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What it has to do with us ...

Everyone who is sick of hearing about Enron and Arthur Andersen ... raise your hand! Me, too, but it has given me pause to think a lot about how something like this happens on such a scale.

I found some new clues recently while reading a very long article that traced a young professional's career at Enron over a period of about 20 years. The various recollections of this employee included encounters with people whose names have become household words in the past few months, as well as people who are not so well known. Memories were recounted of a job that the person was asked to do when whole files were missing. Questions were raised. Vague responses were given. None were satisfactory.

I began to notice a recurring theme as I continued reading. Questions were raised. Vague responses were given. None were satisfactory. I'll excuse the person a little at the start of a career - even for a couple years - for naiveté, career-building enthusiasm, or just being out of the loop. Assignment given. Best job possible done. High-level executives must know what they are doing. Keep your head low and get it done.

After several pages of this as the person's career advanced and the pattern continued, there is no room left for allowing any slack. I began to realize that the culture that was created became one of duplicity or omission. In the end, all become culpable. The speed of the day is fast, and the culture of get it done, don't ask questions, make money. look out for your next promotion feeds subtly under the surface.

Along with that went the messages of the '80s that rolled quietly into the dawn of the '90s, only to explode 20 years later. You know the messages. They're the ones that our young people are fed regularly about success. Society's definition is the size and number of homes, cut of the suit, horsepower and quality of the leather in the car, and the clarity of the gems.

In reality, they have absolutely nothing to do with success. Juxtaposed against this are those traits and qualities we hope our children might have the courage to emulate - Ghandi, Mother Theresa, etc. - which include none of the above. Some of the world's greatest artists and teachers certainly didn't have monetary success nor worldly acclaim in their lifetimes.

Often, the most beautiful stories told in this world are those where sacrifice, honor, duty and even death acclaim people with the most success. We don't do a very good job of sharing those stories and then living their meaning anymore.

Business success is nothing to be ashamed of, but it does not make a successful life. Having the courage to do what is right in the development of that business and in the treatment of the people that you work with - including not expecting them to do things that "walk the line" - is what builds a successful life. After all, as Dave Weinbaum says, "If you don't have a leg to stand on, you can't put your foot down."

Think about it ... walk tall and straight. It's the measure of a successful life.

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By Jacqueline Gately

Ascender Use for Personal Support
By Tim Walsh

Sawmill Shootout
By Richard Howland

Drought puts trees at risk to insects and diseases

Outlook
By Cynthia Mills, CAE
Having the courage to do what's right is one measure of business success.

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By Peter Gerstenberger
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A Christmas tree farm with transplants that didn’t survive.

Dying of Thirst
Trees suffering through prolonged drought
By Jacqueline Gately

Home landscape water use can consume from 59 percent to 67 percent of total home water demand, according to American Water Works Association Research Foundation.

Helping Homeowners Conserve Water

Low-tech solution: Soil probes

"If we just had something that told us how wet or dry the soil is, we could save water," goes the saying of landscape managers and arborists. Try a soil probe to determine soil-moisture levels quickly. Using a soil probe is as easy as inserting it into the ground, pulling it out and then feeling and seeing the soil in it. To test the water-saving potential of this simple device, the Irvine Ranch Water District conducted a voluntary test of 90 homes. Residents were instructed to use the probes as follows:

1. Turn automatic sprinklers off.
dealing with dry conditions that have been occurring over several years."

Much of what’s being seen in the field is worsened by the current situation, but is the aftermath of the prolonged drought.

In addition to biological impacts of drought, the tree industry is feeling financial and political reverberations. For example, in the driest landscapes of El Paso, Texas, homeowners are pulling the plug on costly landscape irrigation systems due to rising water costs. In Colorado, where snowfall is down by as much as 50 percent, the green industry is taking part in water ban discussions.

While it’s impossible to keep every tree in good health in times of severe drought, taking a proactive approach for a prized or sentimental tree can support its good health. One that is supported with good cultural practices, proactive monitoring for pests and disease, and response to warning signs is more likely to survive.

**Silent Suffering**

Symptoms of drought stress in trees may look innocuous, non-specific, or be completely out of sight. A tree’s first damage from drought occurs beneath the soil line in the form of

2. Push the probe into the ground (where turf, shrubs, trees and groundcover are planted).
3. Pull out the probe and observe and feel the soil.
4. If the soil is wet or moist, do not water.
5. If the soil is dry, turn water on (using the probe to determine that water is applied only within the root zone).
6. Repeat the process before the next watering.

The test homes were compared with neighboring non-test homes (the control group) on the same streets. The water savings were measured against the previous year’s water use for all test and control homes. The water savings for test homes over control-group homes were beyond agency expectations:

- 69 percent in the spring;
- 24 percent in the summer;
- 16 percent in the fall.

The $12 cost of the probe was recovered in average home water savings within each three-month test period, regardless of the season. The cost-effectiveness of the probe combined with positive customer response makes it a simple and effective water-conservation tool.

Soil probes are inexpensive and simple enough for everyone to use. They can save significant amounts of water regardless of the type of landscape and in the absence of water meters and sophisticated irrigation scheduling technology. Water agencies, home builders and homeowners associations often give probes away as promotions at seasonal events and during homewater audits, and thousands of home gardeners are using the probes to reduce landscape water use.

*Sidebars excerpted from “Water Right – Conserving Our Water, Preserving Our Environment” a publication of the International Turf Producers Foundation.*
root damage. Long before any outward signs of trouble. After a tree’s unsuccessful attempts to conserve water by closing stomates, feeder roots die back, sometimes so drastically that the tree is unable to take up enough water to support itself.

In the worst case, a healthy looking tree collapses without much warning, like the willows that Greg Carbone from The F.A. Bartlett Tree Expert Company’s Newton, Mass., office has seen. Trees that are accustomed to “wet feet,” such as willows and swamp maples, can “just up and dry out” during prolonged drought, he says.

More often, though, the signs of stress are much less dramatic. Radial growth slows. Leaves are undersized and may wilt, yellow, curl or crinkle, will be marginally scorched, or even turn brown and fall. Emergent shoots are short. In an effort to right the imbalance caused by root-loss, crown dieback or a general thinning of the canopy occurs.

Opportunistic pests

That’s when “opportunistic” pests make their move. Douglas recommends cutting back any deadwood on the tree because drought-stressed trees are more likely to succumb to disease and pests, which “wait” for the tree’s weakest moment to attack.

Dr. Phillip M. Wargo, of the USDA Forest Service in Connecticut, has studied stress-related diseases for more than 30 years. He says borers, such as the adult twolined chestnut borer, are thought to be drawn by the odors and
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scapes could save 57 gallons of water per day. This translates into an average annual savings of at least 20,000 gallons of water saved per home.

The study found these additional benefits of ET irrigation-control technology:

- All test-home residents said they found the controller to be convenient because they did not have to manually set, change or reprogram irrigation times.
- The average annual water cost-savings, at $114, was greater than the yearly ET weather-data broadcast signal fee of $48.
- Homeowners reported that their landscapes looked as good as or better than they did prior to use of the ET irrigation-control technology.
- The technology can send a reduced-percentage signal prescribed during drought periods. (This need would be established by the local water agency to help meet drought and/or emergency shortages automatically. For example: If an area needs to reduce water use by 20 percent, the broadcast system can send an ET signal that is 20 percent lower across that part of the customer base that is outfitted with the technology. Landscapes can survive on 20 percent less water than ET standards.)

Further testing of this weather-based irrigation-scheduling technology will be conducted on different types of home and commercial landscapes in areas of the western United States that do not have water meters.

With water demands projected to surpass delivery capacity in many areas, public agencies and landscape water managers will be able use ET irrigation-control technology to help meet water demands efficiently and cost-effectively. Irrigation system controllers are a prime example of how technology and science can help policymakers, planners, environmentalists, homeowners and businesses use water efficiently in urban landscapes.

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12 TREE CARE INDUSTRY - JUNE 2002
Things great and small
While all trees are at risk during long period of drought, some are more prone to its effects. New transplants are highly vulnerable to drought stress. Jim Chatfield at Ohio State University recommends supplemental watering for the first few years of establishment, to the extent that it’s allowed.

But even mature trees are suffering. Lisa Rams, an arborist and customer service manager at Arborguard Tree Specialists in Avondale Estates, Ga., which has been experiencing drought through the end of last year and into spring, reports, “We’re seeing a lot of mature trees in decline in Georgia associated with the drought conditions.” Like many municipalities, local bans limit watering.

Watering trees deeply with soaker hoses or irrigation systems as opposed to brief, surface watering helps sustain trees. But, cautions Chatfield, “it’s very difficult to do much for a large tree because of the massive amounts of water it needs.” With so many trees affected, he recommends taking a “triage” approach, watering those trees to the extent that you can help.

Wargo notes that there has been severe tree damage along the rocky escarpments of the humped profile of Sleeping Giant Mountain State part in Connecticut. The drought exacerbates matters for trees already under stress, such as those on dry slopes, surrounded by pavement, or improperly planted. In landscape situations, consider taking action, like moving smaller trees to a better location, alleviating compaction, or replacing moisture-draining lawn with a layer of mulch.

Bob Bishop, Faculty Extension Assistant, Horticulture, Maryland Cooperative Extension, suggests mulching with pine needles or a 2- to 3-inch layer of compost. The compost provides microorganisms and biological activity that chemical fertilizers can’t supply.

Avoid the knee-jerk reaction to “pump-up the tree” for health with chemical fertilizers altogether, recommends Douglas. “Fertilizers are essentially salts,” she notes, “and can end up doing more harm than good.” She also cautions that trees under stress may be particularly sensitive to herbicides, such as broad leaf lawn control products.

Outlook
The aftereffects of the current drought will likely ripple for the next three to five years, with the strongest trees surviving. “Trees have developed their own mechanisms for coping with these cycles,” explains Beaty. But some trees are on the brink of survival and “could go either way,” such as in the case of a 100-year-old sugar maple. “If it means the difference between keeping a tree around for your lifetime or losing it in the next five years,” he says, “it’s worth doing something about.”

Jacqueline Gately is a freelance writer in Wrentham, Mass.
**Ergo Guidelines Likely, But Don’t Count Out Regulations**

The Labor Department’s ergonomics program, unveiled April 5 by Occupational Safety and Health Administration (OSHA) head John Henshaw, uses a comprehensive approach to reducing workplace musculoskeletal disorders, to include: industry-specific and task-specific guidelines; strong and effective enforcement; extensive outreach and assistance; and research.

Senate Democrats were sharply critical of the Department of Labor’s plan at a Health, Education, Labor and Pension Committee hearing April 18, during which Secretary Elaine Chao announced that the department will focus its efforts initially on nursing homes.

Several senators complained that OSHA’s initiative was merely a “plan for a plan.”

Sen. Paul Wellstone (D-Minn.) argued that OSHA’s plan is not a new initiative, and pointed out that the agency has been providing outreach and assistance on ergonomics for nearly two decades. In addition, the agency has issued guidelines to specific industries and used the general duty clause of the Occupational Safety and Health Act to enforce citations. He also noted there has been a lot of research on work-related musculoskeletal disorders, including a National Academy of Sciences report that was finished a year ago.

Wellstone also complained that OSHA has no definition for musculoskeletal disorders for recordkeeping. He wondered how the agency can address the problem without a definition of injury given that the agency delayed a decision on the issue under its overall injury recordkeeping rule.

