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Brochure inside

TREE CARE INDUST
The Official Publication of the National Arborist Association
Volume XII, Number 10 - October 2001
Standard One Ton Forestry Body: Model S-11
(84" cab to axle chassis required)

**General**
1. All G-60 galvannealed material (Zinc coated, Resists Rust)
2. One piece design in body sides
3. All wiring in conduit
4. Sealed lexan lens lights meet FMVSS 108 specs
5. Anti-sail mud flaps
6. Class C Hoist
7. Safety body prop
8. Trailer light connector 6 pole
9. Pintle, or pintle/ball combination trailer hitch w/tow hooks
10. Bodies: mounted, undercoated, chemically degreased, cold tar epoxy coating inside chip box, primed and painted (paint warranted)
11. Tool Boxes w/theft resistant rods
12. Tool Boxes “weatherproofed”
13. Tool Box Hinges: include grease zerks
14. Chipper air exhaust vents

**Overall Body Dimensions:**
1. Length: 138"
2. Height: 60"
3. Width: 92"

**Chip Box Material:** (galvannealed)
1. Floor: 10 ga. plate
2. Sides & Front: (1) pc. design - 12 ga. plate
3. Top: 14 ga. plate
4. Tailgate: (270 swing) 12 ga. plate w/tubing frame
5. Runners: 6" structural channel
6. Cross members: 3" structural channel
7. Rear vertical support: formed ½" plate
8. Rear horizontal support: 3" x 2" x ½" rectangular tubing

**Tool Boxes (14 ga. galvannealed material):**
1. "L" cross box - which includes underbody tool box
   Cross box: 24" long x 92" x 37" high across chassis rails; (6) swivel rope hooks; (1) shelf; (3) gal. water cooler holder
2. Underbody tool boxes: (two) 55" long x 20" high x 17" deep
3. Ladder box (inside chip box) 107" long x 12" wide
4. Pruner Box: (inside chip box) 132" long x 12" wide
5. Locks: Keyed alike

**Optional:**
1. Top ladder & pruner rack.
2. **NOTE:** Chassis cabs available to complete the package.

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Sometimes we pick up the latest business management books looking for the new solution, the new quick way to skip a few steps and guarantee a successful future. We go to seminars. We call our friends for advice. We stare at the financials wishing we could add a few zeros.

And yet, we miss the simple things. Business is still about relationships. Even though we get so many more communications per day between phone, voice mail, e-mail, faxes, mail, cell phone, and pager, it’s still all about relationships. We struggle with our priorities every single day about what we think we have to get done. And yet, when you get down to it, it’s really about people and how they are being treated. If we don’t put them first and respect our interactions with every single one of them, we’re missing our most sure path to enduring success.

I practice it in my line of work, too – which happens to be you. If a member contacts me, that person becomes my first priority. I was tested recently, too. A member who had never met me called and left a voice message. I responded quickly (thank goodness). His response: He had never spoken to me, had a few questions, and wanted to see how rapidly I would respond to a member. Fortunately, I passed the test. If I hadn’t, I could have lost a member. Instead, I had a great conversation with a terrific member, and a new positive relationship was born.

You might put this article down now and say, “There’s nothing new in this.” And you would be absolutely right. There isn’t. The business principle of taking care of your people first – whether employees or customers – is still the key to a successful business. I am pretty sure that there isn’t a single reader who could not come up with one example in the past week of a frustration in conducting simple business. It may have been while in a restaurant; trying to get out of the grocery store; filling up your gas tank; or picking up the dry cleaning. Personally, I can name several in the past week.

They all boil down to follow-through and common courtesy. I’m only one small voice in the universe on this, and it seems that poor customer service has become a standard in this country. But I’m going to keep trying. Please, please, please give tree care a well-deserved reputation for dynamite customer service. We can stake our future on this: If we treat those who use our services like gold, they will take care of us, too.

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The Past, Present and Future of Safety Training for Arborists

By Donald F. Blair

I have long preached that the three equal partners of tree maintenance are quality, safety and production. I've always viewed the model as a balance scale. Profitability, reputation and business longevity are dependent upon careful attention to quality and production as they balance delicately upon the pivot of safety.

With the release of the newest revision of the American National Standard Z133.1-2000, it is fitting and proper to take a moment to review the history of safety training and the arborist.

Like so much of the history and development of the profession of arboriculture, the level, focus and sophistication of training has varied greatly between companies, individuals and decades. One fact remains constant: Throughout the history of arboriculture, many of our most respected elders, when interviewed for the International Society of Arboriculture’s “Legends of Arboriculture” video history project, recalled that the extent of their safety training was a warning from the foreman to “not get hurt.” Many arborists took pride in their strength, agility and luck, and viewed such innovations as hard hats, positioning lanyards and respirators when applying lead arsenate as trappings of the effete.

First published in 1953, this 4-inch-by-6½-inch pocket manual is only 31 pages long. Based in part on the A. Robert Thompson manuals of the 1930’s, this pamphlet also paved the way for the establishment of the Accredited Standards Committee on Safety in Tree Trimming Operations, Z133 in 1968.

Rigging for removal techniques have evolved with newer equipment.
The climbers illustrated in the manual tar was the recommended wound coating. Over the past 100 years.

In Tree Pruning, the primary emphasis is on pruning techniques and tools. Heavy, cleaver-like pruning knives were preferred by Des Cars to handsaws. Coal tar was the recommended wound coating. The climbers illustrated in the manual used neither rope nor saddle but were warned about practices that could prove to be dangerous to their health. Interestingly enough, the manual takes a strong stand against the use of spurs in living trees and warns the consumer that tree pruners who use climbing irons are not professional and should not be employed. The more things change, the more they stay the same. In the time that has passed from the writing of Tree Pruning to the present, we've gone from the horse-and-buggy era through the space age to the computer age. We've been through the cold war, two world wars, and numerous moon landings, and we're still trying to get arborists to stop using spurs inappropriately.

John Davey's book, The Tree Doctor (Saalfeld Publishing Company, 1907), makes reference to the Davey School of Tree Surgery, which, by the time of the school's 1924 instruction book on correct tree pruning, cautioned against the use of coal tar as a wound coating. F.A. Bartlett formally established the Bartlett School of Tree Surgery in 1923. Shortly after, in the 1930s, George Van Yahres established his school. Based upon the pamphlets, training manuals and books published between 1900 to 1930, it seems fair to draw the conclusion that the focus of the profession at the time was in perfecting the techniques of tree surgery, large-scale tree pruning, pest control and cavity work. Early photographs of arborists working in tall trees are often notable for their lack of ropes and saddles. Bartlett man Lem Stout

“Chisels, and gouges and other sharp-edged tools should never be carried in the boot.”

(Author’s note: Standard workwear in “the old days” included whipcord riding breeches and 16- to 18-inch high-topped boots.)
Authored by Millard F. Blair and published in 1937, the 297-page book “Practical Tree Surgery” was the outstanding reference of its day on using cement in cavity fillings; the “punch bar” method of fertilization; and pest control before DDT, when lead arsenate and nicotine sulfate were the chemicals of choice. The chapter on ropes, knots, climbing and rigging is 10 pages long.

♦ “A climber should not slide down a limb or tree trunk without carefully inspecting it for projecting stubs, nails or loose bark. Severe gland injuries have been sustained by failure to observe this rule.”
(Author’s note: We used to refer to such hazards as “gland damage,” as in “watch out for the gland damage on that limb!”)

♦ “Pole pruners should never be raised or lowered by placing a finger in the hook.”
(Author’s note: A vintage Asplundh safety illustration carried this concern one step further by warning with a graphic illustration of the danger of pulling a pole pruner out of a load of brush by the hook. If the pruner rope snags, the finger is gone.)

After World War II, arboriculture began to put itself back together. The larger companies like Davey, Bartlett, Asplundh and many others had developed in-house safety training programs, manuals, policies and procedures over several decades. Men who had gained experience from these companies before they “branched out” on their own quite often brought their training and mindset for safety with them. Other men who just sort of found themselves doing tree work found safety to be more of a trial-and-error proposition. The National Arborist Association, National Shade Tree Conference and regional associations such as the California Arborist Association worked hard to bring resources for safety training to their members. The NAA published a Pocket Guide to Safe Practices in 1953 (revised in 1959) that closely paralleled Bulletin No. 8.

Although safe work practices and training had been making steady progress to this point, it was still company by company and association by association, which is to say that there was no one single unifying standard that was available to all arborists regardless
of entity or affiliation.

That all changed in the 1960s, when the son of a woman named Ethel Hugg died while he was doing tree work. Channeling her grief into a call for action, Mrs. Hugg wrote federal and state authorities and also wrote to various safety organizations in an attempt to have standards adopted that would make tree maintenance safer. On April 4, 1968, the Accredited Standards Committee was organized to develop what became the first Z133.1, after it was approved as an American National Standard on Dec. 20, 1972. A dynamic document, Z133.1 has been continually revised, expanded and clarified. Since 1972, revisions adopted by the Accredited Standards Committee have been approved by ANSI in 1979, 1982, 1987, 1994 and 2001.

The influence that Z133.1 has had on the profession has been positive and far-reaching. “The Z” has been closely associated with the rules in the International Tree Climbing Championship (formerly known as the Jamboree). As a result of both the Jamboree and Z133.1, aerial rescue drew a lot of attention throughout the 1980s, culminating in the NAA-produced video on aerial rescue in April 1989.

The Z133.1 has helped unify federal, state, in-house and association safety and training programs. Many state-administered OSHA programs have used standards found in Z133.1. Federal regulations governing tree maintenance and line clearance draw heavily from Z133.1.

In addition to the aerial rescue video, Z133.1 inspired the NAA to produce a Tailgate Safety Program as well as slide and video training programs based upon compliance with “The Z.” Following the 1982 revision, Bailey Hudson and the city of Santa Maria produced a slide show that illustrated compliance with the California version of the standard, known as Article 12. A smash hit, they took the show on the road for the Western Chapter of ISA and presented several Article 12 seminars to hundreds of arborists.

In the mid-1970s, Richard Alvarez produced a series of training manuals for arborists. The training manuals, in many ways, were the forerunner of the certification program that the Western Chapter developed in 1984. Even then, the safety domain looked to the Z133.1 for guidance. Even though the arborist certification program has undergone tremendous growth and evolution, it continues to draw upon Z133.1 as the source for its domain on safety.

I was asked to serve on the Article 12 Committee in California in 1979 to adapt Z133.1 to CAL-OSHA and again for the revision in 1984, which paralleled changes in “The Z”. In April
1991, I joined the Accredited Standards Committee and have been through two complete revision cycles.

As a result of my work with Article 12 programs, I gained more experience in teaching, training and demonstration. As I saw how popular field-level training was, it became easy to create a demand for subsequent programs in climbing, rigging, aerial rescue, pruning, hazard tree evaluation, etc. As General Chairman of the 1984 Western Chapter Annual Meeting, I brought back the Field Day (which hadn’t been done for 20 years), coined the term, “Arborist Skills Workshop,” and put on a great day amongst the oaks at Stanford University. Bob Hunter and Robert Phillips demonstrated climbing techniques, Tim Johnson and others led diagnostic tree walks, and commercial exhibitors demonstrated various aspects of equipment safety and maintenance. We had demonstrations of cabling, rigging and pruning. Since 1984, Field Days have become a popular component of many arborist gatherings and the term “Arborist Skills” has become part of the culture. Z133.1 continues to influence and lead the profession in safe work practices.

My goal in this article is to take a look back at safety training for arborists, from the past though the present. It is my distinct pleasure to turn this forum over to my friend and associate, Tim Walsh, staff arborist at the NAA, for a look at current and future trends in safety training for arborists.

Don Blair is the owner of Sierra Moreno Mercantile Company in Big Pool, Md.

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While researching this article (Don Blair was kind enough to loan me some of his library), I was hoping to use the materials as a review of the history of our profession and fully expected to see all of the information outdated.

The good news is that I was pleasantly surprised to find many of today’s safety topics mentioned as far back as 1900. The bad news is that we are still making some of the same mistakes we were making 101 years ago.

Although much has changed (such as standards for rope used by tree workers – 1-inch diameter minimum breaking strength 9,000 pounds – the use of pruning knives, wound dressings and dendroscopes), much more has stayed the same – at least in terms of safety.

In 1900, *Tree Pruning* by A. Des Cars warns of large branches kicking back if not cut properly. The National Park Service’s *Safety For Tree Workers*, published in 1937, discusses some of the benefits of safety training and accident prevention, including decreased costs (operating and insurance) and better morale.

The publication lists general safety rules that read a lot like the new ANSI Z133.1-2000 Safety Standard.

Some of the key points are:
- knowledge of safety rules, first aid and CPR (referred to as resuscitation in 1937);
- proper training prior to engaging in tree work;
- inspection of work site;
- inspection of all tools;
- “There is no place for intoxicating liquors on a tree preservation operation. … (Workers) suffering from immediate or after effects of alcohol must not be allowed on the job.”

Some other specific climbing-related safety items from this publication include:
- no shinnying;
- dividing your weight evenly between branches;
- using stopper knots in the ends of your ropes (including split-tails for us) to prevent falls;
- prohibiting working off a ladder if not tied in;
- keeping work site clear of debris;
- avoiding lifting with your back.

In 1959, the National Arborist Association published *Safe Practices for Arborists*, which took the basic safety information from the Park Service bulletin and adapted it for arborists.

As I begin my 14th year in the arboriculture profession, I have become aware that I am somewhere between old- and new-school thinking. I recently heard this difference referred to as “retro” and “progressive” climbers. I think I am somewhere in between because of my past training and my current continued involvement.

Most of my experience has been with smaller tree care companies. Working for a smaller company, we did not have a formal training program. As with many companies, it was “learn as you go.” I spent a summer dragging brush and handling ropes before I ever left the ground. My training involved watching climbers and trying to figure out what they were doing while continuing to drag brush. I will always remember the first time I was shown how
to tie a bowline. My crew leader, looking me in the eye, said, “Here is how to tie a bowline” as he tied it with one hand. (Strangely enough, I didn’t really learn to tie the knot that day!)

The following summer I began to climb and lead crews. My boss started by giving me relatively easy trees to allow me to learn on the job. As the level of difficulty increased, I was given more equipment.

As I became more involved in the profession and started to attend conferences and workshops, I was exposed to more formal training opportunities. Once I began to change my climbing style and system, it became easier to adapt to new tools and techniques. This was also the time when things were rapidly changing within the profession: new equipment, new techniques and new people.

Now the information was beginning to be spread at a much quicker pace. Increased awareness of the ANSI Z133.1 Safety Standard helped, as did the popularity of the International Tree Climbing Competitions, which helped bring climbers together. Many climbers were “forced” to learn at least a little bit about Z133.1.

The increased use of electronic media has also sped the spread of information. Now it can take only a few days for a new technique to be shared around the world via e-mail and discussion groups. You can see a picture of a new knot – Howard’s hitch, for example – as soon as someone can e-mail it to you.

The ITCC has also spawned an entirely new aspect of arboriculture: professional training. Training opportunities like those currently available would probably not have been so successful without the publicity associated with winning the event. This training started as the stand-and-deliver type conference and workshops, but has developed into more specialized areas.

Some companies are doing field training to ensure that the entire crew – and not just the climber or crew leader – is being trained. Specific programs are targeted at college students. Competitions – such as those at Career Days at TCI EXPO, the annual Student Society of Arboriculture Conference’s, ALCA, FFA, and others – are also being used as opportunities to train.

Specialized training for aerial lifts, cranes and aerial rescue is becoming available, with an emphasis on trainers being drug-free. The NAA is starting a program to combine high-angle rescue techniques with wilderness medicine to better benefit the profession. Safety has become a priority for many organizations, companies and individuals, and because of this education, training has taken a new role in the profession.

Tim Walsh is staff arborist for the National Arborist Association and director of Student Society of Arboriculture. TCI

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Your ability (or lack thereof) to make effective decisions often has a direct correlation to your ability to lead your company. As a supervisor or small-business owner, you need the ability to make critical business decisions, but also the ability to influence others so that they, too, make the most logical decisions to benefit the company.

