis Turf & Ornamental Products, 910-547-1160.

The EAGLE 42 from AmeriQuip is a trailer mounted, articulated aerial lift with a 21 foot, 6 inch side reach and 42 foot working height. It features positive bucket leveling, 360 degree continuous rotation and offers outstanding portability for easy maintenance access. A proportional control valve with neutral position interlock allows simultaneous two-function operation and feathering capability. Heavy-duty, quick-adjust outriggers are an integral part of the lift. An 8 hp gas engine is standard equipment, and a 24V electric power or dual power (gas & electric) options are available. For more information, contact: AmeriQuip, 1480 Arrow Hwy., La Verne CA 91750. Phone: 800-824-9778 or 909-392-2033; Fax: 909-392-4651.

The newest SwapLoader hoist models, the SL-375 and the SL-505, feature the same frame design and size. This makes upgrading from the 37,000 lb. capacity of the SL-505 a matter of exchanging a few hydraulic components. Both the SL-375 and the SL-505 are available with the Inside/Outside Rail Option, and, like all SwapLoader products, are covered by their exclusive 24 month quality guarantee. For more information, contact: SwapLoader U.S.A., Ltd., 1800 NE Broadway, Box D, Des Moines, Iowa 50316-0386. Phone/Fax: 515-266-3042.
Money Is No Excuse for Topping

"The tree trade has got to change" was the first thing Steve said to me as we shook hands. Here we were, two tree company owners finding ourselves bidding back to back on the same property at the same time and ending up in some small talk about tall things.

I asked him what he meant, and he responded, "The bidding has gone way too low."

I could agree: supply was up, demand was down, and we were coming out of winter with lots of competition with low overheads. All were ingredients for unanswered proposals.

I mentioned that if I stayed in my home area of Jefferson County I'd be hard-pressed to stay in business. He noted there were a lot of tree guys near me, but I told him the real problem was that I refuse to top trees.

"What are you going to do if a customer of yours wants his tree topped, and if you don't do it he's going to get someone else?" he asked.

I answered that the customer would have to get someone else. In the first place, he wouldn't have been a customer of mine.

Steve disagreed. "If our customer wants a tree topped, that's what we do. We do what he wants."

I countered that I attempt to explain the detriments of topping and the benefits of careful and proper reduction to a prospective client. If they are still not interested in doing it right, then at least I've done a little educating, and I'm on my way.

Steve and his brother had been in this family business all their lives. Their clientele extended into Jefferson County.

continued on page 54
These questions came straight from the customers of lawn care operators, pest control operators and other professional pesticide applicators across the country—and probably reflect the concerns of your customers. The more your customers know about the products you use, how you use them and how much is used, the more confident they will be in you and your service.

Communicate With Your Customers

Your customers expect you and your employees to be credible and knowledgeable sources of information about your products. Take time to talk with them about your safe and responsible use of pesticides.

Studies show that most people don't know that pesticide products are among the most highly tested products sold. The U.S. Environmental Protection Agency (EPA) registers only those uses of pesticide products that pose minimal risks.

- Emphasize that pesticide products must undergo stringent government-monitored testing before they can be sold. It is a long and costly process. For example:
  - It takes a chemical manufacturer eight to 10 years to test and register a product, at an average cost of $30 million to $50 million.
  - As many as 120 tests or more are performed, many specific to health, safety and the environment.
  - Only one potential pesticide in 20,000 makes it from the research lab to the market.

- Explain Integrated Pest Management (IPM) to your customers. Most do not fully understand the concept. Point out that a successful IPM program stresses prevention, pest identification and selection of the best method of pest control, which may require the use of pesticides. Tell how you incorporate IPM into your pest management practices.

- Identify the specific pesticides you use and the pests they control.

- Indicate that professionals use an array of products, many the same as those used by homeowners.

- Assure customers of the benefits pesticides provide for turf, trees and ornamentals, and in the home. For example:
  - Termites cause over $1 billion in structural damage each year.

- Explain what happens to pesticide containers once a job has been completed. Note that containers are disposed of properly.

What Else Can You Do?

Provide your customers with materials such as newsletters, brochures, fact sheets and bill stuffers that communicate these messages. Be sure that someone at your company, who has a basic knowledge of the products and application methods your company uses, is available to answer questions.

RISE Is A Resource

RISE is the voice for the specialty pesticide industry. Its members include manufacturers, formulators, distributors and other industry leaders.

RISE works in cooperation with your national, state and local user/applicator associations and is an additional source of information regarding issues facing pesticide users. We can help you in your role as a knowledgeable and credible information source to customers and to the public.

A brochure on communicating about pesticides with your customers is available. Contact RISE to receive your copy.