Henshaw claims that OSHA will use the definition for MSDs that is used by the Bureau of Labor Statistics for the time being. BLS defines a musculoskeletal disorder as an injury or disorder of the muscles, nerves, tendons, joints, cartilage, and spinal discs. MSDs do not include disorders caused by slips, trips, falls, motor vehicle accidents, or similar accidents.

**Rulemaking Still Possible**

In mid-April, Sen. John Breaux (D-La.) introduced a revised bill to force the Labor Department to complete a federal ergonomics standard, saying the Bush administration’s largely voluntary approach is too weak.

The bill (S. 2184) is similar to a measure introduced a little over a year ago following a congressional vote to kill the controversial Clinton administration ergonomics rule. It was referred to the Committee on Health, Education, Labor, and Pensions.

The bill has picked up the support of several key Democrats, including all the Democrats on the Senate Labor Committee, chaired by Sen. Edward Kennedy (D-Mass.). That support is important because Breaux does not serve on the committee, which has jurisdiction over the legislation.

A lone Republican, Sen. Arlen Specter (R-Pa.), is co-sponsoring the bill. The legislation is unlikely to pick up much additional Republican support given the GOP-led opposition to kill the ergonomics standard in 2001.

Ironically, Breaux and Specter were among those in the Senate who voted to kill the Clinton administration rule, which industry groups argued was far too complex for most employers. But both senators argue that some form of federal regulation is still necessary to protect workers from hundreds of thousands of new repetitive motion-related injuries that are recorded each year.

The new rule, which would be promulgated by the Labor Department’s Occupational Safety and Health Administration, would be developed in a way that avoids at least some of the controversy raised by the now-killed regulation. For example, OSHA would have to avoid any conflict with state workers’ compensation programs, which under the old proposed rule would have required employers to fully compensate injured workers while they recovered.

The department would be directed to base a future rule on existing evidence gathered by OSHA during the old rulemaking, which includes thousands of comments, studies, and other material.

Proponents argue that the department could still rely on newer information – the bill specifically refers to employer and industry practices that have been shown to be effective in cutting musculoskeletal disorders – but argue there is also a wealth of information in the existing docket.

The department would be directed to address only those injuries suffered in the workplace, though that distinction is at the heart of the debate between labor and industry over the causes of musculoskeletal disorders.

The department also would have to describe in clear terms when a workplace is required to address ergonomic hazards.

Peter Gerstenberger is director of business management, safety & education for the National Arborist Association.
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California Interior Plantscape Association Roots and Shoots Technical Seminar - Maintenance
California locations
Contact: (707) 462-2276 or www.cipaweb.org

July 19-21, 2002
International Lawn, Garden and Power Equipment Expo
Louisville, KY
Contact: 1-800-558-8767 or www.expo.mow.org

July 25-26, 2002
Washington State Nursery and Landscape Association
2002 Emerald Expo
Seattle Exhibition Center
Seattle, WA
Contact: Vickie Wilson, 1-800-672-7711, vicwsnla@wraim.com or www.emeraldexpo.com

July 28-31, 2002
78th Annual Conference
International Society of Arboriculture
Seattle, WA
Contact: ISA Housing Bureau, (330) 425-9330 or isa2002@conferon.com

July 30-31, 2002
Turf and Landscape Field Days
Virginia Tech and Virginia Turfgrass Council
Blacksburg VA
Contact: David Chalmers, (540) 231-9738, chalmers@vt.edu or David McKissack, (540) 231-5897, turf1@vt.edu

August 14, 2002
Ohio Turfgrass Foundation OSU/OTF Turfgrass Research Field Day OTF Research & Education Center
Columbus, OH
Contact: 1-888-683-3445, www.ohioturfgrass.org or otfinfo@offinger.com

August 20, 2002
Michigan Forestry and Park Association, Inc. (MFPFA) & National Arborist Association Joint One-Day Business Management Workshop
Marriott Eagle Resort
Ypsilanti, MI
Contact: (517) 482-5530 or by e-mail at ashby.ann@acad.net.

August 28-30, 2002
California Interior Plantscape Association CalScape Expo
San Francisco, CA
Contact: (707) 462-2276 or cipa@cipaweb.org

September 18, 2002
Virginia Tech Hampton Roads Agricultural Research and Extension Center 27th Annual Nursery and Landscape Field Day
Virginia Beach, VA
Contact: Bonnie Appleton, (757) 363-3906 or bapple@vt.edu

September 19, 2002
Making Trees Your Business
Waynesboro, VA
Contact: Kathy Sevebeck, (540) 557-2363 or www.treesvirginia.org

September 25-26, 2002
Multi-State Ornamental Plant Materials Conference
Holiday Inn, Stillwater, OK
Contact: Mike Schnelle, (405) 744-7361 or mas@okstate.edu

October 3, 2002
Ohio Turfgrass Foundation Annual Golf Tournament
City of Blue Ash Golf Course
Blue Ash, OH
Contact: 1-888-683-3445, www.ohioturfgrass.org or otfinfo@offinger.com
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Is Your Accounting System Serving You Well?

By Mary McVicker

So often when we ask a business owner an accounting question, the answer is: "Because that's how it's done" or "That's how it is." And there the matter drops. The answer isn't necessarily bad or as unhelpful as it sounds.

In every trade or profession there are a lot of questions where the answer is essentially, "Because it works better that way." Custom, tradition, and sound trade practice influence how a business is conducted, and these influences tend to become parameters. Accounting has more than its share of such parameters, most of them mystifying to a non-accountant. Unfortunately, this leads to an impression that accounting - and accountants - are rigid!

The assumption has some justification. There are rules that have to be followed because they make the accounting system work and give it consistency. But there are choices within accounting. Some transactions, for instance, can be accounted for in several ways, each correct. There are various ways of accounting for depreciation or for inventory. Accounting for a tree care business can be quite different than accounting for a retail business.

Businesses have choices with respect to accounting. Choices may be few and seemingly minor, but they're worth consideration. When alternatives exist, the choice should result in an accounting system suited to the needs of the tree care business.

Year End

Many businesses use a calendar year for the business year. Most of the time this choice is made at start-up, without much (or any) consideration of other possibilities. And, with so many heavy decisions to be made in getting the business under way, this isn't surprising. A calendar year seems the easiest and the most convenient. But does it suit the tree care business as well as a different year-end might?

A business year for accounting purposes should reflect the business' cycle. A seasonal tree care business that has its greatest activity in the spring and summer probably should not have a year end in June, which is essentially in the middle of its busiest time. There's a certain amount of winding up that goes with the end of a business year, and during a heavy business season people are too busy to tend to year-end jobs properly, as any bookkeeper will tell you. Matters of year-end reports, summaries, planning, and organizing records just don't fit in at that time. The office is swamped trying to keep up with the paperwork generated by the sales.

For some businesses there are questions of how they would like the inventory reflected on the year-end statements - at a high or low level. This, in turn, affects the profit (on paper) and, of course, taxes. It has an impact on how the business looks to others reading the financial statements. Creditors, potential lenders, investors, all receive a certain impression of the business' profitability from its financial statements.

Pricing

There are other considerations for determining whether an accounting system serves the tree care business well. Consider the matter of pricing.

Pricing has to cover all costs. Sales need to generate enough revenue to pay all the expenses of the business, including office salaries, fuel for vehicles, taxes, insurance, and so on. Many of these costs are indirect - they aren't the material that goes into the service or the cost of the service. As a result, these costs tend to get overlooked in pricing. At least in theory, the price of an item or service should cover all costs associated with that item, however indirectly, and allow some profit for the business.

Some services are more profitable than others, for a variety of good reasons, including competition and customer expectations. Some services must be priced low, often barely covering costs. Consequently other services are priced with more than their "share" of costs. This quickly gets complicated.

How do you know if your pricing truly covers costs? Unfortunately, the knowledge often comes to light late in the game, when losses are heavy. And also unfortunately, "accurate" pricing is more possible in theory than in reality.

That said, your accounting system should give you good information about expenses and costs. This may mean showing more detail, not putting expenses into broad categories, or utilizing categories that better reflect the structure of expenses in the business.

Showing expense in "useful" detail also enables you to get a better handle on what expenses are doing. They are usually rising, but when and by how much? And what will the impact be overall on the business' profitability?

Complex businesses

Businesses with more than one kind of operation - pruning and removals, spraying, firewood sales - often can use a
different accounting structure than a business with one operation. Sales and services can be two distinct types of business activity. For many such businesses one basic accounting system often works just fine. For some businesses it may make sense to have an accounting system — or to structure the business — to take into account those very different operations. One of the considerations is how readily you can retrieve the information you need, particularly with respect to pricing.

These matters can quickly become complex, and an accountant may be needed to help with the decisions. The accountant may consider that making changes is more trouble and expense than the result would justify. Change may not be possible for various reasons.

**Accounting services**

The type of accountant your business uses is another option to consider. Choices range from one of the behemoth international firms to a sole practitioner who works from home.

Many small businesses overbuy when it comes to getting accounting help. Often they’re tempted by the recognizable name or the marketing. The range of services can sound impressive, clouding the question of how much of these services the small tree care business really needs.

Some of the very large accounting firms that recognize the potential of servicing small businesses have instituted small-business segments or specialties. Their definition of “small business” can range into hundreds of millions in revenue, though. While they purport to tailor their services to the client’s needs, they simply are bigger than most small businesses need. And, it goes without saying, they are more expensive as well.

One of the best accountants specializing in small business I know works out of her home. She’s a CPA, professional, keeps up with changes, and is geared to small businesses, some of them very small. She gets all of her business through referrals, and she’s very busy. Many of her clients have been with her for years. Don’t overlook such opportunities for your business’ accounting needs.

**Conclusion**

An accounting system should work for the tree care business in various ways. It should give people the information they need, relatively quickly. The information should be clear.

If at all possible, the system should not generate the heaviest workload at a time of the year when the business is at a peak of activity. They accounting year cycle should fit with the business’ year cycle, so that they work together and not in opposition to each other.

And most of all, the system should be such that people view it as one of the business’ most useful tools, not as an opposing force.

Is it time for some change?

Mary McVicker was a tax attorney before leaving to teach and write. She has been a small-business consultant in Brookfield, Ill., for more than 18 years.
The inspiration for this article came from a number of ascender-related accidents. (This is actually the third in a series that discusses the proper use of ascenders in tree climbing. (See The Tree Worker, January and February 2002.) One such accident was brought to my attention a few months ago and my research uncovered a number of similar ones. Most of the problems stem from improper selection of ascenders or improper use. This article is meant to provide some basic information on the general types of ascenders and their proper application to arboricultural use. This is not a gear promotion article, but it will focus on some of the ascenders that are commonly in use. There is a lot of information out there pertaining to ascenders—and there seems to be some differences on ratings—so I will try to focus on strength ratings as listed by the manufacturers.

The best place to begin an article about equipment or techniques in arboricultural operations is with the current safety standard, the ANSI Z133.1-2000. (The Z). If you don’t have your own copy, get one and read it. It may just keep you alive. The Z gives us a starting point for this discussion by defining some related terms.

Ascenders are defined in Annex A simply as “A mechanical device used for climbing rope.” It is cross-referenced to Section 3.29 in the definition of “Secured.” One example of being secured is 3.29 (4): “When ascending the arborist climbing line using the footlock technique while utilizing a Prusik loop or ascenders.” About the only other sections that relate to parts of a personal support or climbing system are Sections 8.7.5, 8.7.6, and 3.13.