The process of decision-making isn't as cut-and-dried as some may think. It's a complex process that fortunately can be developed to ensure leadership potential in all who master the skill. The decision-making process is actually a cycle. Our days are spent experiencing life, reflecting on those experiences, and making decisions based on the coming together of experience and reflection. Of the three steps, reflection is the most important. But if leadership is mostly about influencing people—and it is—then how do we get people to make decisions? The answer is: you can't.

First, you can't guarantee anyone an experience of any kind (short of death). If you have any doubt about this, let’s use this definition of experience: Experience is not what happens to you; rather, it’s what you make of what happens to you. Your experiences in life are much different from anyone else’s. Part of a leader’s job is to get into people’s glasses to see how they view things, because no one else sees the world the same way you do.

Next, can you make people make a decision? Can you make them buy your tree care services? No, nor should you want to. You simply can’t make people buy or diversify or adapt. But the one thing you can do is help people reflect.

Reflective decision-making

Quite simply, the better someone reflects on a situation, the better his or her decision will be. True leaders leave the experience and the decision itself to the individual. The leader’s job is to help the individual reflect, because being able to reflect adequately comes through experience, guidance and a measure of self-discipline.

Think of it somewhat like Freud’s classic psychological theory of the Id, the Ego, and the Super Ego. In this case we’ll call them the child, the parent, and the adult. They are three forces or personalities fighting within each one of us for dominance.

The child personality is at our core. It’s motivated by emotions. The child says, “Go for it.” The parent in us surrounds the child protectively and says, “Watch out.” The third persona is the adult. The adult doesn’t say yes or no. The adult says, “Let’s go slow here. Let’s think about this.” The adult reflects thought. That’s where leadership comes in.

The child: When emotions fuel decisions

If you want to be an effective leader, realize that you can’t help how you feel, but you can help how you act. Emotions are neither right nor wrong. They just are. There are five basic emotions: sad, mad, glad, scared and hurt. That’s it. You have the right to feel any way you want. But you do not have the right to act any way you want. It’s the child within that wants free reign.

To be an effective leader, you have to keep your emotions under control and not let them influence your decision-making ability. You need to separate your emotions from the situation to come to an objective conclusion. We hear a lot of stories these days of leaders who let their emotions run free. Read any business journal or magazine and you’ll find companies all over that are going out of business, being fined, going through federal investigations, etc. Do these types of reports make their customers feel good? No way! That’s why you have to keep yourself focused on what’s best for you and your company from an objective standpoint.

The lesson: Don’t base decisions on emotion. And don’t let emotions get in the way of effective leadership. Keep in mind, you’re not only in charge of your organization’s bottom line; you’re also in charge of its emotional climate. Remember that morale filters down; it never filters up. The way you act is what your employees will imitate.

The parent: Life’s lessons

We all have stories about how we grew up. Our parents, families and communities instilled values in us: ethnic values, religious values, political values. All those things we bring to the table today. Simply stated, we are the sum total of our past experiences.

Think of your brain as a giant refrigerator. You put all the fresh information up front and you keep moving old stuff to the back. When you’ve packed so much in that you can’t shut the refrigerator door anymore, what do you do? You empty it out. But you don’t throw away the stuff from
up front, do you? No, you look in the back and you see things that have spoiled or are no longer useful. Those are the things you toss. The same thing happens in our mind.

Sometimes we forget earlier lessons as they get pushed to the back by life's newer lessons. For instance, can you remember everything you learned academically in fifth grade? How about your sophomore year in high school? Junior year in college? This morning's paper? Or can you only remember a few bits and pieces?

It may be that our memories really are selective. But at times we can pull things from the recesses of our minds that don't seem possible. For instance, have you ever played trivia games? Even if you're not a trivia know-it-all, you probably get at least half the questions correct, despite the fact that it's not knowledge you use on a daily basis. How is that possible? Using the analogy from above, something in your freezer melted and came to the front of your refrigerator.

Our decision-making reflects those early lessons. At times our choices may seem intuitive. Maybe some are. But memory is a complexity beyond our grasp. Our decisions are rooted in our past whether we like to admit it or not. We may accept certain ideas without even knowing why, just as we may reject them.

The lesson here is simple. Know yourself. Leadership comes from knowing yourself, from knowing what pushes you to certain choices, and from teaching others to know themselves in the same way.

The adult: Growing into reflection

The third personality is the adult. It is, or should be, the person we project to others. It's the sum total of our emotions and experiences. It's part child (emotion), and part parent (discipline). The adult doesn't say yes or no to anything; instead, the adult says, "Let's go slow here. Let's think about this." The adult reflects thought.

That's where leadership comes in. From the adult self comes the ability to reflect and to think before acting. It's the PTP factor, or the "Price to Pay" factor. What's your price to pay for what you want to do? If you can't pay, you'd better walk away because there's an absolute in life that's just like gravity. What goes around always comes around.

The "Price to Pay" factor is not rocket science. It's learning to see the consequences of our actions — to see clearly the outcome of our decisions. Leaders reflect. But more important, as leaders, we need to teach these reflection skills to others. No two human beings see the world in quite the same way. No two of us have had the same experiences of life. And no two of us will arrive at the same decisions for the same reasons. As a leader, you have control over only one aspect of decision-making: reflection. Practice it. Teach it.

The decision-making dilemma

The challenge is that the satisfied and delighted customers are the "child" personalities. Those are emotions. Where is the loyal customer? In the "adult" personality. The challenge then, as far as leadership goes, is to move those satisfied and delighted customers into the loyal rank.

It all relates to how people make buying decisions. The majority of people buy with emotion and justify with logic. If they can't find the logic, they'll cancel the service, ask for a refund, etc. It's like going food shopping with an empty stomach. That's the child personality. You push the cart with your belly and put your arms on the shelves and load your cart. You spend more than what you have in your pocket. You either have to return some items or you feel guilty for overspending and don't go shopping again for a long time.

The adult is when you eat lunch before you go grocery shopping. You're able to go up and down the aisles saying, "I don't need bread. I don't need cookies. I don't need candy." When you're done, you have more money in your pocket and you don't feel guilty for your choices. Why? You allowed yourself to reflect about it more.

True leadership is under the adult personality. If you read a newspaper today or watch the news, you know that the child personality dominates our world. That's why we have wars and other conflict. Leaders need to move to the adult stage and then teach others how to do the same. Leaders know the success stories and accept the challenges. Now they're providing the direction for others to follow.

Putting it all together

Finally, in order to make good decisions, leaders must be sure they have all the information necessary so they can analyze the decision. Here's a simple yet effective questioning technique that helps leaders analyze decisions.

1. Act

What's the action of behavior that is causing the problem or dilemma?
Who or what is involved and why?
What were the rationales for the action?

2. Circumstances

What do you know and not know about the situation?
Who was involved and wasn't involved, and why?
What information are you lacking in order to make the decision and where can you obtain that information?

3. Criterion

On what basis are you making the decision? Is it your company's mission statement, code of ethics, the law, or your own personal sense of right and wrong?
Note: This point has to be very clear. Very often the decision hinges on the clarity about what the decision is based upon.

4. Communal wisdom

Whom can you relay your decision to in order to get insight and a fresh perspective?

Always present what you think your decision might be on those people that you know are "for you," i.e., colleagues in a similar industry, division, company, etc. This will hopefully provide objectivity to your proposed decision. Their input may help you "see" things you didn't consider before, thus giving you added information before making a final decision.

When you incorporate this decision-making process into your daily operations, you'll arrive at more effective decisions that will positively affect both you and your company. Additionally, as you teach these decision-making skills to others, your results will be multiplied. As your decision-making skills grow, so, too, will your company and your leadership status.

Frank C. Bucaro is the president of Frank C. Bucaro & Associates, Inc. He is the author of two books, Taking the High Road: How to Succeed Ethically When Others Bend the Rules and What Happened to the Good Guys in the White Hats? Lessons in Ethical Leadership. For more information on programs or books, call (800) 784-4476.
Events & Seminars

Don't miss these upcoming events

September 30-October 3, 2001
Maryland Community Forest Council
MAC-ISA 2001 Annual Meeting
"The Power of Trees"
Hagerstown, Md.
Contact: Nancy Herwig, (703) 753-0869 or www.mac-isa.org

October 1, 2001
Ohio Turfgrass Foundation
Annual Golf Tournament
The Country Clubs of Fox Meadow
Medina, Ohio
Contact: (888) 683-3445 or visit www.ohioturfgrass.org

October 2, 2001
Washington Landscape
Trade Show & Field Day
Western Wash. Fairgrounds
Puyallup, Wash.
Contact: (800) 833-2186

dd October 3, 2001
Washington Landscape
Trade Show & Field Day
Western Washington Fairgrounds
Puyallup, Wash.
Contact: (800) 833-2186, e-mail: fieldday@walp.org or visit www.walp.org/tradeshow.html

October 2, 2001
Stockbridge School
Field Day
University of Massachusetts
Amherst, Mass.
Contact: Call (413) 545-2222, e-mail stocky@fnr.umass.edu or visit www.umass.edu/stockbridge

October 5-19, 2001
The Committee for the Advancement of Arboriculture
Advanced Tree Climbing Course
Thompson Park,
Middletown, N.J.
Contact: Steve Chisholm (732) 928-5747

October 6, 2001 (Rain date: Oct. 13)
The Committee for the Advancement of Arboriculture
Lightning Protection Course
At historic "Monroe Oak"
Monroe Township, N.J.
Contact: Steve Chisholm (732) 928-5747

October 9, 2001
The Committee for the Advancement of Arboriculture
Chain Saw Safety
Thompson Park,
Middletown, N.J.
Contact: Steve Chisholm (732) 928-5747

October 11-12, 2001
Tennessee's Urban Forestry Council
10th Annual Conference
"Sustaining Our Urban Forests"
Knoxville, Tenn.
UT Conference Center
Contact: (615) 352-8965, fax: (615) 352-6762 visit www.tufc.com or e-mail tufc@wave3online.com

October 13, 2001
Tennessee's Urban Forestry Council
3rd Annual Tree Climbing Championship
Knoxville, Tenn.
Contact: (615) 352-8965, fax: (615) 352-6762 visit www.tufc.com or e-mail tufc@wave3online.com

October 13, 2001
Michigan Forestry & Park Association
Tree Identification Workshop
Michigan State University
Contact: (517) 482-5530

October 14-16, 2001
Tree Structure and Mechanics Conference
DeSoto Hilton
Savannah, Ga.
Contact: (336) 789-4747

October 16, 2001
Trees, People and the Law
The National Arbor Day Foundation
The Greenwood Inn
10700 SW Allen Blvd.
Beaverton, Ore., 97005
Contact: National Arbor Day Foundation, 211 N. 12th St., Ste. 501, Lincoln, Neb. 68508, call (402) 474-5655 or visit www.arborday.org.

October 16-17, 2001
Multi-State Plant Materials Conference
Stillwater, OK
Contact: Mike Schnelle, (405) 744-7361 or e-mail: mas@okstate.edu

October 17, 2001
The Committee for the Advancement of Arboriculture
Aerial Rescue & Electrical Hazards
Thompson Park,
Middletown, N.J.
Contact: Steve Chisholm (732) 928-5747

October 18-21, 2001
Student Society of Arboriculture
6th Annual SSA Conference and Job Fair
Clemson University,
South Carolina
Contact: www.uwsp.edu/stuorg/ssa or www.ssa-arbor.com or e-mail Tim Walsh, SSADirector@att.net

October 19-21, 2001
New Jersey Shade Tree Federation
76th Annual Meeting
Clairton Hotel & Conference Center
Cherry Hill, N.J.
Contact: Bill Porter, (732) 246-3210

October 21-23, 2001
SMA 37th Annual Conference and Trade Show
Fargo, N.D.
Contact: www.urban-forestry.com

October 24, 2001
California State University - San Bernardino
Tree Failure and Risk Management Workshop and Outside Field Days
Huntington Library
Pasadena, Calif.
Contact: Karen Michelle Yates, (909) 880-5977 or fax: (909) 880-7065

October 24, 2001
California State University - San Bernardino
Tree Failure and Risk Management Workshop and Outside Field Days
Richard Nixon Library
Yorba Linda, Calif.
Contact: Karen Michelle Yates, (909) 880-5977 or fax: (909) 880-7065

October 25, 2001
California State University - San Bernardino
Tree Failure and Risk Management Workshop and Outside Field Days
Richard Nixon Library
Yorba Linda, Calif.
Contact: Karen Michelle Yates, (909) 880-5977 or fax: (909) 880-7065

October 25-26, 2001
22nd Annual Texas Tree Conference and Trade Show
Waco Convention Center
Waco, Texas
Contact: Ralph Pena, (281) 316-3458, Fax: (281) 316-3445 or e-mail rgpena@texas.net

October 30, 2001
9th Annual Community Forestry Workshop
Westminster, Md.
Contact: Katrina Tucker, (410) 848-4363

November 1-3, 2001
National Arborist Association
TCI EXPO 2001
Greater Columbus Convention Center
Columbus, Ohio
Contact: Carol Crossland, (800) 733-2622; crossland@natlarb.com
November 3, 2001
ISA Arborist Certification Examination
TCI EXPO 2001
The Greater Columbus Convention Center
Columbus, Ohio
Three-week advance registration required
Contact: Ohio Chapter ISA (216) 381-1740

December 13, 2001
Ohio Chapter ISA, Tree Appraisal Workshop
An Introduction to the 9th Edition of the CTLA/ISA, "Guide for Plant Appraisal"
Winton Center,
Hamilton County Park District
10245 Winton Road
Cincinnati, Ohio 45221
Contact: Ohio Chapter ISA (216) 381-1740

November 4-6, 2001
The Irrigation Association
2001 Annual International Irrigation Show & Technical Conference
San Antonio, Texas
Contact: (703) 536-7080
or certification@irrigation.org

November 5, 2001
ISA Arborist Certification Examination
TCI EXPO 2001
The Greater Columbus Convention Center
Columbus, Ohio
Three-week advance registration required
Contact: Ohio Chapter ISA (216) 381-1740

January 7-11, 2002
Advanced Landscape Plant IPM
PHC Short Course
Department of Entomology
4112 Plant Sciences Building
University of Maryland
College Park, MD 20742
Contact: Debbie Wilhoit, (301) 405-3913,
e-mail: dw34@umail.umd.edu or visit
http://www.pest.umd.edu/events/events.html

November 6, 2001
Tree Hazard Evaluation Workshop
UCR Extension Center
Riverside, Calif.
Contact: (909) 787-5804
or e-mail sciences@ucx.ucr.edu

January 16-18, 2002
Mid-America Horticultural Trade Show
Navy Pier,
Chicago, Ill.
Contact: (847) 526-2010 or www.midam.org

November 7, 2001
Tree Hazard Evaluation Workshop
UCR Extension Center
Riverside, Calif.
Contact: (909) 787-5804 or
e-mail sciences@ucx.ucr.edu

January 28-29, 2001
Think Trees New Mexico
Crown Plaza Hotel
Albuquerque, N.M.
Contact: Bernalillo County Extension Service,
(505) 243-1386

November 8, 2001
Ohio Chapter ISA, Tree Appraisal Workshop
An Introduction to the 9th Edition of the CTLA/ISA, "Guide for Plant Appraisal"
Brecksville Community Center
9059 Brecksville Road (SR 21)
Brecksville, Ohio 44141
Contact: Ohio Chapter ISA (216) 381-1740

February 3-5, 2002
37th Annual Penn-Del Chapter
Shade Tree Symposium
Lancaster Host Resort
Lancaster, Penn.
Contact: (215) 795-0411

November 9-13, 2001
PLCAA
22nd annual Green Industry Conference at the Green Industry Expo
Tampa, Fla.
Contact: (800) 458-3466

February 10-11, 2001
ISA Arborist Certification Examination Preparation Workshop
Ohio Chapter ISA Tree Care Conference and Trade Show
Columbus Marriott North
Columbus, Ohio
Contact: Ohio Chapter ISA (216) 381-1740

November 9-13, 2001
Associated Landscape Contractors of America
Green Industry Conference & Expo
Marriott Waterside and
Tampa Convention Center
Tampa, Fla.
Contact: (800) 395-2522 or www.alca.org

February 11, 2001
ISA Arborist Certification Examination
Ohio Chapter ISA Tree Care Conference and Trade Show
Columbus Marriott North
Columbus, Ohio
Contact: Ohio Chapter ISA (216) 381-1740

December 3-6, 2001
Ohio Turfgrass Conference and Show
Greater Columbus Convention Center
Columbus, Ohio
Contact: (888) 683-3445 or
visit www.ohioturfgrass.org

February 13-17, 2002
National Arborist Association
Winter Management Conference
Ritz-Carlton Kapalua
Maui, Hawaii
Contact: Carol Crossland, (800) 733-2622;
crossland@natarb.com

December 5-8, 2001
American Society of Consulting Arborists
34th Annual Conference
U.S. Grant Hotel
San Diego, Calif.
Contact: (800) 395-2522 or
www.asca-consultants.org

February 11, 2001
ISA Arborist Certification Examination
Ohio Chapter ISA Tree Care Conference and Trade Show
Columbus Marriott North
Columbus, Ohio
Three weeks advance registration required
Contact: Ohio Chapter ISA (216) 381-1740

December 11-12, 2001
Illinois Arborist Association
19th Annual Conference and Trade Show
Pheasant Run Resort
St. Charles, IL
Contact: (888) 678-8887
John Deere launches environmental Web site

John Deere has launched an environmental Web site called Running Green, located at www.deere.com/deerecom/Environmental/default.htm.