We urge you to take an active part in your state and national association(s). We work together to support your business.

For more information, contact RISE, 1156 15th St., NW, Suite 400, Washington, DC 20005, or call 202/872-3860. Our Internet address: http://www.acpa.org/riise.

Please circle 56 on Reader Service Card
and the St. Louis metropolitan area.

They were well-equipped, owned a tree nursery, were educated, mannerly and well-meaning men. Yet they were telling me they had no problems topping a tree if that's what the customer wants. All to turn a buck.

They were looking incredulously at me, and I was bewildered by them. They were right, the tree trade had to change.

"I guess people will have their trees hacked up for cheap, and then again some will have theirs hacked for lots of money," I said. With that I ended our conversation.

Where am I going with this? I'm going home, amazed at them and some of my other tree peers—some even members of arborist associations—who can't see the value in a tree unless half of it is laying on the ground. My customers are more important to me than their trees. But when I draw a line between what a potential customer wants and refusing to do it, it's for a reason equal to or greater than the health or longevity of that tree. It has to do with what integrity there could and should be associated with our trade.

It says in the Book of Proverbs "A good name is to be more desired than riches."

Fellow arborists who are true to that name, be faithful in the realm you've been given and your work will vindicate you through the large living testimonies you've left intact.

W. Phillips Berwick
The Living Tree Care Company
Hillsboro, Mo.

Keep Those Shigo Articles Coming!

A brief note to thank Dr. Shigo for his series of articles in TCI, starting with "Troubles in the Rhizosphere." For the past few years I have been able to glean only a few paragraphs, from magazine or newspaper, which related to the subject matter of your articles. I can appreciate the frustration that I sensed in your last article, "Arboriculture in the 21st Century," since the direction of my work here at The Heather Gardens Association was initially labeled Voodoo Magic.

I have been referring many in the Colorado Green Industry to your articles, and I hope that your research and articles are ongoing.

Tony Wyles
LA/Horticulturist
The Heather Gardens Association

Correction

The artist's rendering of the handled ascender that appeared on page 42 of the March TCI was positioned upside down. We regret any confusion this error may have caused.
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Experienced climber/foreman needed for established Massachusetts tree service. Self-motivated arborist, certificate a plus, to work in a drug-free environment. Send resume or call Holbrook Tree Service, 252 Union St., Yarmouthport, MA 02675. Phone: 508-362-8085.

RELOCATE TO FLORIDA and enjoy year-round employment, great weather and a terrific working environment. We are growing fast and need: foremen, climbers, sales people and all-round tree care professionals and helpers. Excellent compensation and benefits with opportunity for advancement. Drug-free workplace. Call 407-968-1045.

Experienced Tree Foreman. Established MA tree & landscape co. Needs self-motivated 5 years experience climbing, & bucket truck operator, CDL. Send resume or call: Manning Tree and Landscape, Inc. For yr. round work & benefits. PO Box 2636, Acton, MA 01720. Phone: 508-263-6864; FAX: 508-266-9616.

Boston area company of professional arborists has position avail. for outstanding indiv(s) w/min. 2 yrs exp. Candidates must be committed to highest industrial stds of safety, workmanship & cust. service. Exc. wage & benefit package including pension (401K), medical & more. Send resume to: Lueders, PO Box 279, Needham, MA 02192 or call (508) 359-9905.

Experienced tree care professionals. Fast growing, quality-oriented company in the Chicago North Shore looking for top-notch foremen to manage crews, equipment and shop. Ideal candidates will have a minimum of 3 years experience, CDL and strong desire to achieve. Excellent compensation & benefits package. Please send resume and contact the Kinnucan Company, 28877 Nagel Ct., Lake Bluff, IL 60044. Phone: 708-234-5327.

Arborist Needed to join our professional staff of Shreiner Tree Care Specialists, Inc., located in the beautiful suburbs of Philadelphia, PA. We provide secure, year-round employment, and excellent pay and benefits based upon your level of performance and production. Individuals must be proficient tree climbers with an exceptional pruning ability. We will train and assist with becoming an International Society of Arboriculture certified arborist. We will happily assist with relocation. Please contact our office or fax your resume. 610-688-4122: FAX: 610-995-9355.

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Pennsylvania (York, Lancaster, Chambersburg) Bartlett Tree Experts seeks experienced, quality oriented tree climbers for year-round work. Arborist certification and CDL preferred but not required. Good wages, health insurance, paid holidays and vacation and 401k plan for the right career-minded individual. Send resume to Bartlett Tree Experts, 40 Leigh Dr., York, PA 17402 or call (717) 764-4020 for an application.