Sections 8.7.5 and 8.7.6 discuss carabiners and rope snaps, respectively. Minimum tensile strength for both is 5,000 pounds and both are to be of the “self-closing and locking [positive-locking for carabiners] type.” The other related Section, 3.13 false crotch, states as part of the definition, “Each component of the system shall have a minimum tensile strength of 5,000 pounds.”

Ascenders were first used in mountaineering, caving and rock climbing. The arboriculture profession has borrowed ideas from several disciplines and now many tree climbers are also rock and ice climbers. Mechanical ascenders were designed for the static load of one person, and are not meant for shock loading. They were also meant for kernmantle cord, where the main strength of the rope is in a core that is covered by a tightly woven, wear-resistant cover. In contrast, the main, if not all, of the strength of arborist ropes is in the cover. The cover of kernmantle rope is also smoother than arborist rope allowing for a greater surface area for the ascender cam to contact.
Now let’s take a look at the general types of ascenders. There are two main kinds of ascenders – toothed or cammed. Toothed ascenders are what many people think of when they think of mechanical ascent devices. They may be with or without handles, or be foot ascenders and come in a variety of colors produced by a variety of manufacturers. They often come in color-coded pairs designed for either left- or right-handed use. This type is also referred to as an eccentric cam, or Jumar (actually a trade name but used in a generic sense like Kleenex for tissue. This term is used as a noun and a verb).

Toothed ascenders have the load attached to the body (handle) of the ascender, and the toothed cam pivots inside the body to wedge the rope. The teeth on the cam are relatively sharp and are slanted to bite into the rope and assure a firm grip on clean rope. These ascenders were designed to be attached and removed with one hand. Each has a safety or locking mechanism to reduce the chance of the rope coming out accidentally. When overloaded or shock loaded, these types of ascenders usually damage (or even sever) the rope. This usually happens at loads well below the tensile strength of the ascender, so great care must be taken to not shock load or overload this type of ascender. The locking mechanism can be opened inadvertently if it contacts anything, such as tree branches. This equipment was not designed to be used where it would often come into contact with anything but the rope and the climber. If your hand slips and contacts the cam or locking mechanism, you can cause the cam to open – even while under a load. The toothed design also will not work as effectively if the ascenders become clogged with ice and mud.

The other main type of ascender, the cammed ascender, is also called a lever-cam, shell, or ridged cam. Cammed ascenders were meant to work in dirty and cold conditions without slipping. This type avoids the clogging problem by altering the way the load is attached to the ascender and by altering the surface of the cam. The load is attached directly to the cam, which is enclosed in a shell. There is often a spring on the cam that helps keep the ascender in place on the rope when not loaded. The spring does not change the ascenders’ holding power.

These ascenders function by squeezing the rope between the cam and the back of the shell. The cams will often have ridges or grooves that are perpendicular to the direction of rope travel. Some designs have a groove in the part of the shell where the rope is pressed to increase the surface area that the cam presses against. The cammed ascenders are a little more difficult to put on a rope, but are less likely to come off of the rope once attached. When these ascenders are overloaded, or shock loaded, they tend to slip on the rope. But, they can crush or cut the rope under severe loading.

One of the main themes that kept coming up during the research for this article was that all manufacturers, wholesalers, distributors, and most users warned that these devices were not meant for shock loading or excessive loads. Most were intended for the weight of a single climber. One other important point is that these were designed for specific situations and
environments, and not for use in trees and on arborist rope. I am not by any means saying that we should not be using ascenders, but we do need to make sure that we use the right equipment in the right application.

Now that we have a sense for the basic kinds of ascenders (toothed and cammed), let's take a look at some recommendations for safe usage before we take a closer look at some of the specific devices. (Adapted in part from Arborist Equipment by Don Blair.)

- At the risk of repeating myself, I'll restate that ascenders were not designed for shock or excessive loading.
- They were designed for single-person loads on an overhead, static system.
- Ascenders were designed for use on kernmantle rope, which has a tougher outer shell. Use on arborist rope requires more frequent inspection (than on kernmantle rope) and retirement if the rope is damaged.
- Toothed ascenders can slip off the line or open enough to allow uncontrolled rope slippage if:
  1. They are pulled away from the rope or twisted.
  2. Branches or other debris contact the cam or the locking mechanism while loaded.
- Ascenders were not intended to be used as a single point of attachment, and should be backed up, where and how appropriate.
- When used for personal support, cammed ascenders should have a locking mechanism that is not likely to come undone unintentionally. This means that you should not hang your life from a cammed ascender that has only a quick-release pin. Some cammed ascenders come with a bolt and locking nut or a spring-loaded locking mechanism that takes two motions to remove the pin.
- Climb smoothly and avoid bouncing on the rope.

Let's take a closer look at some of the specific arborist applications of ascenders. Again, this article is not endorsing or denouncing any specific brand or type of ascender, but is trying to address the safe use of the types most commonly seen in arboriculture. We will first look at proper use of some of the cammed type ascenders. The most common way these are used for personal support in arboriculture is as lanyard adjusters.

The most common types are the Gibbs ascender and the Petzl Micro and Macro-cenders. The Gibbs comes in aluminum (cast or forged) or steel shell, with cast or forged cams, in two sizes. The small accepts 3/8-inch to ½-inch rope and the large will accept 9/16-inch to ¾-inch rope. The smaller cast aluminum cams are rated at 2550 pounds (11.1 kN). The Gibbs is sold with the quick-release pin attached to the shell. It is most often sold with the bolt and locking nut. If it is to be used for personal support, it is best to use the bolt and locking nut.

The two sizes/styles of the Petzl cammed ascenders are similar in function to the Gibbs but have some modifications. Rock Exotica originally produced these ascenders but was bought out by Petzl, thus you may see the Rescue, Micro- and Macrocenders (also called Microjuster and Macrojuster) listed under the brand names of Petzl or Rock Exotica. These three ascenders all have a two-stage spring loaded pin that locks the cams in place.

The Microcender is intended for use on ropes 7/16 inch to ½ inch and is rated at 3,500 pounds (15.57 kN) minimum breaking strength. Rope slippage begins at about 900 pounds. The Rescuecender works on 7/16-inch to ½-inch ropes but has a breaking strength of 6,000 pounds. The Macroascender is designed for ropes between 5/8 inch and ¾ inch and is rated at 6,000 pounds. It also begins to slip at approximately 900 pounds.

Another type of ascender is the CMI Ropewalker. The Ropewalker has made some changes on the original Gibbs design, such as creating gaps in the shell to allow dirt and debris to fall out of the ascender, so that it does not compromise the ascenders' holding power. The Ropewalker is rated at 7,500 pounds but rope damage (sheath failure) occurs at just over 3,000 pounds.

There are some ascenders designed to work on two strands of rope. The Rock Exotica Footlock was specifically designed to be used when ascending a doubled rope while footlocking. There are two separate cams within one shell and each cam has its own channel for one strand of rope. The Footlock has a two-stage, spring-loaded pin that locks the cams in place. The tensile strength is in excess of 6,000 pounds, but when shock loaded in a drop test, it slipped at around 3,800 pounds.

Another cammed ascender that works on two strands of rope is the Petzl Shunt. The Shunt is designed for either one or two strands of rope, but was designed for ropes that are smaller than ½ inch (11 mm maximum). The attachment point breaks at 4,496 pounds (20 kN) and the device may begin to slip with only a few hundred pounds (1-8 kN).
There is a greater diversity of the toothed type of ascender, but they have more limitations than the cammed. The toothed types are used for ascent on a single or doubled rope. The Jumar, by Blue Water, is a commonly used ascender in other disciplines. It will accept rope sizes from 6 mm to 14 mm (.236 -.551 inches), but its breaking strength is 1,600 pounds. Some are stamped at 1,100 pounds.

CMI makes a few different types of toothed ascenders that have found their way into some tree climbers’ gear bags. The largest, the Expedition, is rated at 4,000 pounds. The Large Ultrascenders are rated at 4,600 pounds and the Small Ultrascenders are rated at 3,500 pounds. Under test conditions, the ascenders caused the ropes to fail at significantly lower loads than the minimum breaking strength of the ascender itself. When the rope failed, the sheath on the kernmantle cord ruptured at between 1,000 and 2,000 pounds. These tests were run on kernmantle rope, where the majority of the strength is in the core. We do not have data on how they would react if tested on arborist rope.

The use of Kong equipment has become more prevalent in the past few years. Kong has a variety of devices that can be adapted for use in arboriculture, and they have neat colors, too. Kong has a toothed, double ascender that has combined a left- and right-handed cam and one handle with places for both hands. This is used to ascend a doubled rope like that used for footlocking. It has been designed to take ropes between 7/16 inch and 1/2 inch. As with other toothed cams of this style, it is designed to be used for vertical ascent, and the rope can slip out if used to traverse or if it is pulled to the side. They are tested to hold a load of 1,124 pounds (5 kN) without damaging rope. The top eye is rated 4,271 pounds (19 kN) and the bottom is 3,372 pounds (15 kN).

Petzl has a number of toothed ascenders, but the most commonly encountered are the Ascension ascenders. The right- and left-hand ascenders are color coded - blue: right, yellow: left - and feature a large opening for easy access with a gloved hand. They will accept ropes between 8 mm and 13 mm (.314 -.511 inches). There are three attachment points in the body of the ascender: the upper point is rated at 18kN; the large lower point is rated at 20kN; and the smaller is rated at 15kN. The ascender will cause the rope (kernmantle) to fail between 4 kN and 6.5 kN.

The Petzl Pantin is somewhat similar to the Ascension, but it looks like it is missing the handle. The Pantin is designed as a foot ascender and comes with a trap designed to hook to the foot. It will take 7/16-inch to 1/2-inch rope. This device was not intended for personal support so it has not been tested and rated.

As technology advances, we sometimes struggle to keep up. It seems as if there are new gear choices and techniques every time you go to TCI EXPO or the annual ISA meeting, or read the latest magazine. There is a newer classification of ascender, called a “swing sided self-jamming pulley.” There are currently two of these products being used by arborists: the Mini Traxion and Pro Traxion by Petzl. Tensile strengths are reported as 20 kN for the Mini and 22 kN for the Pro Traxion.

So, to wrap things up, we need to ask, “Are ascenders good or bad?” By now, most of you know the answer to that question...yes. Ascenders offer us a wide range of ways to make our jobs safer, easier, and often times more efficient, too. Caveat emptor though. Many of these devices were designed to be used on kernmantle rope and in very different situations than we use them while climbing in trees. The manufacturers repeatedly stress that they are not meant for shock loading. They are almost always used as one part of an ascent system, with backups where and how appropriate.

Based on my experience and this research, I think cammed ascenders are well adapted to be used for personal support as lanyard adjusters. Put a bolt and locking nut in or buy one that has a locking system that minimizes the chance of the cam falling away from the shell.

The toothed ascenders do not seem to be as well adapted to our profession, especially when you keep the current Z133.1 standard in mind. Many of them are below 5,000 pounds minimum tensile strength. In testing, many cause severe damage to the ropes at loads much less than the tensile strength of the device. Keep in mind that these tests were done on kernmantle rope, which they designed them for. We do not know what the test results will be when arborist climbing lines are used.