"Through Running Green, we hope to inform and champion John Deere's vision of making environmental considerations a priority in sustaining life on our planet. Our 'green' vision encompasses product innovations, sustainable environmental management opportunities that will allow greater use of renewable materials, and efficient and safe manufacturing processes," according to Director of Safety and Environment Ralph Grotelueschen.

The site includes the company's environmental vision, latest data, historical milestones, world population and productive land counters, news of recent environmental innovations, community projects and links to other environmental sites on topics including agricultural sustainability, climate change, population, precision farming, and renewable energy.

**Engineers urge adoption of traffic safety programs**

Roadway crashes continue to be the No. 1 cause of on-the-job deaths in the U.S. and account for nearly a quarter of last year's fatalities. With the increase in 'round-the-clock traffic congestion, officials at the American Society of Safety Engineers are urging employers to develop and adopt on-the-job traffic safety programs and guidelines in an effort to combat the negative effects of traffic crashes.

In support of the annual Drive Safely Work Week from Sept. 10-14, the American Society of Safety Engineers has developed a free brochure, "Important Safety Tips," that provides information on how to safely drive in work zones and how to share the road safely with commercial vehicles, as well as important vehicle passenger safety information.

On-the-job traffic crashes cause 3,000 deaths, 332,000 injuries and cost employers over $43 billion per year, according to the National Highway Traffic Safety Administration (NHTSA), and can reduce employee productivity by 40 percent.

In addition to the emotional toll, on-the-job traffic crashes annually cost employers about $3.5 billion in property damage, $7.9 million in medical care and emergency service taxes, $17.5 billion for wage premiums, $4.9 billion for workplace disruption (to hire and train either new employees or temporary employees) and $8.5 billion in disability and life insurance costs.

ASSE also urges all drivers to buckle up. Nearly two-thirds of those killed in traffic crashes are unrestrained.

For a copy of the free brochure, call (847) 699-2929, visit www.asse.org or e-mail Customerservice@asse.org.

Robert L. Crudup Jr. new president at Valley Crest

The Board of Directors of Environmental Industries Inc. (EI), parent company of Valley Crest Tree Co., announced the appointment of Robert L. Crudup Jr. to the position of president and chief operating officer. Crudup, senior vice president since 1998, succeeds Stuart J. Sperber, who was elected vice chairman of EI’s Board. Sperber will remain with Valley Crest Tree Co. as CEO. As company president, Crudup will oversee all Valley Crest Tree Co. businesses, including environmental landscape products, Garden Art international, its specimen division, and the company’s nursery options.
“Performance Under Pressure”

Making the best, heavy-duty Low Pressure Hydraulic Tools for the Tree Care industry has been the primary focus of FCI Racine tools for many years. The versatility, durability and productivity of our tools promise long, trouble-free performance.

Whether it is cutting, shaping, cabling or pruning, we have what you demand for that tough job . . . Performance.

FCI RACINE offers low pressure hydraulic tools to perform the job fast, easy and most importantly—safety.
High Elevation Self-Rescue System
Buckingham Manufacturing Co. has introduced the high-elevation self-rescue system. Should there be a need to rescue someone from an elevated height—such as an inoperable bucket truck—the self-rescue system is designed to make getting down easy and safe. The system provides all the components required to self-rescue or to rescue a fellow employee. The unit will allow the rescuer to lower a hurt person with ease. The system can be purchased with rope lengths of either 50, 75 or 100 feet. For more information, contact Buckingham Manufacturing at PO Box 1690, Binghamton, NY 13902, call (607) 773-2400, or visit www.buckinghammfg.com.

Fleet-tech
Fleetguard Inc., a wholly owned subsidiary of Cummins Inc., has released a new diesel fuel additive package that provides advanced fuel system protection for heavy-duty vehicles during harsh weather conditions. Marketed under the trade name of Fleet-tech, the additive package is balanced to protect the complete fuel system and increase vehicle uptime. Fleet-tech is available in four formulations designed for specific application use: Winter Conditioner, Winter Conditioner Concentrate, Asphaltene Conditioner and Asphaltene Conditioner Concentrate. Fleet-tech products also come in several packaging options: quart, 2.5-gallon, 5-gallon and 55-gallon drum. For more information, contact Fleetguard at 1-800-22FILTER or visit www.fleetguard.com.

Franklin Utility Tractors
Franklin Utility Tractors are engineered to meet customers’ needs. Considerations include axles, tires, hydraulics, oscillation, wheelbase, horsepower, the attachment and the application. Franklin Utility Tractors are designed to customers’ specifications to optimize the performance of the chosen attachment. For more information, call Franklin at 1-800-229-7152, e-mail lturner@franklineq.com or visit www.franklin-treefarmer.com.

Mechanical Mounts for Bull Hog
New mechanical mounts now available for the Bull Hog from Fecon makes it more compatible with carriers ranging from 55 to 350 hp, whether the vehicle is rubber-tired or tracked, including excavators and tractors. Powered hydraulically or used in tandem with a tractor PTO, the Bull Hog is capable of shredding dense brush and undergrowth; standing or fallen trees; stumps and root balls; brush and yard waste piles; and logging scrap and slash piles of any texture. The Bull Hog’s fixed hammer design incorporates counter combs to hold material for the hammers to cut through as well as double carbide cutting tips. For more information, contact Fecon at 10350 Evendale Drive, Cincinnati OH 45241, call 1-800-528-3113 or visit www.fecon.com.

Hear and Protect
Power Aisle Inc. has introduced its Hear and Protect unit. This unit, designed for the outdoor power equipment industry, incorporates speakers in each ear, a microphone, and a control unit. When sounds reach 85Db, the circuit discontinues transmitting to the speakers, at which point the device provides NRR28 hearing protection. When sound levels fall below 85Db, normal hearing is restored. In addition, the Hear and Protect unit allows for hands-free operation and offers over 200 hours of battery life. For more information, contact Power Aisle Inc., at Huntington Station, New York, NY 11746, call (631) 673-5975, or e-mail poweraisle@powerpromos.com.
GRIPS over-the-sock High Traction footwear from Jordan David is designed to provide slip resistance in virtually all slick areas while being safe to wear in normal and clean situations. GRIPS is created to fit all foot sizes and is impregnated with a sandpaper-like grit that increases traction beyond the capabilities of normal rubber-soled shoes and boots. The boots are designed to be worn indoors as well as while driving, reducing the need to take them off and on. GRIPS is a safety product that provides traction on areas covered with grease, ice, slush or water. For more information, contact GRIPS at 1-888-NO-SLIPS or visit www.jordandavid.com.

MHL 331 Log Handler

Fuchs, a division of Schaeff of North America, has introduced the MHL 331 log handler. Weighing in at 49,600 lbs., the MHL 331 has a reach of 36 ft. and can lift 6,500 lbs. at that reach through 360 degrees of operation. The MHL 331 offers high mobility and a hydraulically elevated cab that can provide up to 17.5 ft. of visibility at the operator's eye level, enabling the operator to position himself for optimum machine performance, whether unloading trucks, sorting on the ground, or stacking high decks. Other features include a top speed of 12.4 miles per hour. Additional machine flexibility is added with a remote cut-off saw hydraulic system, which is fully controlled from the operator's cabin. The MHL 331 has 129 net horsepower and is stable when operated in "pick-and-carry" mode on tires, allowing the operator to sort and move logs around the yard. For more information, contact Fuchs at 1-877-907-8300 or visit www.fuchsusa.com.

SL-300 hook-lift hoist

SwapLoader USA Ltd. has introduced the SL-300 hook-lift hoist. The SL-300 has a lifting and dumping capacity of 33,000 lbs. and is designed for single-axle or tandem-axle chassis with bodies that range from 14 feet to 18 feet in length. The SL-300 is part of a family of SwapLoader hoists that range in capacity from 9,000 lbs. to 65,000 lbs. SwapLoader hook-lift hoists are designed to allow the operator the ability to use one truck for many different purposes by swapping bodies. Within a few minutes, an operator can swap from being a dump truck to a flatbed to a waste-removal system, to a sander, and so forth. This is all accomplished from the cab of the truck. The SL-300 incorporates SwapLoader's sliding jib, dual-lift cylinders, slide-through body locks, dual pivot rear section, and low-pressure hydraulics. For more information, contact SwapLoader at 1-888-767-8000 or visit www.swaploader.com.

High Traction footwear

GRIPS over-the-sock High Traction footwear from Jordan David is designed to provide slip resistance in virtually all slick areas while being safe to wear in normal and clean situations. GRIPS is created to fit all foot sizes and is impregnated with a sandpaper-like grit that increases traction beyond the capabilities of normal rubber-soled shoes and boots. The boots are designed to be worn indoors as well as while driving, reducing the need to take them off and on. GRIPS is a safety product that provides traction on areas covered with grease, ice, slush or water. For more information, contact GRIPS at 1-888-NO-SLIPS or visit www.jordandavid.com.

Callbacks

The July issue of TCI magazine contained an error in the Buyer’s Guide listing for Northeastern Associates. The corrected listing is below:

NORTHEASTERN ASSOCIATES

Your arborist supply depot. Northeastern Associates provides the arborist industry with the most complete line of arborist tools, supplies and equipment. Rope, slings, saws, lowering devices – tools and supplies used every day. Plus, a wide range of sprayers with tank sizes from 30 to 1000 gallons; pump capacities from 3 gpm to 60 gpm. Everything is affordable and dependable while easy to use. Northeastern Associates, 50 Notch Road, West Paterson, NJ 07424. Toll-Free: 800-261-SPRAY (7772) or (973) 837-1390; Fax: (973) 837-1391; Web: www.northeasternarborist.com.
There is no question that change is in the air with regard to managing workers today. How can we stay on top of these changes? How can we profit from them by staying ahead of the competition?

I would like to give you a flashlight you can use to light your path into the future without stumbling. I have spoken to a number of people in the tree care industry, and have discovered a problem/challenge that every single business in the industry faces to one degree or another, no matter what region you are in or what size you are.

You could all use about 20 percent more employees, at least during your heavy season. There are problems with retention and staffing, and it is affecting your bottom line. It affects your ability to grow your business. It affects, in some cases, your customer service. You can't meet customers' deadlines. You can't take on new customers or handle a storm. Customer satisfaction and service are compromised, and morale among your team decreases. Your employees are overworked, forced to pull overtime, and
having to do more than they want. All these things add up to the need to retain the good people that we have.

The average cost of replacing a lost worker, according to a national survey of all industries, is $50,000. Are you having a turnover or retention problem? If you are, it is costing you money.

A new perspective

On the bright side, there are things that you can do to make these new workforce changes work for you rather than against you. If we learn how to ride this wave into the future instead of being dragged, we can be successful. What we need first, however, is a paradigm shift.

What is a paradigm? A paradigm is a set of accepted practices, or "norms." I believe the workforce of the 21st century requires a paradigm shift of every business owner, CEO, manager, supervisor and foreman in the tree care business.

The first thing we need to reconsider in this shift of perspective are long-held traditions.

Breaking tradition

Traditionally, paradigms were focused primarily on the customer. We focused on customer satisfaction and on retaining customers, which was job No. 1. We constantly looked for ways to improve service quality. Likewise, we were less concerned about our employee base. Management/labor relationships were fairly traditional. Small businesses, for the most part, were family owned, and we did things the way that dad, or even granddad, had done them. Training was either minimal or non-existent.

Today there is a whole new paradigm being born. It has to do not only customer satisfaction, but with employee satisfaction as well. It is about employee retention and how can we hang onto those people that we have invested in.

The emphasis in the new paradigm will be on progressive management/laborer relations, so rather than having static relationships, the way we did it before, new relations will always be flexible. We need look at what the new generation wants and we see what we can do with it.

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TREES CARE INDUSTRY - OCTOBER 2001
Age waves in the workplace

The way that you and I manage - or would like to manage - has a lot to do with how old we are. Our managing style has a lot to do with the generational cohort with which we came of age. The breakdowns in generations follow along these lines:

GI generation: If you happen to be 75 years or older, you are a proud member of the GI generation. This is the generation that fought the big war. This is the generation that, in many cases, started the tree care company that you work at. In the employer/employee relationship here, management has always been traditional. Perhaps we could say it has been paternal, sort of a benign dictatorship. The attitude was simply: Having survived the Great Depression, this generation had a great respect for a job. It didn’t matter what the job was or what it paid; the important thing was that it was a job. There was a work ethic you do not see anymore.

Silent generation: If you are between 55 and 75 years of age, you are a member of the silent generation. It is called the silent generation simply because there were very few of them. As a worker, members of the silent generation were still very much in the mindset of being happy to have a job and had a good work ethic. In the case of service workers, they saw such jobs as short term. They had a job, it was putting food on the table, and they were happy. According to NAA Senior Director Rusty Girouard of Madison Tree Service in Milford, Ohio, “Our workforce used to be guys from Kentucky who came to Cincinnati to find work. They would go home on weekends, and hopefully they would come back on Mondays. They would live, for the most part, paycheck to paycheck. This was pretty much typical of the silent generation, and still is typical of the silent generation’s outlook on work.”

Baby boom generation: Then we get to the baby boom generation. If you are between age 37 and 55, you are a member of this huge cohort called the boomers. Why do we have so many commercials on television that use rock music from the '60s and early '70s? The reason is because the automobiles and electronics and products are trying to appeal to baby boomers. Baby boomers came of age in the '50s. Everything had to change. Schools were inadequately prepared. There were not enough schools or hospitals for the birthing of this huge generation. This generation has changed everything in its path as it has moved through its life span. As we look ahead, we can see that it will change everything as we move into the future.

In the workplace, this generation pretty much had to toil the line because there were so many of them that, even though they were more or less liberalized people - indulged, some would say, in the way that they were brought up - when they hit the workplace, they to get a hair cut and
conform to the rules and regulations that the silent and GI generations had set for them. There was a lot of competition – 76 million people entering the workforce at once – and, as an employer, you had your pick of which ones were going to hire. That is not the case any longer, and that is what is causing all of this change.

How does this generation manage employees? For the most part, they manage in fairly traditional ways. Perhaps they're a little nicer and a little bit better at listening to employees, but for the most part – and I am generalizing wildly – they would like it to be like it always was for them. Hence the often-heard expressions from this generation, “I had to pay my dues, why don’t they?”

Generation X: Generation X is a smaller group, 17 million Americans between roughly 26 to 37. This generation challenged everything. They questioned everything and gave their opinion. There is also a new generation that some of you may have already encountered in your business or with your colleagues: Members of generation Y, age 18 to early 20s. For simplicity purposes, when I refer here to generation X, I’m including the younger folks from the true X and the older ones from generation Y.