VEGETATION MANAGEMENT SUPERVISOR/FOREMAN. DeAngelo Brothers, Inc., one of the nation's largest and fastest growing Vegetation Management companies, has immediate openings for Supervisor/Foreman positions. Qualified candidates must have proven leadership, communication and interpersonal skills. Industry-related background preferred, but willing to train the right individuals. We offer advancement potential, excellent salary, 401 (k) plan, company-paid health insurance and comprehensive benefits. For career opportunity and confidential consideration, send or fax your resume, including your geographic preferences and willingness to relocate, to: DeAngelo Brothers, Inc., Attn: Dave Jones, 100 N. Conahan Drive, Hazleton, PA 18201. Fax: 717-459-5500. EOE/AAP. M - F.

SALES PERSON, CLIMBING ARBORIST, IPM TECHNICIAN: Collier Arbor Care, since 1937. An industry leader in arboriculture. Positions available for outstanding individuals with minimum of two years horticultural experience. Horticulture degree a plus. Candidates must be committed to highest industry standards of workmanship, safe work practices, and customer service. Excellent communication skills, sales ability. Excellent benefit package including medical, dental, profit sharing. Competitive wage. Send resume to: 9032 S.E. Division St., Portland, Oregon 97266. 503-774-9642

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Victor B. Fleck
VP Human Resources
Bartlett Tree Experts
Box 3067
Stamford, CT 06905
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Fax: (203) 323-1129

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Almstead, Inc. - Our continuous expansion leads us in the pursuit of career-oriented professionals in the tree care industry. Supported by a 32-year reputation for total quality, we truly stimulate growth potential in a team atmosphere. The following positions in utility and residential arboriculture are available in the Northeast. All positions offer an excellent compensation package. Sales Representative • Tree Care Foreman • PHC Technician • Utility Supervisor. Forward resume to Human Resources, 58 Beechwood Ave, New Rochelle, NY 10801, or fax to 914-576-5448.

Established multiple profit center firm in Chicago Area seeks experienced Tree Care Unit Manager. Candidate should possess Bachelor's Degree in Business or Forestry-related major. Illinois Pesticide Applicator's License, well developed sales skills, and substantial operations experience. Responsibilities include profit and loss performance, personnel attraction/retention, purchasing, scheduling of personnel and equipment for daily operations involving take downs, routine pruning, fertilization and chemical application. We offer salary commensurate with experience and performance, an excellent benefits package, outstanding production and supports staffs, as well as a 50+ year reputation for high-quality service in Chicago's most prestigious communities. Please mail or fax resume to: Matt Synnestvedt, Synnestvedt Company, 24550 W. Highway 120, Round Lake, IL 60073, Fax (847) 546-9044

Tired of the snow and cold? The heat and humidity? Consider moving to the Seattle, WA area to join up with a rapidly growing tree care company, in a booming economic area with one of the most livable and forgiving climates in North America. Seattle Tree Preservation, Inc. is looking for hardworking Arborists (ISA-certified a plus, but not required), to join a highly skilled team. Top wages, health, dental, and retirement plans. Paid vacation, holiday, sick days, and continuing education days. Place this company at the head of the list. Serious inquiries only. Call (206) 367-4048, 3-5pm PST, or fax resume to (206) 367-0502.
Second Nature Tree Care, a rapid growth company, is seeking an Arborist for one of the country’s hottest tree care markets. If you are self-motivated and have good people skills we would like to hear from you. Excellent base salary and benefits. Call us today! Second Nature Tree Care, Stamford, CT 203-327-9456.

Relocate to sunny Denver, Colorado! Year-round work. Access to great recreation. We are a growing tree and shrub care company in search of experienced arborists. Duties will include pruning, removal, tree health care and problem diagnosis. Excellent salary, health care, and incentive package offered. Contact TREES FOR LIFE at 6429 Quail St. #226, Arvada, CO 80004. Phone (303) 403-4245 or FAX (303) 432-3474.

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Boston Area: Davey Tree is seeking Arborists with Tree Care experience to climb to the top with us. Dedicated career minded candidates are needed for all facets of our organization. Excellent wage and benefit package plus a big increase in personal satisfaction as an employee owner of one of the most established and respected leaders in the Green Industry await you. Bring your experience to Davey Tree Experts, 674 Pleasant Street, Norwood, MA 02062 or Fax your resume to 617-769-9795. Attn: David Gingrich.