Single Rope Technique can allow for convenient, safe backup for toothed ascenders, but doubled rope ascension systems are much more difficult to back up without installing a separate belay line. (See The Tree Worker, February 2002, for more on backing up these systems.)

So please think about what you are using, its strengths and its limitations. Keep climbing safely.

Tim Walsh is a staff arborist for the National Arborist Association.

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TREE CARE INDUSTRY - JUNE 2002
Deutz Honors Four Suppliers with Award

Deutz, a manufacturer of diesel and gas engines, recently honored four of its suppliers with its Supplier Awards. The recipients, all German companies, were Krupp Gerlach Co. in Hamburg; the firm of Halberg in Saarbrucken; Mahle-Mondial in Turin; and Selzer in Driedorf.

Lowe’s to Sell Jackson & Perkins Roses

Jackson & Perkins recently announced that Lowe’s will become the exclusive home center retailer for Jackson & Perkins roses starting in 2003. Lowe’s has worked regionally with Jackson & Perkins for the past three years.

Earlier this year, Lowe’s announced exclusive agreements to offer Cub Cadet and Husqvarna lawn tractors, Jenn-Air outdoor grills, and the Waverly Home Classics collection of wall coverings, window treatments and drapery hardware.

Winners of Mich. Big Tree Hunt Announced

Global ReLeaf of Michigan and the Michigan Big Tree Hunt Committee have announced the 2002 grand prize winners of the Michigan Big Tree Hunt. The largest tree entered was a 329-inch circumference Eastern Cottonwood entered by Connie and Jim Beresford, in Livonia, Wayne County, Mich.

The largest White Pine (Michigan’s state tree) was a 138-inch circumference tree entered by Cindy Bushre of Midland County, Mich. The tree is located in Greendale Township.

These winners receive a young tree of their choice, a certificate and gift. Winners for the largest tree in each county will also receive a certificate and gift.

The Michigan Big Tree Hunt Contest is a cooperative effort of Global ReLeaf of Michigan, the Michigan Big Tree Hunt Committee, the Michigan Botanical Club/Big Tree Project, the Michigan Forestry and Park Association, and local conservation districts.

Pretzer Promoted at Dow AgroSciences

Fred Pretzer, a senior sales specialist for Dow AgroSciences LLC, has been promoted to technical accounts manager covering the western United States. He will work with several of the turf and ornamental industry’s formulators and retailers.

Based in the Dallas/Fort Worth area, Pretzer will be responsible for marketing, sales coordination and new product implementation involving the active ingredients manufactured by Dow AgroSciences.

Pretzer, who earned an agronomy degree from the University of Arizona, has held various sales positions throughout his 23 years with the company.

Scotts LawnService Acquires Lawn Co.

The Scotts Company announced that Scotts LawnService has acquired The Lawn Company, a major lawn care service company in the Boston area. The transaction is the largest acquisition to date by Scotts LawnService.

Recently, Scotts LawnService completed the acquisition of J.C. Ehrlich Co.’s lawn and tree care division, adding to its companies in Pennsylvania, which include branch operations in Philadelphia, Harrisburg, Allentown, Reading and Lancaster.

This year, Scotts Lawn Service has acquired businesses in Memphis, Charlotte, Dayton and Milwaukee and expanded its presence in metro Detroit.

29 Graduate from Pa. Turfgrass Mgmt. Program

On March 2, 29 students graduated from the 43rd Golf Course Turfgrass Management Program at Pennsylvania State University.

Outstanding Turfgrass Student - selected by fellow classmates - was Alan Lee.
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Our Heritage of Community Trees
The Pennsylvania Urban and Community Forest Council has published a new booklet titled, *Our Heritage of American Trees*. The booklet is divided into five chapters and explores the historical roots of urban forestry. Topics covered include design of urban landscape, arboricultural practices, and urban forest management. The booklet was written by Henry Gerhold and Stacy Frank. *Our Heritage of American Trees* is available for $16 ($18 internationally). To order, send check to Pennsylvania Urban and Community Forestry Council, 56 E. Main St., Mechanicsburg, PA 17055. Check should be payable to Pennsylvania Urban and Community Forestry Council.

The Bobcat MT50 Mini Track Loader
Bobcat Company has expanded its line of compact equipment with the introduction of the MT50 mini track loader. This walk-behind mini-loader is 3 feet wide, 69.5 inches long and 44.4 inches high, and has a rated operating capacity of 500 lbs. and a 74.8-in. lift height. With a 20 hp liquid-cooled Kubota diesel engine, 13.4 gpm of auxiliary hydraulic flow and a 2600 psi hydraulic system, the MT50 can work with a variety of attachments. More than 10 attachments are available, and most MT50 attachments are common with the Bobcat 463 skid-steer loader. The MT50 is equipped with a rubber-track undercarriage that allows its 2497 lbs. to exert 5.2 psi ground pressure. The tracks on the MT50 distribute the loader's weight over a larger area, which reduces ground pressure and minimizes damage to landscapes and other established surfaces. For more information, contact Bobcat Company, a business unit of Ingersoll-Rand Company, at www.bobcatdealer.com.

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The Rhizanova family consists of five different products known as Mycorrhizal Fungi Inoculants. Mycorrhizal Fungi are beneficial fungi that form symbiotic relationships with plant roots. The fungal growth into the soil increases the absorptive area of colonized roots. Rhizanova increases water absorption, nutrient availability and survival rates of trees, shrubs and ornamental flowers. Designed to get your trees and plant material off to a fast start and give them the best chance of root colonization, Rhizanova puts the fungal inoculum at the roots where the opportunity for contact with feeder roots is highest. The chemical activities of these fungal extensions or hyphae on minerals help make inorganic nutrients available to plants. For more information on Rhizanova, contact Becker Underwood, Inc., 801 Dayton Ave., P.O. Box 667, Ames, IA 50010; call 1-800-232-5907; Fax: (515) 232-5961; or E-mail: request@bucolor.com.

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Hanging Thigh Brace/ Tool Tray

Plastic Composites Corp. recently received a patent for its ergonomic thigh brace. The brace is designed to significantly reduce lower back strain among bucket truck workers. The back strain occurs when a worker must lean forward at an angle to brace himself or herself in order to apply leverage. The new light brace hangs from the lip of any bucket, is shaped to fit the contour of a bucket worker’s thighs, is vertically adjustable, and doubles as a tool tray. Options for the thigh brace include an apron or a tool board. For more information, contact Plastic Composites Corp. at 1-800-747-9339, www.buckettruckparts.com or INPCC@aol.com.

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How Much is This Tree Worth ...

And Why Do We Need to Know?

By Lew Bloch

The most important question to ask before starting a plant appraisal is, "Why?"

Why did the client call? Is this a proactive appraisal — such as for a landscape architect, municipality or developer — or is it for a casualty loss for insurance purposes, tax deduction or possible lawsuit? The appraiser needs to know all of this, and more, before deciding whether to take the assignment and what methods to use in performing the appraisal.

Casualty-loss types of appraisals

One reason for appraising the monetary value of trees and shrubs is for insurance purposes. Trees can be lost or damaged by events such as storms, floods, earthquakes, fire, severe weather (freezing or drought), toxic spills, lawn service mistakes, gas leaks, vandalism, auto and construction damages, among other reasons. Generally speaking, most homeowner insurance policies do not cover wind damage, but do cover damage by lightning. Even though an individual tree may be worth thousands of dollars, many such policies have a limit of $500 per tree. (Some insurance companies will write separate policies on special trees. In those cases, a proactive appraisal will be needed on each tree to establish a pre-casualty value in case there is a loss.)

Some people don’t realize that the insurance company of the property where the tree lands — not the insurance company of where the tree was standing — is responsible. If a tree falls across five separate properties, five separate companies may be involved, and the company where the tree originated might not be involved at all. However, if the property owner of the fallen tree is shown to be negligent in allowing a dangerous tree to remain on the property, the other insurance companies may subrogate (or charge) that party.

Another reason why someone may need to know a tree’s value is for an income tax deduction as a casualty loss. It is very important to be aware that even though some appraisals have gone through, the IRS does not accept the trunk formula method — nor
any other formula method! The IRS will accept variations of the replacement cost method, cost of cure method, cost of repair method, and a market approach method.

In order to be a casualty loss, the damage must be sudden and unexpected, such as damage caused by floods, tornados and vandalism. There could be "gray areas" of causes of sudden death, such as certain insects and diseases, and sudden freezes. For residential properties, the amount of the allowable deduction is only for an amount over 10 percent of one's adjusted gross income. However, if the property is a business or income-producing property, then the entire amount of the appraisal is an allowable deduction.

In order to meet IRS requirements, the taxpayer must show that the repairs are needed to restore the property; the amount spent for repairs is not excessive; the repairs do not provide more than the damage suffered; and the value of the property after the repairs does not exceed the value before the casualty. For the definitive word, always contact a certified public accountant. It is not appropriate for the arborist to be giving this type of advice.

A third reason for an appraisal is for a civil - or maybe even criminal - lawsuit.

Non-casualty loss types

These are all casualty loss types of appraisals. However, as appraisers, we as arborists and appraisers should be promoting proactive reasons for appraising tree values. For example:
• To justify maintenance expenses;
• To justify landscape architect designs;
• To establish a tax basis for municipalities;
• To justify new planting costs;
• To assist building codes and zoning regulations;
• To establish plant values in case of future damages;
• To establish values on properties being leased;
• To establish values for insurance policies.

Use "The Guide"

The methodology of plant appraisals has been developing for nearly 100 years, and there have been nine editions of what is now known as The Guide for Plant Appraisal ("The Guide"). This 9th edition was written by The Council of Tree and Landscape Appraisers and published by the International Society of Arboriculture in 2000. Contrary to what most people think, ISA did not write "The Guide" - CTLA wrote it. CTLA is composed of one delegate from each of the following associations: American Nursery and Landscape Association; American Society of Consulting Arborists; American Society of Landscape Architects; Associated Landscape Contractors of America; Association of Consulting Foresters of America; International Society of Arboriculture; and National Arborist Association.

If you are using the 8th edition (or even earlier), be aware of the fact that your appraisal may not be acceptable. However, if you get involved in appraising the value of a tree that was damaged or destroyed prior to the publication of the 9th edition, you might want to use the old book.

Even though the procedures and methods of plant appraisal are basically unchanged from the 8th edition, here are some of the new improvements and refinements in the 9th edition:

For the first time, The Guide describes the different approaches to value:
• The cost approach. This includes the replacement cost method, trunk formula method, cost of repair method and cost of cure method.
• The market approach. This deals with sales comparisons similar to real estate appraisals.
• The income approach. This is used for income-producing properties such as nurseries, orchards, Christmas tree farms and commercial properties.

You really need to read the book in order to grasp the importance to these approaches.