There is a new generation gap between the boomers and the X generation. I heard one person describe it best when he said, “With generation X’rs, there are always a million excuses for why things don’t get done. This is accompanied by anordinate amount of whining.” One California tree care company owner that employs about 20 to 25 people told me, “(Generation X’rs) have lost the work ethic. They don’t want to work.”

This is the heart of the conflict in the workplace. I think that we can all agree with Tom Tolkacz of Swindle Tree Company based out of Denver, Colo., when he told me that the job of managing the staff is so much harder today than it was even five years ago. You just can’t manage the way that you used to.

Managing the new generation

What do we do about it? First, we, as boomers, have to take our own medicine. Recall that the boomer generation was the group that wanted to force change on society. Now here we are in positions of responsibility, figuring out what these people want. This is not easy, but when we consider some of the things that this generation wants, we will find that maybe it isn’t as bad as we had originally thought. Knowledge is power in this situation.

1. Money

First of all, let’s be honest: This generation X wants money. They see people going into dot-com’s and, until recently, making a lot of money. They have become programmers making hundreds of thousands of dollars and more.

We live in a materialistic society. You’re
2. Feedback

X's want, need and crave feedback. My guess is that you are probably not giving your young workers enough feedback. They need more of it than perhaps you did. Why is that? They were raised, in some respects, in technologically intensive feedback environments. When you play a video game, you get instant results. On the other hand, most were raised as latchkey children coming home to empty homes because their parents were off working. They spent a lot of time not having human interaction or feedback, and therefore they crave it.

John Nezbit coined a phrase, "high tech, high touch," in the book Mega-Trends. This generation needs the high touch. They have so much technology today that we have to overcompensate by giving them more feedback.

Tell them more about the job they are doing and give them more instant feedback. Five minutes after they are on the job, they want to know how they are doing. The yearly performance review that you might do with a few paragraphs (or deliver in about 15 minutes with a person, if you happen to be a more progressive manager) will not cut it with this generation. You have to give them more feedback per square inch per day to really satisfy them.

3. Captivating work

They seek interesting jobs. This should not be a problem for this industry - tree care is a fascinating area. The product is a fascinating. It is all in the way that you pitch tree work to a prospective employee, as well as how you hold it in your own minds.

4. Career goals

Next, remember that they want a career path. They want to know where they will be going. Greg Daniels from F.A. Bartlett Tree Expert Company said today's work-

ers are more impatient than tree workers of a generation ago. They are more career-minded. You have to move them along faster and let them know where they are going. It doesn't matter whether you are a large or small company; there is a sense of a career if you pitch it that way. There is always a place where somebody can move to next.

5. Training

This generation also expects ongoing training. They never knew the concept of a gold watch, which basically said that if you show up for work and you do the job for many years, you will get a gold watch at the end. This generation never of the term "job security." It doesn't exist for them. There is no security in a job. Where is the security to be found in this impersonal world out there? In themselves, and they know it.

If they are being trained and are learning, and if you are constantly helping them to learn new skills, then they will most likely stick around. A Gallup report spells this out clearly: The percentage of employees who said their company has a good training program - but they are still going to leave within the next 12 months - is 12 percent. The percentage of employees that think their company's training program is lousy and are going to leave within a year is 36 percent. If you want to know if training is important, than this is your answer. Those dollars that you might spend to attract, supervise and train a new employee could be saved and put into training your existing employees.

6. Balance

This is a generation that wants life balance. The boomers talked about it while they worked 40 to 70 hours a week sacrificing families and time with their children, but never achieved it. This generation wants to work and work hard, but they want balance. They want to be able to have hobbies and not work overtime all the time.

7. Involvement.

They want to be able to make suggestions to you on how you should run your company. That is a different kind of paradigm, but it is true. This is a generation that wants to know what is innovative about how you do your business. What are your new ideas? What is your approach to arboriculture, and how aggressive is it? Are you just a company that clears brush, or are you a company that really cares for trees? That is what we mean by involvement. It is huge and absolutely a necessity for some people.

8. Independence

On one hand, they need guidance, training and direction, but on the other hand they want independence. They want to be left alone and they do not want to be micro-managed. They want the parameters and they want the freedom and to be taught what to do, but then they want to decide how they are going to get things done. Why is that?

If you come back to the notion that the way we do things is based on our background and how we were raised, then it makes sense. This is a generation that, from a very early age, had to be independent and fend for themselves. They had to do their own cooking and cleaning and self-management because nobody was around.

These are some things we need to consider as we look at how we manage. Are we managing straight from our generation, or can we make some changes that would bode well for the new generation?

Practice what you preach

We have to walk our talk - as simple as it sounds - especially with the younger generation. They are constantly looking at what we say and what we do. This is a generation that has been lied to hundreds of thousands of times. They are looking to the workplace and to you as the leader for that authenticity. All in all, keep in mind the words of Herb Kelleher, CEO for Southwest Airlines: "Figure out what your values are, because once you figure out what your values are, the rest just kind of falls into place."

Robert Tucker is the author of several books, including Customer Service for the New Millennium, Winning the Innovation Game, and Managing the Future. This article was excerpted and adapted from a presentation at TCI EXPO 2001 in Charlotte.
### Popular Knives

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There is a tremendous diversity of insect herbivores and plant pathogens on trees, including a very large number of species that can adversely affect tree growth, survival and aesthetics. Given that every insect herbivore and plant pathogen species on every tree species is a unique combination, it can be pessimistically argued that managing problems will consist of specific local solutions that depend entirely upon the tree species and its condition, the local environment, and the particular insect or pathogen species. While I would never deny the critical importance of case-specific knowledge for managing these problems, in this series of three articles I argue that an understanding of general ecological relationships among trees and their consumers can do much to enhance management of insect and disease problems on trees.

The articles summarize our current understanding of relationships among trees, their insect herbivores and plant pathogens, and the environment, showing how this understanding may be of use in arboriculture. Patterns of insect and disease attack on trees have relatively orderly and predictable underlying ecological causes. These causes indicate that it may be possible to risk-rate trees and situations most likely to lead to problems, and suggest management strategies based on those causes that might help reduce the risk, frequency and severity of insect and disease problems. In the three articles I ask three questions:

- What keeps trees free from attack by insects and diseases?
- What causes insect and disease outbreaks on trees?
- Why do trees vary in suitability to insects and diseases?

The answer to each question in one article leads to the next question in the next article, and each answer has arboricultural implications.

How much damage do trees receive?

One of the most interesting features of insect herbivores and plant pathogens on trees is that they are often conspicuous by their absence. Despite the fact that there are tens of thousands of these species feeding on trees worldwide, with many capable of very high rates of reproduction, trees are not routinely devastated by either. In fact, the overwhelming majority of insects and pathogens on trees are rare most of the time and cause relatively little damage.

We can draw this conclusion from estimates of how much new tree material produced by trees each year is actually eaten by insect herbivores and plant pathogens. Values for these estimates in different forest ecosystems — usually measured as the percentage of annual net primary production (ANPP) consumed — vary a lot from year to year and place to place, but on average only about 8 percent of ANPP is consumed each year by insect herbivores.

Although there are no directly comparable estimates for
pathogens, these organisms are also reported to cause similarly low average levels of damage to trees. Estimates of combined consumption by both insect herbivores and plant pathogens have also been made by measuring how much tree material directly decomposes without being first eaten by either insect herbivores or plant pathogens. In temperate forests, about 90 percent ANPP (mostly litter) directly decomposes. This means that only about 10 percent ANPP is consumed by insect herbivores and plant pathogens. This amount is comparable to the direct estimate of 8 percent ANPP. So, on average, insect herbivores and plant pathogens on trees consume relatively small amounts and are often rare.

What keeps trees green?

What keeps insects and pathogens generally rare and trees usually green? Are the trees responsible? Is it abiotic or biotic environmental factors, or is it some combination of all these factors? Based on findings accumulated from research in many systems over the years, three general factors emerge as being important.

First and foremost, plants — and trees are no exception — are generally poor quality food to both insect herbivores and plant pathogens, and low food quality is a major factor keeping both insect herbivores and plant pathogens rare.

Second, the natural enemies of insect herbivores — viruses, bacterial and fungal pathogens, small mammals, birds, ants, spiders, predatory beetles, insect parasitoids and the like — play a key role in keeping the densities of insect herbivores low and trees green. There is also good evidence that plants and natural enemies jointly conspire to help keep insect herbivores rare. The generally low food quality of plants keeps the growth and reproduction of insect herbivores low, which then makes it easier for natural enemies to further suppress their numbers. In contrast, although some plant pathogens do have a few natural en-
enemies, these organisms appear to play a very minor role in determining the abundance of plant pathogens.

Lastly, the weather is an important constraint on population growth rates of both insect herbivores and plant pathogens because it often determines the degree to which conditions are favorable for growth, survival, development and reproduction.

A focus on tree food quality

For the rest of this article I will focus on the role of tree food quality. There are a number of reasons for doing so. First, food quality consistently emerges as an important factor. Even in circumstances where natural enemies or the weather may be playing the most important role, the influence of food quality can often still be seen.

Second, the important effects of food quality arise from a relatively limited number of general mechanisms that occur across a diversity of plant species with their even more diverse assemblages of insect herbivores and plant pathogens. In contrast, the effects of weather and natural enemies tend to be far more idiosyncratic. The particular natural enemy species or weather conditions responsible for keeping herbivore or pathogen species rare invariably differ from species to species, and can even differ for the same species from one time period to the next.

Third, unlike the weather and natural enemies, food quality is a factor that arborists may have the potential to influence directly. An examination of the mechanisms responsible for low plant food quality reveals some important general traits and relationships that can potentially be managed to reduce insect herbivore and plant pathogen damage on trees.

Why trees are poor quality food

An interesting pattern emerges if you compare the performance – survival, growth or reproduction – of insect herbivores on synthetic diets and plant pathogens in culture media, with their performance on living plant tissues. In many cases, performance on plant tissues is often much lower than can be achieved on synthetic diets or culture media. So, although many insects and pathogens can have high rates of growth and reproduction when food quality is high, plants are generally such poor quality food that insect herbivores and plant pathogens spend most of their time eking out an existence. Why are plants such poor quality food? There are three general reasons:

1. Low nitrogen content.
   First and foremost, the nitrogen content of insect body tissues and fungal and bacterial cells is much higher than the nitrogen content of the plant tissues they eat. The nitrogen content of plants ranges from extremely low levels of less than 0.0003 percent dry weight in xylem fluid to about 5 percent in leaves and up to 8 percent in seeds. In contrast, the nitrogen content of animals, fungi and bacteria ranges from about 9 to 15 percent dry weight, and the nitrogen content of insect eggs and fungal spores can be even higher. (See Figure 1.) Most leaf-feeding insects contain about five times more nitrogen in their body tissues than the leaves they eat, and for insects that feed on phloem or xylem sap, the difference is much greater.

   Since the nitrogen in protein is critical for growth and reproduction, the much lower nitrogen content of what is eaten versus what the organism, its eggs or spores are made up of, is a fundamental constraint on growth and reproduction.

   Evidence that insect herbivores and plant pathogens are limited by the low nitrogen content of the plants they consume is convincing. For example, there is often a strong positive correlation between the growth and reproduction of insect herbivores, mites and plant pathogens and the nitrogen content of the tissues of their host plants, including trees. A very large number of experimental studies fertilizing plants with nitrogen, again including trees, have shown that fertilization has a positive effect on insect and mite growth, survival, reproduction and/or density in a large majority of cases. Similar results have been found for plant pathogens, with positive effects of plant nitrogen fertilization on pathogen growth, survival or reproduction occurring in over 70 percent of about 50 studies.

2. Variable nitrogen.
   The second reason also relates to nitrogen. It is not just the low average nitrogen content of plant tissue that is a problem for insect herbivores and plant pathogens. Tissue nitrogen content is highly variable in space and time. For example, a leaf can vary by well over 100 percent in nitrogen content across the growing season. Similarly large amounts of variation can be found between higher nitrogen sun leaves and lower nitrogen shade leaves of trees, and even bigger differences can be found between leaves of trees growing in nitrogen-rich compared to nitrogen-poor soils.

   Variation in nitrogen content has many important consequences to insect herbivores. Leaf nitrogen varies substantially across the season, going from higher values in buds and expanding leaves to much lower levels in mature leaves, and then rising again in senescing leaves. Aphid reproduction is
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restricted to just the two periods when there is adequate nitrogen in growing and senescing leaves.

The non-uniform distribution of nitrogen means that mobile insects have to make a substantial energy investment just to find food. For example, caterpillars of some specialist tree leaf-feeding Lepidoptera may expend as much as 50 percent of their energy budget simply moving around the plant to find an adequate leaf amidst a sea of low nitrogen leaves. For plant pathogens, variable nitrogen means that there is a high likelihood that spores will fall on tissues where the nitrogen content may be too low to support any growth or reproduction.

3. Defended nitrogen.

The third and last reason plants are such poor quality food again relates to nitrogen, but in a more complex manner. Nitrogen in plant tissues is mixed with a tremendous diversity of other ingredients. Some of these ingredients are found in virtually all plants, while others are much more idiosyncratically distributed among plant species and genotypes. Nevertheless, these ingredients can all be thought of as collectively making it risky, difficult and costly to extract and process the nitrogen.

Nitrogen in leaf, stem and roots always co-occurs with large amounts of indigestible cellulose, fiber and lignin. In fact, trees and other woody plants generally have the lowest nitrogen content and the highest concentrations of fiber and lignin of all plants. Nitrogen in phloem or xylem is massively diluted by water and sugars and has to be concentrated. Most plant tissues, particularly those of trees, contain phenolic compounds such as tannins that form chemical complexes with nitrogen when cells are injured. These complexes may inhibit digestion and may have to be disassociated before digestion. In other plants, including some tropical trees, most of the nitrogen is in the form of compounds like alkaloids that are toxic and non-utilizable, and plants contain a tremendously diverse array of non-nitrogen defensive chemicals that must be overcome in order to take advantage of any nitrogen that is present.

Although insect herbivores and plant pathogens have evolved sophisticated adaptations for dealing with nitrogen limitation and the problems of finding and extracting nitrogen amidst the specific defenses of their host plant, most still remain fundamentally limited by poor food quality. So the leaf-feeding caterpillars that expend as much as 50 percent of their energy budget wandering around trying to find suitable the leaves may expend the remaining 50 percent on the cost of extracting and digesting the adequate plant nitrogen found in these few leaves.

In summary, a major reason why trees are usually relatively free from insect and disease attack is because they are poor quality food. Insect herbivores and plant pathogens face fundamental constraints on their survival, growth and reproduction because plant tissues have low and variable nitrogen concentrations, and because plants have a tremendous diversity of defensive mechanisms that make the extraction and processing of this limited nitrogen difficult, dangerous and costly. While I do not want to dismiss the importance of natural enemies or the weather as major influences, the intrinsically low quality of plants as food is very likely the most
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consistently and generally important constraint limiting the abundance of insect herbivores and plant pathogens, keeping them rare and the world green.

**Tree food quality and arboriculture**

What are the management implications of finding that trees are generally poor quality food for insect herbivores and plant pathogens?

First of all, as is the case in natural ecosystems most of the time, most trees will be relatively free from attack by insect herbivores and plant pathogens, and severe damage will be uncommon. While this does not preclude the need to take care of problems when they arise, it does mean that the need for active intervention will occur relatively infrequently.

Second, from the perspective of minimizing problems, arborists should try to avoid directly increasing the nitrogen content or decreasing the defenses of trees. Fertilizing trees with nitrogen, particularly with large or repeated doses, often increases tissue nitrogen in many tree species. At the same time, for reasons that will be explained in the third article, nitrogen fertilization also tends to simultaneously reduce tree defenses. So, although fertilization can increase tree growth rates, if it also results in increased insect or disease problems, there may be no net gain from fertilization.