New Orleans-based company is seeking a quality minded Sales Representative with experience in the Arboricultural or Horticultural field to service our residential clientele. We are looking for a self-directed, dedicated individual who enjoys working in a professional team environment. Our firm is locally owned and has been in operation for more than 40 years providing the highest quality services and products to the community. Our company is growing, expanded and diversifying into new areas of the green industry. Come grow with us, real advancement opportunity awaits the individual who is serious minded about their ability to contribute to this company and the green industry. We are offering a solid salary and benefit’s package for this position. Your first benefit is obvious, come and live in one of the greatest cities in the World - New Orleans, Louisiana! Please submit your resume for consideration. You may fax it to us at 504-733-8499 or mail to: Human Resource Director, 5817 Citrus Blvd., Suite B, New Orleans, LA 70123.

Experienced, self-motivated tree climbers wanted by suburban Boston, MA tree & landscape company. Arborist certification, CDL and pesticide license preferred but not required. Company-sponsored training and education programs, health insurance and paid holiday/vacation days available to career-minded, quality-oriented workers. Relocation assistance available. Fax your resume to 617-630-5273 or call Mon-Fri 7a.m.-4 p.m. 617-965-8820 for an application.

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ACRT is Hiring Instructors. Positions open to teach Urban Forestry to young adults who are enrolled in Job Corps. These are full time positions in several locations. Successful candidates will have excellent work experience as tree trimmer or tree trimmer supervisor; training in biology and tree identification; and experience working with disadvantaged populations. Military experience is a plus. Candidate must be a self-starter and have personal and work references. ACRT employees enjoy competitive salaries and full benefits package including medical and dental insurance and 401K retirement plan. ACRT is an EEO employer. Please contact Lynn Kindsvatter, VP of Corporate Services, ACRT, Inc. 800-847-3541, Ext. 211. Resumes may be sent to PO Box 401, Cuyahoga Falls, OH 44221-0401; faxed to 330-945-7200; or e-mailed to LynnK@acrtinc.com

Arborists/Climber/PHC Technician. Tree Care & Landscaping Company located in Eastern Long Island is looking for quality-oriented personnel. Must be enthusiastic & self-motivated. Will train to become an ISA-certified arborist. Competitive salary and benefits package available. Send resume to P.O. Box 5024, Southampton, NY 11969 or fax (516) 287-6245, phone (516) 287-6100.

SavATree, a leader in the arboricultural industry, is experiencing a period of wonderful growth. Exceptional professionals will be the key to our continued success well into the 21st century! We have branch offices in NY (Westchester County & L.I.), NJ (Northern & Central), CT (Fairfield County) and MA (Cape Cod) with continued expansion planned throughout the US.

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It is common sense that electric wires can be hazardous to anyone doing tree work. OSHA Standard 1910.331 states that only qualified employees can come within ten feet of an overhead energized electrical conductor. Plus, OSHA Standard 1910.269 clearly defines who is legally permitted to work within the ten foot boundary. Finally, ANSI Z133.1 dictates very specific training and operational requirements that all tree care personnel need to follow for safety's sake.

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“Family Tree”

By Steve Rudolphi

Twenty-five years ago, a customer of mine added a large family room to the back of his house. A large Chinese elm tree grew within the area where he planned to build the new room. Always one for the unusual, the man left the tree and built the room around it. Actually, the tree was cut down to the height of the cathedral ceiling and basically left as a conversation piece. Over the years the homeowner’s wife decorated the tree with pictures of children and grandchildren, making this particular elm truly a “family tree.”

Eventually, this 30-inch diameter, 12 foot tree stump died and began to deteriorate. It also was taking up needed space. It needed to be removed. The homeowner called me for a consultation. I considered several options on “topping” out this large stump, but finally decided on a simple set of scaffolding to do the job. We placed plastic sheeting around the tree, creating an enclosed space to shield the rest of the area from sawdust and dirt. Then it was just a matter of “topping out” chunks one at a time and carrying them out the door. At 3 feet from ground level, I pulled over on the remaining trunk. It easily broke free and the complete trunk and stump came out of the ground.

The thought crossed my mind of the damage that a 12 foot, 3000 pound falling tree might have caused inside a house.

As it was, the only “problem” we had was setting off the smoke alarms from the chain saw exhaust. In my 12 years in the tree business, this was definitely a first “family tree” removal for us.

Steve Rudolphi is the owner and operator of Effingham Tree Service in Effingham, Ill.

Do you have a story for From the Field? TCI will pay $100 for published articles. Submissions become the property of TCI and are subject to editing for grammar, style and length. Entries must include the name of a company and a contact person or they will not be considered for publication.
It is the goal of all businesses to complete the job in a way that satisfies all parties. The tree care industry is more sensitive than others. We deal with living organisms. Whether the trees bring a financial value to a client’s properties or an emotional value to their being, our clients trust that we will provide them with the most comprehensive tree work available. This must be true, for we wouldn’t get jobs if they didn’t believe in the quality of our service.

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