These three photos were taken for a lawsuit. One tree was a 46-inch diameter white oak that the tree owner alleged the builder/developer killed. The photo to the left shows a sizable crack/seed that opened into a cavity that I probed to a depth of 35 inches. I estimated a 60 percent strength loss, using the formula in Evaluation of Hazard Trees in Urban Areas, by Nelda P. Matheny and James R. Clark. The photo on the right shows the extent of the cavity when the tree was cut down. Furthermore, four other arborists retained by the plaintiff reported the tree had armillaria. Nevertheless, the plaintiffs had appraisals from $11,800 to $25,000, and one of these appraisers even rated the condition factor of 20 percent. If the tree was given 1 point (extreme problems) in all eight possible categories of condition rating, the tree would be 25 percent. Unfortunately, some of the appraisals of value were from tree contractors who were also bidding on "saving" the tree and ultimately removing the tree. This could be a conflict of interest. I represented one of the three defendants, and my lawyer refused to make any settlement based on my testimony that a photograph supplied by the plaintiff showed the tree in the background on the day excavation started. Although all of the other trees were in heavy foliage, this tree was mostly dead. In my opinion, the tree had a negative value (the cost of removal and hauling), and should not be appraised for value because of its condition. The other two defendants agreed to pay the party $5,000 each as a settlement of the claim, which the plaintiffs accepted even though they had been offered $15,000 before I was retained.
The new edition also goes into more detail into the factors used in the cost approaches. For instance, we now use the species factor in the replacement cost as well as the trunk formula method. The condition factor now gives extra weight for the roots, trunk and scaffold branches, pre-judging them for both health and structure, and rating the foliage and smaller branches for health only. Another refinement is the easier-to-follow and easier-to-explain step-by-step worksheets for replacement cost and trunk formula appraisals.

Each form is broken down into three separate phases: field observations; regional plant appraisal committee and/or appraiser developed information; and the calculations.

The new guide is also greatly expanded and explains the cost of cure method of appraisal, reasonableness testing, and includes new information and many new suggestions in the professional considerations and responsibilities chapter. It also has an improved casualty claims and losses chapter. These two chapters are very helpful to new as well experienced appraisers.

There is also a new chapter on appraisals within easements and rights-of-ways.

There are more great hints and many more helpful details than I can expound upon in this article. Please be advised, however, that the name of this book is “The Guide” – not “The Rules” – “for Plant Appraisal.” This book does not contain regulations for plant appraisal. Each individual plant appraiser must make his or her decision during the entire appraisal process based upon the situation.

The Guide provides a detailed discussion of the steps to follow during the entire appraisal process. Not every step is necessary in every situation, but this dialogue serves as a valuable checklist. Briefly, the appraiser should:

- Determine the reason for the appraisal;
- Decide who the client is;
- Write down all pertinent information, names and dates;
- Discuss fees and possible court appearances;
- Obtain a complete history of events leading to the appraisal;
- Ask for all pertinent documents and photos available;
- Visit the site;
- Make a sketch and take photos/videos;
- Prepare a report with proper credentials attached.

Although this is not an article about report writing, remember there is a good possibility that your report or appraisal will be closely scrutinized and criticized by attorneys as well as your colleagues.

The common “Cost Approach Method”

As discussed, the cost approach is the one that we, as arborists and plant health care technicians, will most likely be involved with. We will use one or more of the following methods:

The replacement cost method is one that may be used for plants that are big enough to be transplanted from a nursery. With this method, the installed cost of a replacement plant may be reduced (or depreciated) by a percentage factor for the tree’s species, condition and location. The word “may” is intentional. An appraiser has the leeway to use 100 percent for each of the factors if he or she determines the damaged party is entitled to it. In addition, the cost of removal of the damaged plant and stump might be added to determine the appraisal of damages. The Guide has a step-by-step worksheet and sample.

If a tree is too large to be transplanted reasonably, the trunk formula method could be used. With this method, the appraiser determines the cost of installation of the largest commonly transplantable tree in the area. In most regions of this country, a committee has established published guidelines of this cost, as well as species ratings. The appraiser also depreciates this cost by a species, condition and location factor. This formula is described in a step-by-step worksheet and sample.

The cost of cure method can be used in order to return a property to a reasonable approximation of its pre-casualty...
condition. The Guide gives comprehensive descriptions of numerous possibilities in using this method. With this method, the appraiser is not necessarily replacing species for species or size for size, but trying to replicate a situation. It may simply entail replacing a large shade tree with several smaller ones to produce a similar amount of shade, or it could be replacing a screen planting with similar sizes and species of trees to achieve the same effect. Or it could be for a large wooded area that would entail some replacing, some debris removal, stump regeneration and plant repairing, or other recognized urban forestry operations. It may even involve compounding plant and maintenance costs.

The cost of repair method is another cost approach that simply is used when a tree is damaged but can be repaired in a timely and satisfactory manner to return it to near its original condition.

CTLA has developed a very complete field report folder for the cost of cure method, and replacement cost and trunk formula method. Both of these folders take the appraiser through a checklist of possible procedures to arrive at an answer. They both also include pads of field report worksheets to be inserted into a professional-looking manila folder. These are available through ASCA, NAA or ISA.

I mentioned the factors needed to perform a tree appraisal. The Guide describes each one of these in great detail. Briefly:

Species. An appraiser needs to know what kind of tree he or she is placing a value on. CTLA recognizes that certain species may have different values depending on where they are located. Each regional committee, previously mentioned, has determined species ratings for their respective regions. Most have a range of ratings, as some regions have different geographical situations in the same region. The appraiser can always assign his or her own rating, depending on the situation.

Condition. As mentioned, the latest edition of The Guide has revised the condition rating to give extra weight for roots, stems and scaffold branches because they are more important than the foliage and smaller limbs. It also separates health and structure ratings for roots, stem and scaffold branches, because they can be different. If a tree poses an unreasonable risk, the tree should not be appraised. A hazard tree evaluation may be in order, and the tree might actually have a negative value. That would be the cost of removal and hauling.

Size. Most shade trees are measured for trunk diameter at 4.5 feet high, and most shrubs and small evergreens are measured for height or spread. This chapter provides information on unusual situations such as elliptical-shaped trunks, leaning trees, trees on slopes, low-branched trees, multi-stemmed trees, and trees that have been cut off at ground level. It also has convenient tables converting diameters and circumferences into square inches.

Location. The location factor involves three separate categories for judging. One is for site, which is an evaluation of the entire site that the tree is located on. Another is for contribution, which involves the functional and aesthetic influences on the landscape setting. The third category is for placement, which is the actual position of the damaged setting.

Keep it reasonable

In order for a plant appraisal to be considered appropriate and defensible, it must be reasonable. The Guide has a chapter devoted to reasonableness testing. Since the appraisal is often estimating the contributory value of plants to the entire property, the appraiser can compare his or her values to the real estate value of the entire property. Research has indicated that landscaping can be worth up to 20 percent of the total property value – possibly higher in some situations. Then the appraiser can determine the value of the entire landscaping and relate that to the amount of landscaping that was damaged.

Guide as your proof

It is apparent that there is a recurring item throughout this discussion about The Guide: Whereas it might be possible to appraise plant values without reading or using The Guide, one would have serious problems defending the appraisal. Just as one should not operate new equipment without consulting the proper manual, one should not appraise tree values without reading this manual.

The book also provides a lot more useful help than just that of the mechanics of plant appraisal. Some of these helpful topics that are not discussed in this article include:

- Conduct as an expert witness
- Professional liability insurance
• Sample certificates of appraisal
• Checklist for the appraisal process
• Arbitration and mediation
• Ethics and standards
• Professional qualifications
• Easements and rights-of-way
• Field records and tools
• Timber values
• Double and triple damages
• The appraisal report

A few of the more interesting plant appraisals that I have been involved with:

• The appraisal and court testimony for damages to 12 white pine trees that had seven to eight small low limbs on each tree removed by a county cleanup crew. The trees were on private property but hung over the element. In spite of my two appraisals of $960 (3 percent damage to $32,000 worth of trees) and a $3,000 cost of cure, the plaintiff was awarded $50,000;
• Appraisals totaling over $1.5 million due to the damages to trees and landscaping from soil contamination clean up from chemical warfare testing during World War I – yes, first World War!
• Investigation of appraisal of damages due to unauthorized logging operations of approximately 60 acres on a historic property dating back to 1790;
• Appraisal of damages caused by an automobile accident damaging a blueberry farm. Party claimed $179,550 in damages to bushes, loss of vegetative cuttings, loss of crops, and contaminated soil. When I visited the site for the insurance company, the farmer stated that she didn’t know why I was there as she wouldn’t settle for anything less. My appraisal of $11,970 was accepted.
• A court trial defending a landscape contractor being sued for $33,000 for improperly installing the plants, plus tree damage. Plaintiff collected nothing.
• An appraisal of damages to 26 separate properties that a tree contractor had sprayed before realizing that someone had placed 2,4-D in the spray tank.

Some interesting appraisal cases that are in my book Tree Law Cases in the USA include:

• A case that was arbitrated for $6,600 for the plaintiff, but they refused and asked for a trial. They were awarded $100 doubled to $200 at trial;
• A case where a judge misunderstood an expert arborist’s appraisal, believing it to be $1,000 instead of $8,500.
• A case where a jury awarded $1.2 million ($400,000 tripled) against a property owner, and $800,000 against the tree trimmer in a trespass case.
• A case in which a jury awarded more than twice the value of the entire property, plus an award for emotional distress.
• A case where the homeowners paid a premium for a house because it was next to a “preserved unbuildable lot,” but the builder began to clear the lot for a new home. Plaintiff was awarded $205,000.
• A case where the plaintiffs asked for $1,250,000 for damages to an abandoned Christmas tree farm. They were awarded $17,000 for cleanup costs only.

There are numerous appraisal claims that have been awarded or settled without trial in some amazing circumstances and amounts. Even with so-called reasonable-ness testing and guidelines outlined in The Guide, courts of law and insurance companies keep on making interesting decisions.

Lew Bloch is a registered consulting arborist and landscape architect. He is also the author of “Tree Law Cases in the USA.”
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Each region of the country experiences common tree disease problems season by season. In temperate regions, the problems are numerous and widespread.

In the latter portion of May, through June and the early part of July, for example, we start to see continued development of landscape problems that first appeared in spring. We see secondary infections in diseases such as apple scab as pathogen spores continue to be spread around. Anthracnose diseases can increase, particularly if wet weather persists and there is a second flush of leaves after defoliation. Black spot on rose continues to develop all season, particularly with frequent rains or overhead irrigation. Powdery mildews really start to appear in June, and as the summer goes on, they get worse and worse.

By September, the plant may be completely white. Aesthetically, the mildew is unappealing, but does little damage to the plant’s health. We see twig blights develop in the early summer, especially Juniper twig blights, and we see some of the cankers and other diseases developing, too. Monilinia shoot blight, which develops on Prunus species, is another early summer problem.
As new succulent, tender growth emerges, we begin to see problems with bacterial diseases such as fire blight on the rosaceae species: apples, pears and a number of other plants. We also see bacterial blight on lilac at this time of year.

Here are some examples:

**Black spot on rose.** Most people know what black spot on rose looks like. Lesions develop, then the leaves yellow, and plants start to defoliate. I have seen roses almost 100 percent defoliated from this disease as it progresses over the season. Will it kill the plant? Probably not, but it is unsightly.

**Volutella blight on pachysandra.** This is one disease that shows up frequently in pachysandra. You will start to see a certain area of the bed yellow and then blacken up, often with shriveling along the stems. This is a fungal disease, and we tend to see it more in beds that have had some winter damage. This is something often seen after winters that have not had a lot of snow cover.

**Powdery mildew.** Lilacs, in particular, are susceptible to powdery mildew. Again, this fungus is on the surface of the leaf, and if we aren’t in a severe drought, there is very little impact from the disease. The fungus has little “roots” that it puts into the leaf and removes moisture and nutrients out of the leaf. In years when we have sufficient rainfall, it does very little to the host. The thicker the leaf, the less the impact from the fungus. In most cases, powdery mildew is an aesthetic problem.