Third, arborists should try to be aware of the existing local environmental conditions that could promote increases in tissue nitrogen or decreased defenses. These conditions will be discussed in more detail in the second article, but, for example, trees growing in particularly nitrogen-rich soils, growing in or next to lawns that are being heavily fertilized, or growing where agricultural fertilizer runoff is high may be more likely to experience insect and disease problems.

Fourth, for reasons that will be explained in the last article in the series, some types of tree species have lower nitrogen content and higher concentrations of defenses in their tissues than others. Irrespective of the value of using tree genotypes that are resistant to a specific insect or pathogen, arborists may also want to select these “low nitrogen/high defense” types of trees for planting because they can have a lower overall risk of insect and disease problems.

**Acknowledgments**

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Clive Jones is a research scientist at the Institute of Ecosystem Studies in Millbrook, NY. An ecologist, he studies how trees defend themselves against attack by insects and pathogens, how the environment affects tree defense, and what causes insect outbreaks.

**Suggested further reading.**


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Congress is considering a bill, H.R. 2235, that would codify the Occupational Safety and Health Administration's Voluntary Protection Program. The bill was introduced June 19 by Rep. Thomas Petri (R-Wis.). It currently has 21 co-sponsors and picked up important support from the Bush administration in August, when Labor Secretary Elaine Chao endorsed the bill as part of its overall emphasis on more employer-friendly programs.

The Voluntary Protection Program was first offered during the Reagan administration. Participating work sites must reduce their injury and illness rates and are rewarded with a partial inspection exemption from OSHA.

Recently, the head of the American Society of Safety Engineers — representing some 30,000 safety professionals in the United States — said the group will support the pending legislation. “These programs have been proven to reduce injury and illness rates, while increasing employee morale at the more than 750 sites currently participating in the program,” the ASSE president said.

The Petri bill also would encourage expansion of the program to smaller businesses, he said. “While there has been some debate whether small business would have the resources to qualify, we believe a committed small-business operator could participate in VPP if also provided with the appropriate level of support.”

VPP-related legislation was introduced in the last Congress but was bogged down when labor unions and industry groups failed to reach a compromise over bill language.

The Department of Labor claims that for the past 19 years, VPP has helped set the standard of health and safety, and that, to date, VPP partners have an injury and illness rate that is 60 percent lower than the average in their respective industries.

In all, more than 750 workplaces with 500,000 employees have joined VPP.

The economy is changing how Americans work, where they work, and what they expect from work. Change brings new challenges. Perhaps the change of greatest importance to the tree care industry is the demographic destiny of growing labor shortages. It is this type of change, according to Labor Secretary Elaine Chao, that makes VPP so important. When government and industry work together to implement and promote state-of-the-art safety and health programs, everyone benefits.

Closely related to the pending legislation, OSHA and current VPP participants are forming a new initiative that will significantly increase the joint outreach to small businesses through your mentoring program. Over the next three years, OSHA and the association’s member companies will work to double the number of small businesses in the association.

The new OSHA believes that the government does not have all the answers and cannot solve every problem by itself. For example, at the current pace it would take OSHA 167 years to inspect every workplace in America just one time.

The Department of Labor must find ways to work with employers and employees — organized and unorganized — to create a workplace culture that puts safety first. Collectively, OSHA and industry must anticipate problems before they happen, not just react to them after the fact.

Proactive compliance assistance from OSHA, and not more regulation, may prove to be a bright spot for business and workers in the 21st century economy.

Peter Gerstenberger is vice president of business management, safety & education for the National Arborist Association.
Learn and laugh at WMC 2002 – Hawaii

While the golf, beaches and attractions are always a WMC draw, the heart of the conference is the educational program, which this year offers some interesting new twists. Wednesday will be leadership day, with presentations from John Izzo on “The Soul Advantage: The New Kind of Leadership,” and from Randall Stutman on “The Effective Use of Time.”

We can always learn more about human resources, so David Richardson will present ways to keep good employees in a marketplace desperate for good people in “Tough to Get ‘Em ... Tougher to Hold ‘Em.”

Richardson will also offer us the opportunity to learn something useful about marketing our services when he brings his fast-paced style to this subject and presents specific strategies to help us reach our target customers in “Marketing Madness, Metamorphosis and Motivation.” A two-hour roundtable discussion will follow the presentation, so come prepared with real examples from your marketing efforts.

OSHA contributes to the conference in a unique way this year. As we continue to stress safety, Paul Cyr, OSHA’s National Compliance Assistance Coordinator, will devote three hours over two days to “Developing Your Company’s Safety Program.” Don’t miss this opportunity!

Finally, noted attorney and author Randall Stamen will discuss lawsuits, lawyers and contracts that you shouldn’t do business without in “Arboriculture and the Law.”

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If you think it’s too early to start planning for Winter Management Conference 2002, think again. Reports from the host hotel confirm that we have never had so many rooms booked so far in advance. Our room block, which guarantees special rates, is limited. Here is the information you need to help you book your trip to WMC 2002:

The dates of the conference are Feb. 12 - 17, 2002. The Opening Reception is scheduled for Tuesday evening, Feb. 12, and Sunday, Feb. 17, is a travel day. The conference concludes Saturday evening.

The Ritz-Carlton Kapalua is the site of the conference. Reservations can be made by calling 1-800-262-8440. We have secured the following rates:

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- Single/Double Occupancy: $295 - Deluxe Ocean View

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We have contracted with the following two airlines for reduced fares to Hawaii. Travel reservations can be made by contacting your local travel agent or by calling the airlines directly.

American Airlines: To take advantage of the special fares being offered by American Airlines, call 1-800-433-1790 and refer to the following Authorization Number #3122AC.

Delta Airlines: Reservations and schedule information may be obtained by calling 1-800-241-6760 and referencing File Number #178610A.

Don’t de-“lei”!
Maybe it's a story that could happen only in California. A public works inspector worried about tree roots has a dream about flexible sidewalks.

An environmental activist, trying to save trees from being cut, locates the inspector, who is testing his brainstorm. The inspector and the activist locate a manufacturer and set up meetings of public works employees interested in sidewalk alternatives.

The result? A blossoming interest in rubber sidewalks, which have the potential to save thousands of trees per year in urban settings.

It has been a problem that has dogged cities ever since the advent of concrete. Trees with aggressive and invasive root systems heave up sidewalks. Then the sidewalks have to be replaced and the trees cut to preserve public safety and save money. But rubber sidewalks have suddenly become an alternative that is not only workable, but also cost-effective and aesthetically pleasing. The locally designed and manufactured product provides a malleable surface that gives way to invasive tree roots. And it all started in Santa Monica, with a street inspector with a dream.

"One night I went to sleep and I had visions of broken sidewalks," recalls Richard Valeriano, who, as the senior public works inspector for the city of Santa Monica, sees lots of heaving sidewalks in the daytime, too. "But in the dream the sidewalks were moving and bending."

OK, call it a vision. Call it a revelation. Whatever you call it, this vivid 1994 dream of Valeriano's triggered an idea. He took the idea to work with him. At first he and all the public works guys had a good laugh over it.

But then while at his health club, Valeriano saw workers installing a rubber safety floor, and he began doing some research. He couldn't find any rubber flooring that would take the place of a sidewalk, but he found the rubber flooring manufacturer.

"I brought the idea here to work and finally found somebody to design and build it," he says. That somebody was Rick Snyder of U.S. Rubber Recycling in Rancho Cucamonga. Snyder was intrigued by the idea. His company put up $10,000 as half the cost to design and build molds. Santa Monica
put up the other half.

The rest, as they say, is history. The city currently has six areas where it is testing second generation rubber sidewalks that are durable, attractive and will give under the pressure of tree roots. They come in modules that are 2.5 square feet, 2 inches thick, weigh 22 pounds, and can be fitted together to make any length of sidewalk desired.

Made from compressed, recycled crumb rubber - the biggest source of which is from recycled tires - the rubber pavers have a urethane bond. They are very resistant to environmental and chemical damage. Once the city of Santa Monica began its tests a couple of years ago in relative obscurity, the promotional part of the story began. That, too, was kind of a California fairy tale.

A filmmaker and environmental activist, Lindsay Smith of Gardena, was out for a walk one morning in the spring of 2001. Noticing some Los Angeles County workers preparing to cut down 26 large ficus trees that were threatening sidewalks, she convinced them to cease and desist. Then she not only went on a campaign to save the trees, she also began looking around for a practical way to provide a sidewalk that would allow them to grow in the future.

“That was when I started making calls to other cities to find out what they did with their sidewalks,” says Smith. She found Valeriano, who just happened to be testing rubber sidewalks. “I jumped in my car, raced to Santa Monica, and looked at the rubber sidewalks.”

Ultimately, Smith not only saved 12 of the endangered ficus, she also became deeply involved in promoting rubber sidewalks. Once she saw how effective they could be in saving old trees in the L.A. area, she called “every public works person in the 310 area code.”

The upshot was a mini-conference put on by the city of Santa Monica to demonstrate its findings on the sidewalks. Twenty-five public works personnel from around Southern California attended, and it was like a sales event. Several cities committed to at least try out the rubber modules. Subsequent meetings and phone communications resulted in other commitments.

“We had at least 26 cities say we want to try,” Smith says. And cities from as far away as Ireland and New Zealand have been calling, wanting to know if rubber sidewalks might be solutions for their own tree root problems. “In all these years there had never been an alternative.”

The community forester for the city of Santa Monica, Walt Warriner, says the problem exists anywhere large trees with invasive roots grow near pavement. In Santa Monica the pri-
mary culprits are mature ficus, pine and sweet gum. In other areas they may be different.

"We have a forest that is 50 years old," Warriner says of Santa Monica, and the city is having a terrible and continual problem with heaving and broken sidewalks. He says the rubber sidewalk is not the single solution to the problem, but as part of a program it might help solve the problem.

"The rubber sidewalk is not the magic pill," Warriner admits, but combined with street crews educated in how to prune trees and tree roots, they can be effective. A crucial part of his urban forestry program is training a crew that can go out and prune roots without doing damage to the tree.

Warriner points out that the rubber sidewalks are feasible in most any region. The city's tests show that after two years there is some displacement of the rubber by roots. In general, the sidewalk is distorted or uplifted without being heaved out of place or broken.

"The tree root comes up, and the rubber bends," explains Valeriano. The first rubber sidewalk installation, only two years old, is at the Fairview Library. It has held up well, both in terms of displacement as well as wear and tear from foot traffic.

Santa Monica, unlike some municipalities, does not remove trees. It spends a lot of time and money pruning them back, top and bottom, as well as replacing the sidewalks the tree roots displace. Thus, having a sidewalk that will last longer without repair or replacement is a cost-saver. Concrete sidewalks cost from $4 to $5 per square foot to replace. Brick pavers,
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another alternative, cost $7 to $8 per square foot. Rubber sidewalk, because it is not being mass-produced, currently costs about $10 per square foot, installed.

Edges are glued, and they tie into adjacent concrete with plastic strips or restraints. The segments can be used as pavers and laid without glue, but when glued, they form a smooth, uniform surface without individual pop-up. If a rubber sidewalk has to be removed for root pruning, it can be reused and glued back into place.

The handout Valeriano gives to interested parties notes that the pavers do not noticeably expand in hot weather, and, unlike concrete, they do not become impregnated with tree sap or gum. They can be hosed off when dirty and are impervious to compounds such as gasoline and ammonia. They can be damaged by long-time exposure to oil-based products, such as motor oil, as well as sulfuric acid. They are also susceptible to vandalism.

Valeriano insists that rubber sidewalks near trees will not have to be replaced as often as concrete ones, lessening the long-term cost. In addition, the cost should come down as the manufacturer produces more units. Plus, the state of California may, in the future, provide subsidies to buyers of rubber sidewalks made from recycled tires, a huge problem in the state and elsewhere.

Rick Snyder, president of U.S. Rubber Recycling, confesses that at first, he dismissed the rubber sidewalk idea. "I blew her off totally," he says of Lindsay Smith, but he has since become a promoter of the pavers—especially since the product could become a big seller if early indications pan out.

Snyder has small orders from cities wanting to test the pavers, and he also is sending out samples to
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cities that have heard of the phenomenon and want to see what the pavers look like. In all, he has purchase orders from 20 cities. Test quantities are going to California cities, and samples have gone to cities as far away as Florida, Texas and South Carolina.

Snyder agrees with Valeriano’s assessment that prices will come down as manufacturing orders increase.

“We’re selling them to the cities at $7 per square foot,” he points out. “It could come down 60 percent.”

In addition, the California Waste Management Board pays out subsidies to cities that come up with innovative means of getting rid of waste problems. Used tires certainly fit that description. It would be up to individual cities to apply for those funds.

“One passenger tire-equivalent is 20 pounds of crumb rubber,” Snyder says. Thus, one paver requires slightly more than one recycled tire to manufacture.

The pavers are still in the R & D mode of production and testing, and they could change in shape and ingredients by the time mass production is called for.

“In the long term, the rubber is cost-effective,” Valeriano claims. The pavers are easy to stack and transport. The 22-pound paver size was decided on because it can be lifted by workers without strain.

Rubber sidewalks have three other advantages to the city. First, they are recyclable. Second, they require less maintenance. And third, there is less liability.

Santa Monica sends crews out every day to replace sidewalks and put little asphalt ramps on heaved sidewalks so pedestrians do not trip over them. That is a lot of maintenance needed just for safety and liability reduction. Rubber sidewalks, even when they bend out of shape, don’t have abrupt edges to trip over.

“If someone does trip,” he notes, “falling on rubber is better than falling on concrete.”

The rubber segments will withstand 2,000 pounds per square inch of pressure. In addition, the rubber sidewalks provide a great surface for walking and jogging. Santa Monica has 235 miles of sidewalks, Valeriano relates, and replacing even a small percentage of that concrete with rubber would be good for citizens’ joints.

In addition, the 30-by-12 segments can be ordered in any color. Santa Monica orders some in red. It orders green ones to replace sidewalks that abut turf areas. Other cities have been ordering gray ones to match existing concrete.

Part of the popularity has come from publicity about the rubber sidewalks. Part of it comes from Smith’s dedication to the technique.

“I call myself a rubber sidewalk advocate,” she says, pointing out that public works people have been enthusiastic about utilizing the idea. “What I’m saying is that if there is an alternative (to concrete), we should explore it.”

The most attractive part of the whole thing, obviously, is that if the idea keeps trees across the world from being cut down, it is doing a great public service.

“We need as many trees on our land as we can get,” Smith says.

**Don Dale is a freelance writer in Hollywood, Ca.**
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Making a profit can be tough under any conditions. If you run a family tree care business, though, you face some special challenges. Just how do you cut through the gunk of parental control, sibling rivalry and non-family staff resentment that too often gums up the wheels of commerce? The answer, to a large extent, lies in good communication.

"The key to family business success is what I call LTP: Listen, talk and plan," explains Dr. Jerry I. Kleirnan, cofounder of Optimal Resolutions, a Manhasset, N.Y.-based firm that helps family businesses resolve relationship issues. "Listen to what family members' needs are, talk about alternative solutions to fulfill those needs, and plan initiatives that bring the solutions about." You'll find that good communication will often reveal some pretty complex personal needs on the part of family members, who typically carry domestic tensions into the workplace.

"Things will always be a little blurry where the spheres of family and business come together," says Kleiman. "Relationship issues and personal needs, if not attended to at home, play themselves out in the business."

Is that bad? Yes, says Kleiman. He offers two examples of how things go wrong: An individual who does not feel accepted by other family members at home will attempt to find such acceptance at work. And someone who does not feel independent in the domestic setting may seek a greater degree of autonomy in business. In both cases, individuals will be hampered in their work performance by inappropriate personal agendas. Failing to recognize this — and to take steps to address the problem — can threaten your bottom line. Says Kleiman: "You do not want your business decisions determined by emotional needs."

Changing economy heightens danger
The danger of unresolved family business issues has increased because of the changing economy.
current economic slowdown. The greater strain on business resources, and higher stress levels, may bring to the surface many problems that would otherwise remain hidden. “When you’re in a boom time, and the economy is robustly growing, family business problems are often masked,” explains attorney Melanie Rovner Cohen, chairman of Turnaround Management Association, a Chicago-based umbrella organization of 4,500 consulting firms in the United States and Canada.

“When you are in a time of contraction, the problems are fully exposed, and that often makes the difference between success and failure.” OK: So communication is vital. But just what should family businesses talk about?

Our experts suggest you get together and brainstorm these questions:

1. “Do we have an entitlement mentality?”

Are family members “entitled” to better jobs, perks and salaries than the non-family staff? If so, you can bet that everyone in the company knows about it, and it’s affecting morale. Moreover, entitled individuals can drain the business of critical resources needed for a profitable organization. Entitlements are often easily visible to both the non-family staff and to outsiders, says Cohen. “A dead giveaway is when you visit a business and you see a lot of parking spaces with signs that say ‘Reserved for . . .’ and the same last name on each one.”

It’s easy to fall into the trap of feeding more mouths than the business can support. “There seems to be a common idea in family businesses that all brothers, sisters, nephews and cousins are entitled to jobs and salaries without regard to the amount of work they provide in exchange,” says Cohen. “It’s a matter of productivity. If everyone contributes, you can have as many family members as you like working at the business. But their productivity must match their salaries.”

How can you avoid this problem? Kleiman suggests developing solid rules for entry and promotion. “Careful planning prior to positioning family members in jobs prevents problems later on,” he says. “Establish clear, written entry criteria, and detailed job descriptions.”

Here are questions to address:

♦ Will positions be offered to all branches of the family tree, including distant cousins? If so, at what point on the branch is a person no longer considered “family,” from the standpoint of employment?
♦ What are the entry criteria in terms of education?
♦ Must a family member put in a certain number of years at other employers prior to joining the business?
♦ Will the entry and promotion hurdles be higher for family members than for outsiders? (By the way, the last two policies are especially recommended by many counselors as effective techniques for alleviating the resentment of non-family staff about real or imagined nepotism.)

Finally, everyone must agree that no one is “entitled” to a salary. One way to make this palatable is to spell out the difference between dividends paid to owners and salaries paid to staff members. “It’s important to recognize the difference between ownership and compensation,” stresses Kleiman. “You get paid a dividend for being an owner; a salary for doing a job.”

Two family members may be equal owners and get the same dividends, but their salaries should be different if they perform different duties. Setting up unfair compensation schemes will damage the morale of non-family staff members. Bonus tip: Mission statements are all the rage in the business world, and they can be handy vehicles for outlining the borders of a family business.

“A mission statement is a perfect vehicle to get a family to communicate about critical business and family issues,” says Kleiman. “It helps clarify expectations, opens up a dialog, and reaffirms the family’s commitment to the business.”

2. “Do we express resentments about favoritism?”

Do some family members harbor resentments for real or perceived favoritism toward one sibling or another? Again, this is a damaging condition that can be alleviated through open communication. Siblings and other relatives often resent the use of business assets to assist a family member in need of money.

“One of the best things about a family
business is its ability to help out the younger people financially. But you have to be careful not to destroy the goose that lays the golden eggs. Encourage people to express any feelings of resentment. And by all means set up an arrangement whereby the favored member will pay back the business down the road, either by a direct return of funds or by a diminishing level of that individual’s claim on the estate.

“Always talk about how a loan will be paid back, and make sure everyone is aware of the plan,” notes Kleiman. On the business side of things, you should try to avoid charges of favoritism in promotion. Individuals should be advanced for performance, not for emotional reasons.

Provide training opportunities for all of the people who may represent the next generation of business leadership. Allow each sibling equal opportunity to operate distinct parts of the business or set up a division. See how each interacts and gets along with the staff, the board of directors and their peers in planning sessions.

“All of this data needs to be used to make hard decisions about who will be promoted into leadership positions,” suggests Kleiman.

3. “Are we all in agreement about a written succession plan?”

Failure to address succession planning is especially dangerous for a family business, where an “assumed heir” may not be the right person for the job.

“Managing a business is more complicated today than ever before,” warns Warren Bagatelle, managing director of Loeb Partners, a New York investment banking firm. “Life itself has become more complicated.”

Whoever succeeds the current management must be trained in psychology, expert management of people, good decision-making techniques, and the ability to reason to a conclusion. Alas, many family businesses put off the process of succession planning until it’s too late.

“Succession needs to be planned well in advance,” cautions Cohen. “If you wait too long, the focus shifts from business requirements to family dynamics and disputes. The question is no longer ‘What does the business need?’ but rather ‘What do I need?’ ” Long-simmering hostilities can rise to the surface and scuttle efforts to keep the business going for the long term. In contrast an early start allows more time to get everyone singing from the same song sheet.

Even so, the most businesslike efforts to plan for succession must also consider personal needs and desires – especially that of the retiring founder. “Passing the baton is a two-way movement,” says Kleiman. “It’s not just a matter of what the founder is retiring from, but what is he or she retiring to?” It’s an area that requires communication with one’s spouse and family.

4. “Are we hiring quality non-family employees who participate in decision making?”

Getting your own way all the time because you are in a position of power can be comfortable – sometimes too comfortable. “We often find that family businesses hire people who ‘yes’ them to death,” says Bagatelle. “As the founders age, the business declines because the remaining people are not capable of making decisions – they have been essentially taking...
orders all of their professional lives.”

Joel Getzler, president of Getzler & Co., a New York firm that helps ailing companies, echoes that sentiment. He often finds himself turning around businesses that have fallen into the “family is best” rut.

“A lot of people in family businesses have a home-grown way of thinking,” says Getzler. “They don’t take outside advice. If you are not in the family, you are not taken seriously. Non-family members are not encouraged to speak up – the family needs to get the accolades.”

How about your own organization: Does it encourage the non-family staff to participate in decision-making? Maybe you need a disinterested assessment of this issue, which strikes at the heart of good management.

A third party professional can be helpful in identifying business issues that need to be dealt with. Those issues include not only the need to encourage non-family members to become involved in decision making, but also other areas that the family has been deliberately overlooking to protect their own interests. While one may be tempted to engage a trusted family adviser to make these assessments, Cohen cautions otherwise.

“Many times the family lawyer or accountant doesn’t want to get involved, because to do so would involve taking one person’s side over another’s,” says Cohen. “And that can scuttle a lucrative business arrangement.”

Turn instead to professional advisers, whom you can find by talking with other family businesses, consulting with your professional organizations, or perusing the rosters of organizations such as the Turnaround Management Association.

5. “Do we need a professional manager?”

Getting input from third party advisors is great, but sometimes it’s not enough. Every family business must ask if the second generation has what it takes to manage the business as the founding generation gets older and approaches retirement. If the children of the owners need more time, education and training to take the reins of power, it’s time to consider the services of a professional manager who is not part of the family but can step in for a number of years. In some family businesses, this individual may stay for over a decade, preparing the second generation to take over the reins of control. The professional manager is motivated to stay the course through grants of voting or non-voting stock.

“Consider leaving the professional executive in place until the son or daughter grows into the job,” recommends Bagatelle. “We have found that one of the most common problems is the founder automatically assumes that his son or daughter can successfully run the business. That’s frequently not the case. Some people are not capable of making decisions, or they make the wrong decisions.”

Good advice. But too often, blood is thicker than black ink. That can obscure a clear assessment of relative competencies. One way to obtain a clear picture is to measure the second generation’s performance against that of other people in the business. This is tough to do, and once again the services of a disinterested third party may be just the ticket to putting the business on the highway to success.

6. “Are we getting the reports we need?”

Family members must all be educated in financial reporting, and must insist on
receiving and understanding documents that show where the business is going. “The business needs to set up a system of timely reporting,” says Gary Brooks, chairman of Allomet Partners, a New York risk assessment and crisis intervention organization. “And reports must be accompanied by interpretive explanation so people understand the ramifications of what they see.”

An important part of the financial report package is the cash flow analysis. “My experience is that most people do not understand cash flow,” notes Brooks. “And they don’t manage by budgeting cash as well as other budgets.”

A misunderstanding of the principles of cash flow can cause problems. For example, family members often mistake a regular paycheck for evidence that no changes need be made in the business. “Cash is king in a family business,” says Getzler. “When everyone is assured a regular paycheck for evidence that no changes need be made in the business. ‘Cash is king in a family business,”’ says Getzler. “When everyone is assured a paycheck, no one cares about improving the business or taking risks, and that’s a prime reason why family businesses are often less aggressive than their non-family counterparts.” Unfortunately, when the need for long-term investments and operational initiatives is ignored, revenues eventually soften. The business does not make the money it did at one time, and then the bickering starts.

7. “Do we acknowledge the stresses of family business?”

Sometimes a big part of the solution is just acknowledging the problem. Family members need to communicate their stress to each other rather than bottle up their feelings. The usual business strains are magnified because emotions and misunderstandings get involved. When you have second and third generations in a business, they often have different points of view that can lead to infighting. Arguments begin over who caused a problem, or whether it was caused by a person or a business factor. There’s more finger pointing than in other businesses.

This problem is further magnified because family members don’t have the usual domestic environment to let off steam. In regular businesses, people go home and moan to their spouses. In a family business, they go home and face the same people they deal with at work. The family becomes all consuming.

It all boils down to one theme: Sensitive communication can alleviate the resentments that otherwise wear away at profitability. Rather than suppressing grudges and ill will, family business members must bring them out into the open. It takes effort — and courage. “Everything we suggest is tougher to do than to say,” admits Kleiman. But the results can be impressive. An emotionally healthy family can lead to a strong business.

“Don’t take the family or the business for granted,” concludes Kleiman. “Be proactive in establishing good communications, both at home and in the workplace.”

Get More Information


The Family Firm Institute offers a variety of informational resources, networking opportunities, and contacts with business advisers on the web at www.ffi.org or contact The Family Firm Institute, 221 N. Beacon St., Boston, MA 02135. Phone: (617) 789-4200. E-mail: info@ffi.org. Turnaround Management Association, 541 North Fairbanks, Suite 1880, Chicago, IL 60611. E-mail: info@turnaround.org. Phone: (312) 822-9700. Web site: www.turnaround.org.
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Bangalore, the garden city of India, is suffering from the onslaught of development like never before. Growth in the past decade has started taking its toll on this “pensioners’ paradise.” The trees and gardens are paying the price for unchecked and unplanned growth. Encroachment on lakeshores and a sloppy administration are ruining the green legacy of this one-of-a-kind city. A rising disposable income has led to the culling of trees to make way for landscapes and new buildings, but trees are vital for generation of oxygen in the rarefied atmosphere of this el-

Public sector undertakings such as Bharat Electronics maintain an efficient horticulture department. Come August, the flower show in the Lalbagh botanical gardens will display the best of manicured gardens in Bangalore and the state.

Rather than seeking permission to remove trees, builders “prune” them until there is no foliage left.

In the heart of Bangalore’s central business district, The Sankey Tank Forest survives amid the din.
evated city – especially since the city is also highly polluted.

In former times, city administrators kept in mind the city’s subtropical climate and topography when designing wider roads or additional sidewalks, and trees were so well planned that they never clashed with civic amenities, be it storm drains or sewage lines. Broad sidewalks could easily accommodate lofty trees such as *Peltophorum*, *Samania saman*, *Michelia champaka*, *Syzygium cumini*, *Pongamia pinata*, *Cassia fistula*, *Spathodina companulata*, *Tamarindus indica*, *Mangifera indica* and *Aegle marmelos*, which are ideal for the subtropical climate of the city. No wonder one can still see birds as rare as collared scops owl in Bangalore!

At the dawn of the 20th century, there were at least four huge green spaces in the city: Lalbagh Botanical Gardens, which today spreads over about 235 acres, or 96 hectares; Cubbon Park, covering about 300 acres, or 120 hectares; the campus of the Indian Institute of Science, spanning approximately 400 acres, or 160 hectares; and Bangalore University, which covers about 1,100 acres, or 450 hectares. After India achieved independence from Britain in 1947, the few visionary administrators who were left in the Indian Administration Service managed to develop expansive boulevards and protect parks. In addition to the 600 small, medium and large parks – and the areas mentioned above – the city is also the proud host of 81 lakes.
All of this in a city with an area of 450 square kilometers, or 280 square miles.

**Creation of the “Silicon Valley of Orient”**

Bangalore has been the scientific capital of India since before its independence from Britain. The “Silicon Valley of the Orient,” as it has come to be called, became such a hub, to a large extent, because of its climate and its reputation as the “Garden City,” which attracted investors and entrepreneurs alike. Situated in a trough created by a ridgeline comprising four hills in four different directions, the city has an enviable elevation of 900 meters, or 3,000 feet, above sea level.

The Indian Institute of Science was established in Bangalore under the patronage of the Maharajas of Mysore. Thereafter came Hindustan Aeronautics Ltd., National Aeronautics Ltd., Bharath Heavy Electricals, Bharat Electronics, Bharat Earth Movers Ltd., and many other companies. The Centre for Development of Advanced Computing, Wipro Infotech, Infosys, Satyam Computers, Sun Microsystems and Micronics were the foundations of the oriental Silicon Valley. The city had the electronic infrastructure to usher in the establishment of computer-chip-based industries. But was the city’s other infrastructure adequate? Excessive demands on the transportation infrastructure led to horrendous traffic snarls. Redundant overpasses consumed the roads and pavement. Public transport could not keep pace with growth. For the 7.2 million people estimated to be living there in the year 2001, the only affordable public transport provided by the state comprises just 4,000 buses. As a result, the city is choked with 1.3 million private vehicles.

As this valley fell under rapid expansion, the real estate boom spelled doom for the trees. Development soared in the early ’90s, and bungalows with white-washed patios and lofty balconies – touched by the fragrance of at least 40 species of trees in...
each compound – made way for glass-paned multi-storied buildings that made their presence felt with foreign exchange revenue.

The Peoples’ Court – for trees

The Garden City lays its claim to fame on its gardens, boulevards, lakes and trees, which, as of 1991 were estimated to total 10 million trees compared to 5 million people. Now, the 2001 census shows a population of 7.2 million coupled with a sustained loss of tree cover. Trees play a critical role in the city, providing much-needed oxygen in the rarified atmosphere. Each adult tree is estimated to generate about 15 to 20 liters of oxygen per day, depending upon the density of the foliage.

In accordance with the provisions of the Karnataka Tree Preservation Act of 1976, a Peoples’ Court was set up in 1994 by the Urban Green Belt Division of the Karnataka Forest Department in Bangalore. Designed for applicants seeking permission to fell trees, cases are heard in the presence of honorary tree wardens. The rangers and foresters are required to give written testimony to tree unit officials about the need, genuine or otherwise, to fell trees. Tree officers, in consultation with the honorary tree wardens (who are also obliged to submit confidential reports to the officers of the need or lack of need to fell the tree) decide whether a tree merits felling with permission.

Applicants who secure permission to fell a tree are required to make post a savings certificate with the forest department to assure that double the number of trees will be planted. If the trees are not planted by the applicant, the money will be claimed by the department. From April 1999 through July 2001, applicants received permission to fell 16,940 trees, which means 33,880 trees should have been planted to replace them.

But the system has a huge loophole. The forest conservation staff does not verify whether the trees have been planted – or if they survived. The depositor is allowed to reclaim his certificate after two years without any confirmation that two new trees are growing.

The new-economy companies sprouting up in Bangalore are housed in multi-storied complexes built on huge parcels where private bungalows once presided over a majestic tree canopy. Builders seek to fell the trees within the proposed building area. The municipal administration, which is responsible for granting permission for construction of any new building in the city, is obliged...
to refer any felling of trees within the construction area to the forest department. In practice, once the plan for the proposed construction has been officially stamped, the forest department is "officially morally obliged" to grant permission to fell trees. These new buildings eat up so much of the property that hardly any green space is left for replanting trees.

Road widening has also taken a cruel toll on Bangalore. Since 1995, city development has manifested in an intensive construction of overpasses and a proposed elevated rail transportation system. The national Games, an important sporting event in India, were held in Bangalore in 1995. The construction of the Games Village, along with the road construction, decimated approximately 22,000 trees. The National Corridor Project - North South and East West Highways, which proposes to connect Kashmir with Kanya Kumari (or the southernmost point - Cape Comorin, as it was called during the British Raj) will also go through Bangalore's Green Belt Division. Thousands of trees will be felled for this project.