**Dogwood anthracnose.** This is one that there has certainly been a lot of talk about on *Cornus florida*, which is very susceptible. *Cornus kusai*, while less susceptible, isn’t 100 percent resistant. In very ideal conditions, *Cornus kusai* will develop some anthracnose but will not cause defoliation or twig dieback, just spots on the leaves.

Later in the season, gymnosporangium rusts develop into yellow spots or sometimes bright orange spots on the upper surface of the leaf. When you turn the leaves over, you can sometimes see little “hairs” sticking out from the bottom beneath those spots.

In the case of quince rust, alternate hosts include Amelanchier, or shadbush. We tend to see swellings developing on branches. Each one of the hairy tendrils sticking off the swellings produce spores that are going to go back, usually around August, to the Juniper species to complete the life cycle.

**Ash leaf rust:** This can appear sporadically but can be significant and dramatic. In 1999, ash leaf rust was absolutely phenomenal in New Hampshire’s Great Bay area. The alternate host for this rust is salt marsh grass (*Spartina*). Those spores can only blow certain distances – 20 miles inland from salt marshes. This particular year, because we had a lot of on-shore breezes, we actually saw this about 35
miles inland. Some people had never seen it before and the lab phone was ringing like crazy.

What is the first thing the customer asks? "What can I do or what can I spray?" At this point, the infections are already there and there will not be any additional infections. You can't do anything about it. The following year, it may or may not develop. You certainly can't go cut down all the marsh grass.

Monilinia shoot blight is something that we find on Prunus species. Over the past six or seven years, it seems to be showing up more and more. If we have a very wet spring, we see a lot of it. Flowering cherry, flowering plum and sand cherry are all susceptible to it. Monilinia shoot blight has the potential to kill the twigs. The initial infection starts during bloom. It attacks the blossoms and completely blights them. It almost looks like fire blight. Many people think it is fire blight, but it is a fungus and not a bacterial disease. As the new leaves start to come out, there are already spores on those twigs and stems and on the blighted blossoms. All we need is a little moisture as the leaves develop and it will kill them. From there, it goes in through the leaf petiole, attacks the twig and kills the twig back.

Kabatina is another fungus that attacks junipers. Kabatina actually infects in July and August, when you will see shoots start to yellow and then brown up. Ascocytta shoot blight shows up somewhat sporadically, but if it is a wet spring, it will appear more often. It causes a dieback on the shoots of lilacs just as the buds start to break. Later in the season, as it develops, black and brown areas will appear on the leaves; the leaves will then crinkle up, curl, and become distorted. Pruning will be essential once you see those brown shoots develop early in the spring.

Fire blight is a disease on plants in the rosaceae species: crab apples, apples, pears and mountain ash. Fire blight is a bacterial disease that attacks during bloom. The bacteria splash off cankers on the twigs and infect new blossoms as they are developing.

Bacterial blight of lilac is caused by the bacterium Psedomonas syringae. The bacterium also infects forsythia and mock orange. Symptoms include leaf spots, blossom blight and shoot dieback. The infected tissues often turn black. Of interest to note is that the bacterium that causes bacterial blight is an ice nucleating bacterium, thus, infected plants are often more severely damaged by low temperatures.

Dr. Cheryl A. Smith is plant health specialist at the University of New Hampshire Cooperative Extension, and is director of the UNH Plant Diagnostic Clinic. This article was adapted from a lecture Smith presented at New England Grows 2001.

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TREE CARE INDUSTRY - JUNE 2002
A new Pierce's disease vector, the Glassy-Winged Sharpshooter, is a serious threat to California vineyards, citrus, avocado, and eucalyptus trees. The GWSS was accidentally introduced into California in 1989. What makes this pest unique is that it travels faster and longer distances than other sharpshooters and feeds much lower on the cane. This means late season infections introduced by glassy-winged sharpshooters may survive the winter, causing chronic Pierce's disease. Fortunately, this devastating pest can be managed with Arborjet's revolutionary plant injection system.

With the Arborjet microinjection system it is quick, easy and cost effective to manage the GWSS before it spreads the disease to the trees and vines.

Arborjet offers therapeutic formulations to limit the progress of Pierce's disease. Using the Arborjet system, a greater number of plants can be treated in a shorter period of time since there is no waiting period for product absorption and no microinjection capsule left behind. You can triple your profits in 1/3 the time!

Based on soil and foliar analysis, Arborjet's research scientists have formulated organic and natural based nutritional supplements to augment the plant's vitality.

The Glassy-Winged Sharpshooter has been found in high numbers in citrus and avocado groves and on woody ornamentals in southern and central California. Pierce's disease has killed more than 300 acres of vineyards in Temecula Valley California alone in the past three growing seasons and is now spreading to northern California. The Arborjet's fast and effective new injection system promises real headway in the battle against the Glassy-Winged Sharpshooter!
It was long after the spectators had drifted away, the combatants had left town and the sawdust had settled that this year's winners of The Great Portable Sawmill Shootout were determined.

In fact, it would be three days following the close of the 2002 Northeastern Forest Products Equipment Expo on May 4 in West Springfield, Mass., before last year's shootout champion, Timber Harvester, again would be declared overall champion. Timber Harvester bested 10 challengers for top honors and also walked away with the No. 1 spot in its price/class division.

Other top-class finalists were Baker 3638D Mill in the over $30,000 division, Timber Harvester 30HTD25 Mill in the $10,000 to $30,000 division and Peterson WPF Mill in the under $10,000 class. (See sidebar for complete list of final standings by division.)

Now in its fourth year, the sawmill
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Auto cycle valve completes full splitting - the best IN the business... for maximum productivity

Timberwolf log splitters are engineered for the fast cycle time and heavy tonnage it takes to get the job done. Our bigger, baffled hydraulic tanks run cooler for longer engine life and greater wood production. And every Timberwolf splitter is built to order in the U.S.A. from components we manufacture. If you're serious about wood, it's time you got serious about a Timberwolf.

...we blew through that mountain of wood, were able to cash out the machine and pocket some vacation money.”
— Dennis Redican, Tabor Tree & Land Co., Martha's Vineyard, MA
The Baker 3638D took first place in over $30,000 Division.

J J' recovery rates - then totaled to determine the order of finish.

Everyone involved in the shootout is cautious to point out that results do not mirror those of actual day-to-day jobs, since in the heat of battle, snap decisions might result in a lower recovery rate, for example, in favor of total production throughput. In reality, a Sawyer likely would take more time to better the yield and quality.

At the end of competition, judges inspect every piece to ensure proper

All the way from New Zealand, the Peterson All Terrain Sawmill took on all logs.

Sawdust was flying from T.A. Schmid Maximizer 24.

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**3) 1990 International's**

Diesel, automatic, Prentice boom with 18 ft. dump body. Recently rebuilt engines. Very nice. $39,900

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TREE CARE INDUSTRY - JUNE 2002
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- Satisfy contractor/commercial client bidder requirements
- Boost productivity
- Ensure OSHA compliance
- Produce better motivated employees
- Improve ability to finish jobs on time and within budget
- Enhance your company's reputation

The NAA Model Company Safety Program represents the best practices of some of the foremost companies in the industry. It contains instructions to guide you through implementation, as well as sample company policy language and useful forms for program implementation in print and on CD.

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thickness and sharp, four-sided edging that excludes any trace of bark, and teams have the right to challenge results for review.

We tracked down Timber Harvester President Paul Nelson during the afternoon phase of competition to check his team’s progress in defense of last year’s crown.

“We are trying to improve on last year’s results and to do it with only one operator,” he said, explaining that the Waterloo, N.Y.-based company had to add one person to meet the competition requirements of a two-man team. The decision was made for the father-son team of Ken and Tim Clouser of Pennsylvania to represent the company with Tim sawing and Ken “on lookout.”

The shortest sawing time was clocked by Peterson’s WPF mill at just 44 min, 29 seconds, followed closely by the Baker 3638D at 45:18.

In terms of lumber recovery (finished lumber to logs according to pre-determined scale), both Timber Harvester and Quality Manufacturing’s Grizzly 30 Automatic “logged” 103 percent, with the Thomas 7020 unit close behind with 102 percent.

As noted above, competition results won’t always mirror true field conditions, but by the end of the day both competitors and spectators had a pretty good idea of the capabilities of the latest machines on the market.

The final standings by division:

<table>
<thead>
<tr>
<th>Overall standings</th>
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<tbody>
<tr>
<td>1. Timber Harvester 30HTD25</td>
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<tr>
<td>2. Quality Manufacturing Grizzly 30 Automatic</td>
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<tr>
<td>3. Baker 3638D</td>
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<td>4. Peterson WPF</td>
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<td>5. Thomas 7020</td>
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<td>7. Turner GM2420E</td>
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<td>8. T.A. Schmid Maximizer 24</td>
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<td>9. Peterson ATS</td>
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<td>10. Enercraft/Baker 18M</td>
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<td>11. Lucas Mill 825</td>
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<th>Under $10,000 Division</th>
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<tr>
<td>1. Peterson WPF</td>
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<tr>
<td>1. Baker 3638D</td>
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15-day satisfaction guarantee

Use of chain saws in trees should only be done by professionals with specific training. Price and availability vary by dealer. ©2002 Husqvarna

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Marketing is an essential ingredient in the recipe for growth— even survival— for any small business. Yet many owners of tree care and landscaping companies shy away from all but the most obvious ways to promote their businesses. For some, their entire marketing program, if they have one at all, consists of an expensive ad in the Yellow Pages.

Surprisingly, one of the most neglected marketing techniques suitable to tree and landscaping trades is also one of the least costly and potentially most profitable: direct mail.

During my years as a management consultant, I have found that most failures to make use of this pow-

Building Your List

While your own list of customers is likely to be the best one to use in your first direct mail efforts, it need not be the only one. Lou Giroud, owner of Lou Giroud's Tree Service in Huntingdon Valley, Pa., conducts a continuing direct mail campaign aimed at local companies whose customers may require tree care. He sends regular mailings to:

- Roofers
- Driveway contractors
- Builders
- Swimming pool companies
- Landscapers

His mailings remind these companies of his services. He reports receiving many referrals from them. Says Giroud, "In this business, marketing is everything."
erful marketing tool were due simply to
the owner's lack of knowledge of the
easy-to-master fundamentals of direct
mail marketing.

Equally common is the notion that, "It
doesn't work." In almost every case I
have encountered, this prejudice resulted
from an unsuccessful effort that failed to
incorporate even the most basic direct
mail essentials.

If you've been neglecting this power-
ful tool for building sales and profits,
there has never been a better time for you
to get started. In tough economies, many
business owners are tempted to cut back
on marketing expenses. That's exactly
the wrong thing to do. Experience proves
that continual marketing is one of the
most effective ways for companies to
prosper and grow through good times
and bad.

Direct mail is an effective marketing
tool in even the strongest of economies,
but it really shines when times get tough
when you need to make every penny
count. According to the Direct Market-
ning Association, every 8.8 cents spent on
direct mail advertising generated one
dollar in sales in 1999. Compare that to
television advertising where it took 19.2
cents to generate one dollar in sales.