Undoubtedly, good infrastructure will help ease congestion in and around the city, yet city planners are not taking the region's green health into consideration. There is absolutely no space envisaged in construction plans for replanting trees. Tree wardens have objected to road construction plans, noting that no room is left for sidewalks or trees. But their objections have been overruled, though the tree wardens have the support of the forest department.

In one case, the tree wardens organized a signature campaign that managed to save a heritage road laid out about 100 years ago. The Vani Vilas Road is blessed with 20-foot sidewalks and houses 184 trees over a stretch of 2 kilometers. During peak hours in 1999, an estimated 1,284 vehicles whizzed past every day. Officials reasoned that parking, which is always a nightmare in the city, would be improved by widening the road. Tree wardens argued passionately - and successfully - against the plan. That victory, to save the Vani Vilas Road, is one of few.

While wider roads will not prove a panacea to traffic congestion chronic to Bangalore, unfortunately for the
tree the city really cannot grow outward because of the narrow confines of the valley. Instead, environmentalists are campaigning to grow trees in cemeteries, hospitals and alongside lakes.

The unprecedented growth has become a logistical nightmare for the city administration. Says the divisional forest officer for the Bangalore Urban Green Belt Vijay Kumar Gogi, “We have to evolve a strategy for selection of trees for different localities. For the central business district, no trees with large crowns like Samania saman or Peltoporum can be planted. Instead, Gravelia robusta, Polyalthia longifolia, Bamboosa vulgaris, Casuarina equisitifolia with small crowns and tall trunks are best suited ... For lake shores, we could afford Ficus bengalensis, Sizigium cumini, Emblica officinalis, Michelia champaka, Cassia alata, Cassia fistula, Pongamia pinnata, even Samania saman, Peltoporum, Terminalia bclerica, Ficus religiosa, Terminalia tomentosa and the much abused but sleekly delightful Cochlospermum gossypium, Bombax malabaricum, and Eriodendron anfractuosoam too. The last three are very unpopular in residential areas given their allergy causing characteristics. For residential areas, Azadirachta indica, Pongamia pinnata and Michaelia champaka are best suited because their roots are not buttressed, and thick foliage give perennial shade and are also ecologically very friendly to urban wildlife like birds, insects and monkeys.”

This kind of planning has never been more necessary. But planning must be coupled with follow through. The urban forest division claims to have planted 23,713 saplings between April 1, 1999 and April 1, 2001 over an area of 1,910 acres. How many have survived is anybody’s guess. During the same period, 16,940 trees were felled with permission, and 64 cases of illegal felling have been booked. Figures for the current year are still not finalized because the planting season has just begun.

The numbers are contradicted by visual assessment of the greenscape in the city. The fact remains that growth is taking its toll on tree survival.

Mulini Shankar is the Tree Warden for the Karnataka Forest Department.
Citrus Longhorned Beetle Found in U.S.

Entomologists from the state Department of Agriculture in Washington are searching for evidence of the highly destructive citrus longhorned beetle, and they’re asking for help. This is a shiny black beetle, capable of flight, measuring 1 to 1½ inches long, with irregular white patches on its back and long distinguishable antennae that are banded with black and white.

The search for this beetle began immediately after the owner of a nursery in Tukwila, Wash., brought what appeared to be an Asian longhorned beetle to the U.S. Department of Agriculture’s Seattle plant inspection office. Asian longhorned beetles have caused thousands of trees to be destroyed in Chicago and New York.

The entomologists caught two more beetles in a group of maple trees at the nursery recently. They also found eight exit holes on the trees, indicating that up to five beetles are on the loose. Because many beetles resemble the Asian longhorned beetle, the beetles caught in Tukwila were sent to the Smithsonian for positive identification. They were positively identified as citrus longhorned beetles.

It is the first time the citrus longhorned beetle has been found in Washington state.

The citrus longhorned beetle is closely related to the Asian longhorned beetle. It is just as destructive. Forests and landscapes could be severely damaged if the beetle is allowed to establish itself in this country.

The maple trees were imported from Korea. The entire shipment of 369 trees has been destroyed. The trees were in the eighth month of a two-year long disease quarantine to ensure they were healthy before they could be sold to retail outlets or the public.

State and federal entomologists will be inspecting trees in the immediate area for egg sites or damage to leaves and bark that would indicate adult beetles have been feeding. The state and federal departments of agriculture are also discussing methods that can be used to prevent the beetles from becoming established in Washington.

“Fortunately, we’re ready,” said Brad White, managing entomologist at the state Department of Agriculture. “We’ve been gearing up for this fight for more than two years. One entomologist got firsthand knowledge of Asian longhorned beetle control measures in Chicago.”

Citrus longhorned beetles are considered serious orchard pests in Asia. They represent an even larger threat to trees in this country where they have no natural enemies.

Females may lay as many as 200 eggs individually, not in egg masses, beneath the bark on the lower portion of the trunk or exposed roots of trees. The eggs hatch into larvae, large worm-like grubs that feed on wood within the tree. Larvae grow more than 2 inches long and ½-inch wide and then emerge as adult beetles.

Despite its name, the citrus longhorned beetle attacks a wide range of living hardwood and softwoods, and conifers. They are fond of maple, alder and poplar trees. They kill trees, gradually, by boring large holes throughout the heartwood of the tree during the insect’s larval stage.

Since the New York and Chicago Asian longhorned beetle infestations were linked to wooden pallets and other wood packaging materials, USDA requires those materials to be treated before entering the country. Several species of longhorned beetles have been found in nursery stock from Asia.

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TREE CARE INDUSTRY - OCTOBER 2001 77
One tree, 11 deaths

A chilling reminder of just how deadly a falling tree can come is from France, where 11 people were killed and 85 injured when a single tree fell during a storm.

According to several news accounts, all of the victims were attending a concert in the town of Alsace when a thunderstorm brought winds that reached more than 90 mph. The wind uprooted a single plane tree that crashed onto a piece of canvas that had been stretched into a makeshift tent where the crowd had gathered to find shelter from the sudden storm. One official noted that if the concert-goers had remained in the bleachers during the storm “none of them would have been touched.”

Rescuers spent hours cutting through the tree’s leafy branches to reach the victims. More than 50 people were hospitalized, most with head and neck injuries, according to authorities.

French officials convened a judicial inquiry to examine whether anyone was responsible for the disaster. That inquiry heats chasing them away with a shotgun.

But now, the arborists have to contend with property owners who are filling their favorite citrus trees with nails, screws and other metal objects as a way of slowing down the canker eradication crews. According to the Miami Herald, e-mail lists and anti-Department of Agriculture Web sites first began suggesting the sabotage.

“I’m going to shoot my trees full of nails,” Liz Kates, a resident of Coconut Creek who also happens to be an attorney, told the newspaper. “So if they want to take [my trees], it’s going to take a lot of time.”

The property owners say their goal is not to injure arborists, so they say they will post signs warning that the trees are infested with hardware. As one resident put it: “It beats chasing them away with a shotgun and ending up in jail.”

The battle against the canker has been waged for more than a year. Homeowners are now given $100 for each tree cut as the state scrambles to protect its billion-dollar citrus industry against the disease. State agriculture officials have ordered all trees, healthy or not, with 1,900 feet of an infected species to be removed. After a respite during the summer, cutting was set to resume in the fall in most southern Florida counties.

Sour taste

You might think the tree-trimming crews employed by the state of Florida to contain the citrus canker had enough to deal with when they go to work: Some have been shot at, others attacked by dogs at the direction of angry property owners. But now, the arborists have to contend with property owners who are filling their favorite citrus trees with nails, screws and other metal objects as a way of slowing down the canker eradication crews. According to the Miami Herald, e-mail lists and anti-Department of Agriculture Web sites first began suggesting the sabotage.

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Trees to blame?

Researchers in Kentucky believe they have pinpointed the cause of a mysterious and widespread illness that killed hundreds of thoroughbred and quarterhorse foals during the spring. The culprit, they say, is cherry trees.

Specifically, scientists say naturally occurring cyanide in the cherry leaves appears to be a likely cause of the deaths, according to an Associated Press account. But since the carefully bred and closely watched – and valuable – foals don’t usually eat cherry leaves, the question of how the horses were exposed to the toxins remains. Most theories center on the Eastern tent caterpillar, which is suspected of eating the leaves, digesting the poison – they are immune to its toxic effects – and transmitting the poisons onto grazing areas.

Kentucky endured a worse-than-normal infestation of the caterpillars this past spring and a survey of more than 100 horse farms found that most had cherry trees growing near grazing areas.

A fast-growing tree crop

Meanwhile, word from another Southern state is that the world’s fastest-growing tree is taking the Western hemisphere by storm.

Paulownia trees, native to Asia but now growing wild in some parts of the United States, are being touted as an alternative to tobacco farmers looking to replace that crop, according to news accounts.

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<td>61. Sherrill Arborist Equipment &amp; Supply, Inc</td>
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TREE CARE INDUSTRY - OCTOBER 2001
You’re a Tree Man Now
By Jim Walsh

In my first few days in the tree business, after a recent career upgrade from working at a lawn service, I woke up to an early morning rain, uncertain if we would work that day. While still new to the crew, I knew I had to show up for work or face certain scorn from the filterless-Camel-smoking tough guy. If I wasn’t there that rainy morning, these guys would be all over me the next day. I knew full well what they would say. As they picked the tobacco off the tips off their tongues with their fingers, they would admonish me with comments such as, “You’re no damn lawn boy any more. You’re a tree man now. You have to be here every morning.”

 Those were the days.
To begin the day we loaded the tools and piled into the cab via the driver’s door of the old truck. A large misjudged limb had wiped out the passenger side of the truck’s cab earlier in the week. The offending limb had damaged the fender and dented the door, making it inoperable. The side view mirror was slightly damaged. The lower screws that held the bracket to the door were sheared off, so, supported only by the upper bracket, it flapped in the wind as we drove. To back up or change lanes the driver had to pull a climbing rope that was attached to the lower end of the loose mirror bracket and fed through the now permanently open window. There were a few blind spots.

Once we arrived at the residential job site the crew began its work unencumbered by the many modern workplace niceties such as hardhats, safety glasses, earplugs, traffic cones or “Men Working in Trees” signs. We were however, armed with tree spikes for pruning and work orders for topping.

Jimmie, the trimmer, spiked his way up, climbing freestyle, into the huge, damp, silver maple, the only truly innocent character in this story, which was slated for topping.

Bill – only senior to me on the crew by a few weeks, whose distinctive characteristic was an unusual combination of steadfast honesty, a calm disposition, and a hint of naivete – and I serviced the saws and performed some minor maintenance on the truck in the street out front. Leaving Bill to complete the work on the truck, carrying the saws, I headed toward the back yard to start dragging the brush out to the street.

Just as I rounded the rear corner and entered the back yard, a limb plunged from above with a whoosh and harpooned itself in to the soft ground a mere 4 feet in front of me. The newly planted tree shook violently from the force of impact, its leafy ends brushing me in the face. The slash-cut limb-turned-planted-tree was 6 inches in diameter and now stood at least 15 fifteen tall. Larry, the foreman of the crew who was working on the ground cutting up limbs, saw the near skewering of his newest employee, grinned, and kept on working.

Not knowing to look before I rounded the corner ... not knowing I should have a hard hat on ... not knowing the trimmer should have yelled, “headache” ... not knowing the crew should hold a short meeting to go over the job prior to starting ... I did the smart thing. I did an about face and walked three-quarters of the way around the house to access the back yard away from the tree. I poked my head cautiously around the corner of the house, saw the sky was clear of falling limbs, grabbed an armload of branches from the ground and quickly exited.

Bill, who had completed the truck maintenance, soon joined me. After dragging brush for more than an hour, we had cleared most of the area beneath the maple, which intermittently rained limbs.

With Jimmie still in the tree, Bill and Larry and I stopped to catch our breath. Bill pointed to a 15-foot silver maple that had grown beneath the large maple Jimmie was topping and yelled to Larry above the screaming chain saw noise, “What are we doing with this?”

Larry gave me a conspiratorial look and yelled back to Bill. “It’s a trim. Get a pole pruner and make it look good.”

Bill retrieved the pole pruner from the truck and began clipping a few drooping limbs from the tree. After a few minutes Bill called to Larry, “Hey, how does this look?”

By this time Jimmie had finished cutting above, and worked his way to the ground. Unaware of the action below, he asked, “You gonna make a career out of that tiny maple Bill?”

Larry stood back from the small “tree,” he and Bill examining it for errant limbs needing attention. Under Larry’s direction, Bill made several additional cuts. Larry walked around the “tree” and suddenly reached out and pulled the rootless branch from the ground. He slammed it down a few feet away and said, “I think it would look better over here!”

Everyone howled. I turned away grinning and thought, “Maybe I was actually better over here!”

Do you have a story 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.

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11' Chip Body with Mancab and Toolbox Package
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NT-16-CT
16' Chip Body with Underbody Toolboxes: 2001 International 4700; DT466 Diesel

93 Ford-SD
12' Chip Body with Mancab and Toolbox Package
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93 Ford-AL
55' Working Height Aerial Lift of Conn.
AL-50 1993 Ford F7000; 6.9 Cummins Diesel

GMC-XT6070-FP
60' Working Height H-Ranger XT-55
2001 GMC C7500 Cat 3126 Diesel

92 GMC-SD

INT-XT60-RM

93 Ford-SD

93 Ford-AL

GMC-XT65-SP

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For the first time ever ...

World's Largest
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Milwaukee,
Wisconsin
November 7-9, 2002
Midwest Express Center
THURSDAY, NOV. 1

- #1 - 9:30 am 15 Ways to Motivate Employees ........................................ 1 Hour
- #2 - 3:00 pm Balancing Estimating, Job Costing and Accounting .......... 2 Hours
- #3 - 4:00 pm Putting the Revised A300 Pruning Standard to Work for You ... 1 Hour

FRIDAY, NOV. 2

- #4 - 8:00 am Tree Planting Guidelines & Managing Soils ...................... 1 Hour
- #5 - 8:00 am Safety Philosophies & Experiences with OSHA .................... 1 Hour
- #6 - 9:30 am Tree Failure Risk Assessment for the Climber .................. 1 Hour
- #7 - 9:30 am Careers in Arboriculture ............................................. 1 Hour
- #8 - 4:00 pm Young Tree Training .................................................. 1 Hour
- #9 - 4:00 pm Customer Service: How to Keep Clients for Life ............... 1 Hour

SATURDAY, NOV. 3

- #10 - 8:00 am Pruning to Manage Shade ......................................... 1 Hour
- #11 - 8:00 am Web Power: Branching Out Your Business on the Internet ... 1 Hour
- #12 - 9:30 am Building a Company Safety Program ......................... 1 Hour
- #13 - 9:30 am Marketing: What is it? And How Do I Do It? .................. 1 Hour

TOTAL SEMINAR HOURS
Register online at [www.natlarb.com](http://www.natlarb.com) for the world's largest tree care show. NAA offers a secure transaction online, and confirmation of your registration will be received within minutes.

When you register online, you are automatically entered to win one of the 200 Arborwear shirts (retail value greater than $50), which will be given out at the show. This shirt is made of soft pre-washed 10-ounce canvas for a remarkably comfortable fit. The relaxed room in the sleeves and collar offers unparalleled freedom of movement.

This promotion is applicable only to online registrants and winners will be picked at random. Void where prohibited. All prizes must be picked up before the show ends. NAA will not ship unclaimed shirts. All Arborwear LLC products are unconditionally guaranteed.

Registration

Please photocopy and complete a separate registration for each conference attendee. Register before the Early Bird deadline of Oct. 5 to receive discounts on Trade Show Admission and educational seminars. Registrations received after Oct. 5, 2001 that do not comply with the appropriate fees, will be billed accordingly. Registration is required to obtain your admission badge. Everyone is required to wear a badge issued by the National Arborist Association to enter the exhibit hall and all seminars. Be sure to pre-register and avoid long lines at the registration area.