Here are three reasons why direct mail
can be a profitable advertising medium
for your tree care or landscaping busi-
ness - facts you should keep in mind
when you are designing your own cam-
paign:
• Direct mail is a targeted medium.
  It's easy (and essential) to aim your
  advertising dollars exclusively at legitimate
  prospects.
• The results of your direct mail ad-
  vertising can be tracked and analyzed in
  minute detail and with more ease than
  with any other medium. This allows you
  to test new offers or approaches on small
  mailings before committing to your full
  mailing list. With direct mail, you don't
  have to guess how successful your efforts
  have been.
• Desktop computers and inexpen-
sive software have made it easier than
ever to design and produce professional
quality direct mail packages. While it is
always preferable to seek professional
help in any advertising program, it is not
an absolute requirement in basic direct
mail campaigns.

Getting started

Your first direct mail campaign should
be targeted to your most likely prospects
- your own list of past clients.

Targeting your direct mail dollars to
your best prospects means putting your
company's most valuable asset - your
own list of customers - to work. Direct
mail experts know that people who have
done business with your company in the
past are the best prospects for additional
business in the future.

Lou Giroud, owner of Lou Giroud's

---

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Tree Service in Huntingdon Valley, Pa., has built the core of his many successful direct mail campaigns around his list of past clients. “We send our quarterly newsletter to every client we’ve served during the past eight years,” he says. “Our mailings of about 12,000 bring in an average of 300 to 400 responses.”

Of all the variables in a direct mail campaign, the most important by far is the mailing list itself - not the creative design, not the offer. Direct mail professionals refer to this as the 60-30-10 rule. That is, 60 percent of the success of a mailing depends on the list used, 30 percent on the offer, and only 10 percent on the creative design.

That’s why you should always carefully target your direct mail advertising dollars - and the bull’s-eye in that target is the list of your own past clients.

The care and feeding of a direct mail list

Given the obvious importance of the list itself, you must make every effort to keep it healthy. Here’s how:

Keep it current.

People move away from your coverage area in numbers that may surprise you. According to government statistics, one in five Americans (20 percent) changes addresses each year. That means that a list untended for two or three years will suffer serious deterioration in quality.

One of the easiest ways to keep your list up-to-date is to request address corrections from your post office on at least one mailing per year. There’s a small expense for this service, but it’s money well spent. Every undeliverable address on your list represents wasted money.

Keep it clean.

Whether your operation is large enough to use custom software or whether you maintain your list with over-the-counter software such as Excel, Access, or Approach, it’s important to weed out irregularities such as duplicates and misspellings. If you use an outside service to maintain your mailing list, they will be able to perform list-cleaning services for you. And, of course, you must make certain that your list contains only names of people who are legitimate prospects for your service. As obvious as it seems, you don’t want to waste money sending your message to people who live in apartment houses.

Is it worth all this trouble? Definitely yes. The more accurate your list, the better your response rate. You can count on that.

Creating your mailing package

Once you are satisfied that your mailing list is as clean as you can make it, it’s time to decide what type of mailing will work best for you. A direct mail package can take any one of many forms. Here are three of the most suitable for tree care and landscape companies:

1. Concentrate on creating a mailing list as tightly focused as you can make it. Remember that your mailing list is the most important part of your direct mail package.
2. Spend a lot of time developing an attention-grabbing headline. With today’s short attention spans, your headline must give the reader an instant reason to continue reading. If your headline doesn’t do its job, the rest of your package won’t matter.
3. If possible, try to work in one or more of the proven power words in your headline or the body of your main copy: Free, New, You, Value, Yes, Discover, Introducing, Announc-
Postcards
The easiest to create and least expensive form of direct mail advertising is the humble postcard. Done with careful planning and a dose of creativity, a postcard is well-suited for some types of promotions—but woefully inadequate for others.

Given its obvious space limitations, a postcard cannot effectively carry a complex message that requires the reader to make a major decision. Still, a carefully crafted postcard message can be effective for such promotions as limited-time discount offers, pre- or post-season specials, invitations for free estimates, or simply providing notice of availability of your service to recipients within your area.

Hint: Your postcard mailing doesn’t have to be limited to the standard 3½-by-5 inches. Postal regulations permit postcards to be as large as 4½-by-6 inches and still be mailed for the regular postcard rate.

The additional space on the oversized card allows for more freedom in crafting your message, and is more likely to arrest the attention of the recipient. If you use a postcard mailer, I recommend that you always take advantage of the larger size. The slightly higher printing expense will be well justified.

Formal letter
When done skillfully, a letter—particularly a first-person letter—from the owner of the company to a client or potential client is one of advertising’s most powerful techniques.

Your message in a letter can contain more information, be more personalized to the recipient and is more likely to be given serious consideration by the reader.

In my experience, a letter written in the first person is the only choice for a local service company such as tree care or landscaping. The warmth and directness of a first-person letter, as opposed to the impersonal third person, greatly enhances the effectiveness of any message. The more personal your letter, the better will be your response.

First person simply means that the writer of the letter is speaking directly to the reader. A letter written in the first person will contain phrases such as this: “As owner of Smith’s Tree Care Company, I’d like to welcome you to our community.” Or “I take great pride in our reputation, and all of our service carries my personal guarantee of satisfaction.” In other words, write as if you were speaking to the recipient face to face.

Regardless of your offer or the nature of your message, always write in the first person. This technique alone will improve response to your offer.

Hint: Writing an effective sales letter is far more difficult than most company owners realize. Unless you are exceptionally skillful with English grammar and the subtleties of writing advertising copy, you should consider hiring a professional to create your advertising messages.

If you are convinced that you can do
a good job yourself, I urge you to have a qualified person check over your work before it goes to the printer. I have seen many small business owners become sold on the notion that direct mail advertising is a waste of time. They reached this conclusion after sending out a hopelessly flawed letter which, of course, produced little or no response.

Newsletters
As many tree care and landscape company owners have learned, an informative newsletter can be an amazingly powerful business-builder. Company owners such as Lou Giroud (who uses newsletters on a regular basis) agree that the key to a successful newsletter is worthwhile information.

Says Giroud, “I make sure that every issue of our newsletter contains information about tree care that is of genuine value to the homeowner. The sales message in our newsletter is always low-key, but it never fails to produce satisfying results.”

Newsletters may consist of a single page printed on both sides, or they may be in the more conventional four-page format. Either way, your local printer can provide important help if you decide to make use of a newsletter in your marketing program.

Test – Test – Test
One ingredient for success in direct mail marketing agreed on by all professionals is the absolute necessity of testing each and every promotion.

One of direct mail’s most important advantages is the ability to track the exact results of every campaign. With direct mail, there is no need to waste advertising dollars on a campaign that isn’t producing satisfactory returns. By tracking on a consistent basis, you will soon learn exactly which of your promotions are working and which are not.

The United States Postal Service offers some excellent advice on tracking and other direct mail tips on its Web site at http://www.usps.gov. Just click on “mailing” and then “promote with direct mail.”

Whether direct mail is art or science, or some combination of both, is a matter of continuing debate among professionals. One point that is generally agreed on, however, is that the tiniest change in a direct mail promotion can make a surprisingly big difference in its results.

Such seemingly unimportant details as the color of the paper or ink, the day of the week that the package is mailed, or the size of the type used can affect the overall results of the promotion.

At this point, you needn’t be overly concerned with such minutiae. The important thing is to get started with your own direct mail promotions now. If you follow the advice here, you’ll soon learn what works for you and what doesn’t.

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Making Amends
(From the Ground Up)

This enormous maple is alive thanks to careful soil and tissue analysis. Subsequent soil treatments and fertilization have brought it back to health.

By Laiici Robinson

The Louis-Dreyfus Estate, a sprawling 100-acre manor near Mt. Kisco, N.Y., comprises 20 acres of formalized planting areas, with the balance in fields, farmland, woodlands, old stone walls, and ponds. It’s an idyllic setting for sure, but it wasn’t the most favorable environment for trees 12 years ago, when Lewis Sparks hired on as manager. After several seasons of poorly performing bedding plants, and an overabundance of seed production from trees—an indicator of stress and decline—Sparks knew something was amiss. Tests in 1994 confirmed his suspicions that problems stemmed from the soil, which in this case contained excessive levels of phosphorus, low pH and insufficient organic matter.

“Generally, the phosphorus levels were 10 times what is normal for this area,” recalls Sparks, a soft-spoken man with a retail nursery background and over 20 years of estate work under his belt. “The soil had a pH of around 5.5, and we had low organic matter that was in the 3 percent to 3.5 percent range. I think the high levels, for the most part, were the result of excessive applications of chemical fertilizers. The phosphorus was being dammed up in the soil. It was not being used because it was not available. We had obvious soil compaction issues as well.”

Although there were no records reflecting how the grounds were maintained prior to his arrival, Sparks found an arsenal of chemicals onsite. He says the absence of beneficial insects and organisms pointed to overuse of harsh chemicals and the need to look for a more nature-friendly alternative. Sparks set about making amends to restore balance to the soil and to correct problems from the ground up.

“We absolutely stopped all applications of phosphorus,” says Sparks. “One of the challenges we faced was how to raise soil pH. That is generally done through applications of lime, but calcium levels were extremely high, so we couldn’t use lime. What we ended up doing was bringing the pH level up gradually through the use of potassium carbonate, which has an alkaline pH.”

According to Sparks, the slow-release liquid nitrogen/potassium solution supplied important macronutrients without exacerbating the existing phosphorus problems.

Next, Sparks initiated a fertilization program which included Essential, a Growth Products soil conditioner, akin to humic acid, to stimulate root growth, rejuvenate the soil, and promote growth of beneficial soil organisms. Sparks notes that regular applications of this organic soil amendment, containing plant extracts and kelp, does two things:

1. It solubilizes phosphorus, allowing it to be used by the plant or moved out of the root zone.

2. It increases the percentage of organic matter in the soil.

“With that program in place, we’ve seen a drop in phosphorus levels by 24 percent over the course of about six years. We’ve adjusted the pH to 6.5. That’s a full percentage point from where we were. We’ve gotten the organic matter up from 3 to 3.5 percent to 4.4-plus percent,” he reports.

With the soil on the mend, Sparks has more time to devote to gardening projects on the property, which is less than an hour’s drive from New York City.

“Lately, in the more natural areas of the landscape, we have been incorporating and, you might say ‘editing,’ or taking out some of the weak species,” explains Sparks, noting that he has two full-time people—one a horticulturist—to assist with tree and plant care at the Westchester County plantation. “The owner, William Louis-Dreyfus, has been a tree collector since the mid ’70s. It’s a very nice collection. We’ve certainly expanded it.”

About 80 percent of the trees found dotting the Louis-Dreyfus landscape were moved to their present locations. In addition to the dawn redwoods (Metasequoia glyptostroboides), pin oaks (Quercus palustris), Norway maples (Acer platanoides), sugar maples (Acer saccharum), white ash (Fraxinus americana), and tulip trees (Liriodendron tulipifera), Sparks takes particular pride in the more rare species: 14 cultivars of Japanese maples (Acer palmatum); 11 cultivars of false cypress, or white cedars
14 cultivars of European beeches (Fagus spp.); seven cultivars of unusual varieties of magnolia (Magnolia spp.); incense cedar (Calocedrus decurrens); cedar of Lebanon (Cedrus libani); and a common redbud cultivar (Cercis canadensis 'Forest Pansy'). Another interesting favorite, the weeping European hornbeam (Carpinus betulus 'Pendula'), produces wood with tensile strength close to that of iron, Sparks points out. The Europeans used it in ox yokes, across the horns — hence, the name "hornbeam."