All TCI EXPO admission badges will be mailed to attendees who register prior to Oct. 5, 2001.

Individuals registering after Oct. 5, 2001, must stop by the pre-registration desk located outside Exhibit Hall E to pick up their admission badge.

Seminars

Check the box beside each seminar you wish to attend. Be careful not to pick two seminars scheduled for the same time. Count the total number of seminar hours indicated next to the seminar titles. Record this number in the space marked TOTAL SEMINAR HOURS.

If you are attending 5 or more seminars ... BUY GOLD!

To purchase the GOLD CARD, which will give you unlimited access to all educational sessions and the Trade Show, check the appropriate box on the registration form and enter the correct amount in the TOTAL COST line.

Seminar Registration Cancellations

All seminar registration cancellations must be received in writing at the National Arborist Association office. Cancellations received on or before Oct. 19, 2001, will receive a full refund less a $25 administrative fee. Fees cannot be refunded after Oct. 19, however you are welcome to send a replacement. No telephone cancellations will be accepted.

Please Note:

Registrations will be processed but not confirmed until paid in full.
Finding a Hotel Room

This year the host hotel for TCI EXPO 2001 is the HYATT REGENCY COLUMBUS, adjoining the Greater Columbus Convention Center at 350 North High Street. The HYATT REGENCY COLUMBUS is offering TCI EXPO 2001 attendees a rate of $117 single/double occupancy. Valet parking is available for overnight hotel guests at a daily rate of $21. This includes in and out privileges on a 24-hour basis. Self-parking is available on a daily basis at a charge of $14 per day. Space is limited; be sure to make your reservation early. This rate will be offered until Oct. 5, 2001. To make your reservation, please call the HYATT REGENCY COLUMBUS direct at 614-463-1234. Be sure to reference the National Arborist Association/TCI EXPO room block.

Alternative accommodations are available at the Crowne Plaza Hotel Columbus Downtown, which is connected to the Greater Columbus Convention Center. The address for the Crowne Plaza is 33 Nationwide Blvd., Columbus, Ohio 43215. The Crowne Plaza will offer TCI EXPO 2001 attendees a rate of $115 single/double occupancy. Valet parking is available for overnight hotel guests at a daily rate of $19. This includes in and out privileges on a 24-hour basis. Reservations must be made by Oct. 5, 2001 in order to guarantee this preferred rate. To reserve your room, please call the hotel direct at 614-461-4100. Be sure to reference the National Arborist Association/TCI EXPO room block.

EXHIBIT HALL HOURS

Thursday
Nov. 1, 2001
9:57 am - 4:00 pm

Friday
Nov. 2, 2001
9:00 am - 4:00 pm

Saturday
Nov. 3, 2001
9:00 am - 3:00 pm
**Getting There . . .**

**Driving**

**From Port Columbus International Airport:**
I-670 West, Exit 4-B to the Greater Columbus Convention Center, 400 North High Street.

To the Hyatt Regency Columbus: Adjoins the Greater Columbus Convention Center and is located on the corner of Nationwide Boulevard and North High Street.

To the Crowne Plaza Hotel Columbus Downtown: Connected to the Greater Columbus Convention Center and is located across the street from the Hyatt Regency Columbus.

**From the Cincinnati area (south):**
Route 71 North to Route 70 East to Fourth Street Exit; North on Fourth Street to Nationwide Boulevard.

To the Hyatt Regency Columbus: Adjoins the Greater Columbus Convention Center and is located on the corner of Nationwide Boulevard and North High Street.

To the Crowne Plaza Hotel Columbus Downtown: Connected to the Greater Columbus Convention Center and is located across the street from the Hyatt Regency Columbus.

**From Indianapolis, Ind. area (west):**
Route 70 East to Fourth Street Exit: North on Fourth Street to Nationwide Boulevard.

To the Hyatt Regency Columbus: Adjoins the Greater Columbus Convention Center and is located on the corner of Nationwide Boulevard and 350 North High Street.

To the Crowne Plaza Hotel Columbus Downtown: Connected to the Greater Columbus Convention Center and is located across the street from the Hyatt Regency Columbus.

**From Wheeling, W. Va. area (east):**
Route 70 West to Fourth Street Exit; North on Fourth Street to Nationwide Boulevard.

To the Hyatt Regency Columbus: Adjoins the Greater Columbus Convention Center and is located on the corner of Nationwide Boulevard and North High Street.

To the Crowne Plaza Hotel Columbus Downtown: Connected to the Greater Columbus Convention Center and is located across the street from the Hyatt Regency Columbus.

**Flying**

**US Airways**
US Airways has been selected as the primary air carrier. Special discounts have been arranged on your air transportation. To take advantage of this special offer, please call US Airways' Group and Meeting Reservation Office at 1-877-874-7687 and refer to Gold File No. 678671807. Plan ahead and receive an additional 5% discount by ticketing 60 days or more prior to departure.

**Southwest Airlines**
Southwest Airlines has been selected as the alternate air carrier. Southwest Airlines is offering a 10% discount on most of its already low fares for air travel. You or your travel agent may call Southwest Airlines Group and Meetings reservations at 1-800-433-5368 and reference ID Code R3145. Reservation sales agents are available 8:00 am. - 5:00 p.m. Monday – Friday, or 9:30 a.m. - 3:30 p.m. Saturday and Sunday. You must make your reservations five or more days prior to travel to take advantage of this offer.

**Ground Transportation**
Ground Transportation is available on the baggage claim level.

COTA, the public transportation authority, has service to all downtown hotels at a cost of $5 each way, exact change only, leaving every 20 minutes.

Arch Express and Urban Express Transportation offer shuttle service to the downtown hotels for $8.50 per person each way, leaving every 20 minutes.

Taxis are available for approximately $18 each way.

**In-City Transportation**

**Southwest Airlines**
Southwest Airlines has been selected as the alternate air carrier. Southwest Airlines is offering a 10% discount on most of its already low fares for air travel. You or your travel agent may call Southwest Airlines Group and Meetings reservations at 1-800-433-5368 and reference ID Code R3145. Reservation sales agents are available 8:00 am. - 5:00 p.m. Monday – Friday, or 9:30 a.m. - 3:30 p.m. Saturday and Sunday. You must make your reservations five or more days prior to travel to take advantage of this offer.

**Ground Transportation**
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Arch Express and Urban Express Transportation offer shuttle service to the downtown hotels for $8.50 per person each way, leaving every 20 minutes.

Taxis are available for approximately $18 each way.
Saturday, November 3, 2001

7:30 am  REGISTRATION OPENS

8:00 - 9:00 am  PRUNING TO MANAGE SHADE – Scott Robinson
D) Say your golf course client needs more sun on a certain part of the fairway, or a residential client wants sunlight in his breakfast nook from 8 to 10, but neither is willing to part with any trees. Robinson has developed an innovative system to model the quality and quantity of sunlight needed and come up with pruning prescriptions to save trees and satisfy clients.

8:00 - 9:00 am  WEB POWER: BRANCHING OUT YOUR BUSINESS ON THE INTERNET – Brian Urbanski
This exciting fast-paced Internet session will show newcomers and experienced users alike the Internet strategies to propel your business into the 21st century, including how to get started, site design tips and tricks, attracting visitors to your site, e-mail as a business tool, choosing vendors, set up costs and more!

9:00 am  TRADE SHOW OPENS
This is your last day to see and learn everything you need to keep your business moving. Be sure to take advantage of all TCI EXPO 2001 has to offer!

9:30 - 10:30 am  BUILDING A COMPANY SAFETY PROGRAM – Joseph Tommasi & Peter Gerstenberger
If your company is like most tree operations, you may hold pieces of the safety puzzle, but you don't know how they all fit together in a cohesive program. Tommasi and Gerstenberger are going to share the outline and content of a Model Company Safety Program that the NAA Safety Committee has been painstakingly working on for the past year and a half.

9:30 - 10:30 am  MARKETING: WHAT IS IT? AND HOW DO I DO IT? – Don Willig
In this seminar Don will help you to understand the true definition of marketing, its function in a company, and the variables (predictable and unpredictable) you need to focus on to develop an effective marketing plan for your company.

11:00 am  ARBORBUCKS DRAWING - Tree Demonstration Area
It's not too late too enter the drawing. You could be the winner!

12:30 pm  ISA Certification Exam Check-in

1:00 pm  ARBORBUCKS DRAWING - Tree Demonstration Area
This is your last chance to win! See you in the demo area.

1:00 - 5:00 pm  ISA Certification Exam - To sit for the exam, you must call ISA to pre-register at 1-217-355-9411.
Application and registration fee must be received at ISA 12 working days prior to exam date.

3:00 pm  TCI EXPO 2001 TRADE SHOW closes!
World's Largest
tree care expo

Columbus
Ohio

November 1-3, 2001
Greater Columbus Convention Center

Presented by the National Arborist Association
Welcome to Columbus and the 12th Annual Tree Care Industry Expo presented by the National Arborist Association, Inc.

Welcome to the 12th annual tree care expo

The sky is the limit with what you'll learn from this year's exciting program. Over 150 exhibitors under one roof, bringing you cutting-edge tree care equipment, technology, supplies and services.

Why should you attend?

- SMART MANAGER and EXPERT PRACTITIONER seminar series allow you to customize your educational experience to fit your needs - with several sessions offering ISA continuing education units.
- SAVE, SAVE, SAVE ...
- Take advantage of the educational seminars. If you are attending 5 or more seminars ...
- BUY GOLD!

Registration Procedure

Please photocopy and complete a separate registration for each conference attendee. Registration is REQUIRED to obtain your admission badge.

Register before the Early Bird deadline of Oct. 5 to receive discounts on trade show admission and educational seminars.

All TCI EXPO admission badges will be mailed to attendees who register prior to Oct. 5, 2001. Individuals registering after Oct. 5 must stop by the pre-registration desk located outside of Hall E to pick up their admission badge.

Please Note:
We encourage you to bring your employees to TCI EXPO 2001. TCI EXPO is a valuable educational experience.
Your TCI EXPO 2001 Exhibitors!

ACRT, Inc.
ADI Pruning Tools by TOL Incorporated
Aerial Equipment, LLC
Aerial Lift, Inc.
Agape Designs
Alliance Equipment Company, Inc.
Altec Industries, Inc.
Alturmamats, Inc.
American Arborist Supplies Inc.
American Express Business Finance
American Standard Company
AmeriQuip/MTI
ArborSystems, LLC
Arbortech
Arborwear, LLC
Asplundh Tree Expert Co.
Auto Manufacturing, Inc.
Bahco Tools Inc.
Bailey's
Bandit Industries, Inc.
Bartlett Manufacturing Company
The F.A. Bartlett Tree Expert Company
BBA Nonwovens/Reemay Inc./Bio Barrier
John Bean Sprayers/Durand-Wayland, Inc.
Ben Meadows Company
Big Foot Industries Incorporated
Bishop Company
Blue Ridge Arborist Supply
John Brown & Sons Inc.
Brownwood Sales
Brush Technology
Buccaneer Rope Co.
Buckingham Manufacturing Co., Inc.
C. A. G. Corporation
Capital Engine Co.
Cargotec Inc.
J.P. Carlton Company
Christmas Decor & Nite Time Decor
Climb Axe, Ltd.
CNA Commercial Insurance
Columbian Specialty Products
Commercial Cutters Direct
Concept Engineering Group, Inc. (CEG)
Corona Clipper
Creative Automation Solutions
Creative Sales, Inc.
Cutter's Choice
Daviey Tree Expert Co.
DICA Marketing Co.
Doggett Corporation
Doxkort Industries, Inc.
DTN Weather Services
DUECO, Inc.
Enginaire
Engine Center
Engine Distributors, Inc.
Excalibur DMM
FAE Forestry Mowers/DCL Sales Inc.
Fano Saw Works
FCI-Racine Hydraulic Tools
Fecon, Inc.
Forestindustry.com
Forestry Equipment of Shelby
Forestry Suppliers, Inc.
Fred Marvin Associates
Future Forestry Products Inc.
G & A Equipment, Inc.
Green Manufacturing, Inc.
GreenIndustryOnline.net
GreenPro Services
Growtech, Inc.
Growth Products, Ltd.
Gyro-Trac, Inc.
The Hartford
Horticultural Alliance, Inc.
Husqvarna
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Implemax Equipment Co., Inc.
Independent Protection Company
Institute For Land & Trees
Jameson
Karl Kuemmerling, Inc.
Labonville Inc.
Leonardi Teeth
Liberty Financial Group, Inc.
Loader Division of NMC-Wollard
MAT-3, Inc.
J.J. Maegert Company
Mayo Global Transportation Inc.
McDonald Equipment Company (MECO)
Mickey’s Truck & Equipment Sales Inc.
Midwest Arborist Supplies
Miller Machine
Mills Truck Sales
Minnesota Wanner Company
Monterey Lawn & Garden Products, Inc.
Morbark, Inc.
MTI Insulated Products Inc.
NMC - Wollard/Loader Division
Niemeyer Corporation
Northeastern Associates
Payeur Distributions Inc.
Peavey Mfg. Co.
Petzl America
Pigeon Mountain Industries
Pinnacle Concepts Inc.
Planet Green Inc.
Plant Health Care, Inc.
Plastic Composites Corporation
Polecat Industries, Inc.
Power Great Lakes, Inc.
Power Planter, Inc.
Practical Solutions, Inc.
Praxis
Preformed Line Products
Progress Leasing Company
Rainbow TreeCare-Scientific Advancements
Rayco Manufacturing, Inc.
Rear’s Mfg. Co.
Redmax-Komatsu Zenoah America Inc.
Reliable Equipment & Service Co., Inc.
ROOTSInc
Royal Truck & Equipment, Inc.
Salco, Inc.
Samson Rope Technologies
Schodorf Truck Body & Equipment Co.
Sherrill Inc.
Sierra Moreno Mercantile
Simonds Industries, Inc.
Southco Industries, Inc.
Southeastern Equipment Company
STIHL Incorporated
Stump Removal Inc./KAN-DU
Sunrise Concepts Inc.
Tamarack Clearing Inc.
Tanaka Power Equipment
Terex Telelect, Inc.
Tilton Equipment Company
Timberwolf Manufacturing Corporation
Tree & Landscape Equipment Trader
Tree Line Supply Co.
Tree Tech Microinjection Systems
TreePro Direct
VERMERE Manufacturing Company
VERSALIFT, TIME Manufacturing Co.
Voss Signs, LLC
Wall Industries
Weaver Leather, Inc.
Wood-Mizer Products, Inc.
Wood-Chuck Chipper Corporation
Woodman, Inc.
Zenith Cutter Co.

The products and services you need to achieve success with your tree care company are all under one roof. Attend TCI EXPO 2001 and make a difference in your future!

Over 150 at this year’s EXPO!
WIN ArborBucks!

There will be two drawings each day on the trade show floor for at least $250 in ARBORBUCKS. Drawings will be held on Thursday and Friday at 12:00 noon and 2:00 pm and Saturday at 11:00 am and 1:00 pm.

ARBORBUCKS can be used the same as cash to make purchases at the show from participating vendors. There is no cost to enter the drawing. Just complete the survey found in the center of your pocket program.

Winners must be present to win and receive ARBORBUCKS cash!

ArborBucks Participants

American Arborist Supplies Inc.
Bandit Industries, Inc.
Blue Ridge Arborist Supply
Concept Engineering Group
Creative Automation Solutions
DICA Marketing Co.
Future Forestry Products, Inc.
Horticultural Alliance, Inc.
Karl Kuemmerling Inc.
Leonardi Teeth
Minnesota Wanner Company
Morbark, Inc.
National Arborist Association, Inc.
Northeastern Arborist Supplies
Peavey Mfg. Co.
Pigeon Mountain Manufacturing Industries

and more ... see final list at registration

Tree Demonstration Area

Visit the Tree Demonstration Area on the trade show floor for scheduled demonstrations of various arborist skills. Upon completion of a scheduled demonstration, ISA Certified Arborists will become eligible to receive ISA re-certification credits by filling out a demonstration attendance form.