"These trees are from all over the world, but of course, they have to fit into our climate, generally 6b (USDA Plant Hardiness Zone)," he adds.

To enhance the collection of trees, Sparks has established a dwarf conifer garden, formal herb gardens, rose gardens, woodland gardens, walks and scores of ephemeral bulbs.

"Whenever you have an integrated landscape — trees incorporated with small woody shrubs and herbaceous elements — it is visually more pleasing. It sort of replicates nature. Very few times do you find in nature just one single colony, or monoculture, created. You have your understory plantings, shrubs, and then your ground things going on, the herbaceous plants on a lower level. We have tried to use nature as our model," he says. "Where we have created monocultures, we feel we need to reintroduce elements into the soil that are not there, or were taken away, when we do this type of gardening. So where we had a choice, we chose an organic-derived product. We believe these products are easier on the soil and soil life. Our goals are to improve soil health, create better soil structure and tilth, and to encourage an environment where microorganisms can do their job. With a product called Companion, we’ve introduced mycorrhizae into the soil. This also acts as a biological fungicide."

A designated conservation easement on the Louis-Dreyfus estate, known as LuLu Farm, is included on the Garden Conservancy Tour, with the most recent event held on May 25, 2002.

"That’s an ongoing, national tour," notes Sparks. "We have upwards of 200 visitors throughout the season. The Ithaca Gardening Club will be touring in June, and we’ve had Hortus (Hortus Forum), another gardening club, out here. The 80 acres preserved in the conservation easement can’t be developed."

Food from the estate’s extensive vegetable gardens are canned and donated to area food banks. A small orchard, with 22 semi-dwarf apple trees, provides apples for cider pressing and the maple trees here are tapped for the sugaring process — activities introduced by Sparks and his wife, Penny.

It has taken time, but Sparks is seeing evidence that his steps to address problems rooted in the soil are working. He is sticking with his regimen, which begins with deep-root fertilization in the fall, followed by three applications through the course of the growing season, before concentrating on the grass.

"Now the emphasis is placed on affecting the whole issue of soil, with the idea being that tree roots are throughout the lawn area. We figure that if we create an environment in the soil structure and give the soil life and treat it in a way that promotes soil health, then we can unlock the nutrients to do their jobs. It’s ultimately less work. That’s the long range effect. It’s subtle in its changes, but in order to build up soil life, it is really effective. There isn’t a quick fix," he suggests.

Signs that the trees have benefited from this approach include fewer fungal infections as well as a reduction in other diseases. Insect problems are also less common than in the past, now that beneficiais are returning.

"The plants are obviously stronger," says Sparks. "We have noticed that they suffer a whole lot less storm damage than in the past, which we attribute directly to the plants being healthier and stronger, more able to resist insects and disease. Earthworm activity has also increased. With the addition of humic acid, a lot of organic matter is present. That’s helping to create a favorable environment for our trees and herbaceous plants. We’ve noticed much deeper rooting from all the herbaceous and woody plants."

Sparks concedes that an arborist’s work is never done. "But on the whole, it’s good work. I’m very lucky."
Tim Johnson
New Chairman of NAA Board of Directors

The National Arborist Association's new chairman of the board, Tim A. Johnson, came very close to avoiding involvement in the association altogether.

His father, who was always a strong advocate of the NAA, joined in 1950. Johnson's initial contact was less promising. In 1978, just after he had left his father's company to start out on his own, he was one of a group of arborists planning to meet with State Attorney General Bruce Babbitt about licensing. "I needed some statistical information for the meeting," he remembers. Even though Johnson had been involved with the NAA through his father's company, he had not yet signed on as a member with his own business. He called the NAA and asked the executive vice president, Bob Felix, if he would send the information he needed.

"No, you're not a member," Felix answered. After pleading his case, insisting that his efforts would help all tree care companies in the state, he asked again. "Join and I'll get it to you," promised Felix.

"Fat chance," Johnson thought at the time. It would be three more years before he would become an NAA member and a good friend of Bob and Pat Felix.

Since he first entered the industry working for his father, he has enjoyed a varied career. His expansive involvement in the profession has spanned many changes – with the NAA and the profession.

Johnson got his start in tree care during high school and college working for his father's company, Badger Tree Service, which was located in Beloit, Wis., then in Phoenix. He started as a general laborer and eventually became a foreman of all tree care operations.

After high school and before college, he took his arboriculture knowledge on the road, traveling the United States and working with a number of tree care companies. He took positions with Trees of Houston in Texas; Halverson Tree Experts in New Orleans; Florida Forestry in Tampa; Frost and Higgins Company in Boston; and Hillman Tree Surgery in Galesburg, Ill., (all NAA members).

After his travels, he enrolled at California Polytechnic State University at San Luis Obispo, where he earned a bachelor of science degree in agriculture – ornamental horticulture. He immediately put his newly minted degree to work with Davey Tree Surgery Company, which hired him to open an office in Hawaii. He moved to a position as corporate coordinator with Davey in California, from which he supervised offices in five states.

The lure of travel then took over again, and Johnson embarked on an 18-month journey around the world, sometimes visiting arboretums and tree care companies in Europe, Asia and Australia. He confesses he "didn't get a chance to stop and look at the trees while running with the bulls in Pamplona or hiking through the Hindu Kush in Afghanistan."

Upon his return, he went to work again with Badger Tree Service until striking out on his own. In 1978, he founded Artistic Arborist, Inc., in Phoenix, a full-service tree health management company. Artistic Arborist has evolved over the past 24 years from a consulting business to a fairly large tree service and back to a consulting business. Today, the company has a small tree care services division; offers consultation services; provides tree care skills training, workshops and seminars; and has retail tree care tools and diagnostic equipment for sale.

The curiosity and quest for knowledge that sent him around the country and then around the world has propelled him to dive into the organizations that influence the green industry. Just as his business has grown over the years, so, too, has Johnson's involvement in the organizations, committees and governing bodies of the profession. He is an active member of International Society of Arboriculture, American Forestry Association, Society of Commercial Arboriculture, Arizona Nursery Association, International Palm Society, National Arbor Day Foundation, and Valley of the Sun Men's Garden Club. In addition, he is vice president of the Board of Directors of American Society of Consulting Arborists and has been chairman of ANSI A300 Standards Committee since 1991.

His concurrent involvement with other green industry organizations has helped form his appreciation for the value of NAA membership.

"The NAA was founded 64 years ago with a dream of providing targeted services to commercial arborists," he says. "When my dad joined in 1950, there were 150 companies in
the NAA family. When I took the fateful step and joined in 1981, there were only 333 member families, a growth of only five members per year. Time marched on, peer review ended and membership raced to approximately 1,200 by the time I joined the board in 1995. Now, six years and two strategic plans later, we have approximately 2,800 members—a growth of five per week. Because of these strategic plans and hard work by the staff during difficult times, the NAA is financially stable in a way never seen before. Our bottom line has increased while we have invested in the association through technology to make the NAA a 24-hour, 7-day-a-week international association. Visit our Web site and see.

High on his agenda as NAA chairman will be to finalize the association’s next three-year strategic plan. He plans to put his 40 years of varied industry experience to use in helping to facilitate the association’s direction.

"With the breakthrough thinking and dreams that will be used to implement the next three-year strategic plan, the NAA—through the volunteer leadership, staff and infrastructure—will be able to move the NAA to heights unimaginable 10, even five, years ago," he insists.

"The next era of NAA will not be the same association my father knew, nor even the one we know today. To service our members, we must be a dynamic association with the ability and agility to change with the world as it changes around us. We, the current members and staff, are the custodians of the future NAA. We have to build the NAA so that the next generation wants to be a part of it."

Johnson is excited about the future of the NAA and he hopes to transfer that excitement to the membership at large during his tenure. "This is the time to put our efforts as a membership into working hard together to invest our time and energy into an NAA that will survive generational differences, diversity, and impacts we can’t even conceive of now," he says. "When the strategic plan rolls out this summer, I would like each member to consider contributing. We need each and every member to step up and share his or her expertise. There is room for everyone! Together we can accomplish great things."

Johnson’s 40-year personal journey through the profession has taken him outdoors around the world and indoors to the committee and boardrooms of the organizations that advance the entire green industry. Through his willingness to volunteer, share his experiences, and help write the standards that govern the profession, he has helped determine the direction of the industry.

As chairman of the board of the NAA, he has a clear sense of the direction he wants to take the association. "Let’s never look back—we are not planning to go that way."

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TREE CARE INDUSTRY - JUNE 2002
Arborist Service Day at Historic Site

On Saturday, March 2, 2002, the International Society of Arboriculture (ISA) Southern Chapter and Clemson Extension Service co-sponsored Arborist Service Day 2002 at the Penn Center Historic District in Beaufort, S.C. This was a volunteer service event where professional tree care companies and other volunteers donated their time, labor and equipment to take care of the many beautiful live oaks on the Penn Center Campus. The Penn Center is a significant site in African American history as it was one of the first schools for freed slaves and a retreat location for Dr. Martin Luther King. Despite the inclement weather, 85 individuals representing 25 companies and organizations participated in the day’s event.

Work crews began arriving at 7 a.m. that morning. The slow rain turned to heavy downpours several times, thoroughly drenching anyone who wasn’t already soaked. We decided to end the day at 1 p.m. and the Penn Center staff kindly worked with us to serve the Gullah meal at 1:30 so that everyone had a hot meal before they went home. The dedicated volunteers contributed $32,115 in 274 equipment hours and 568 personnel hours. Donated supplies and funds brought the total value of services received by the Penn Center to over $35,000! Local weather reports indicated that Mother Nature contributed 1.6 inches of rain during that time period!

In order to include everyone, many arborists brought their children. The Student Society of Arboriculture (SSA) and the National Arborist Association teamed up to provide a kids climb. The SSA and Preservation Tree Care provided the equipment and the NAA donated the time. Due to the rainfall the kids climb was moved indoors. Sturdy ceiling beams provided adequate support to allow the kids, big and little, some aerial time.

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Pesticide Notification Required at Pa. Schools

A new law recently signed by Pennsylvania Gov. Mark Schweiker will require that a certified applicator or pesticide application technician notify school officials at least 72 hours before beginning the planned treatment. The applicator must also supply school officials with a pest control information sheet that must be posted by school officials in a public area with high foot traffic.

Under the new law, the pesticide and applicator information (including phone number) must also be made available to student’s parents and guardians who request the information.

The pesticide notification ruling will take effect Jan. 1, 2003.

Another bill that recently became a law, SB 705, amends the Public School Code by adding legislation that requires schools to adopt integrated pest management plans in accordance with the integrated pest management policies or regulations of the Department of Agriculture.

Schools are required to adopt an IPM plan by Jan. 1, 2003. The bill also places responsibilities on the Department of Agriculture to assist in the development, planning and preparation of the integrated pest management plan.

Eastwood Loses “Tree-mendous” Honor

Clint Eastwood’s distinction as owning what was believed to be the nation’s largest known hardwood has been overshadowed by an even bigger tree 200 miles up the street.

The new champion — a bluegum eucalyptus — was discovered in Petrolia, Calif., north of Eastwood’s Carmel, Calif., home.

In 2000, Eastwood’s bluegum eucalyptus took first place in the official National Register of Big Trees. The new champion this year weighs in at nearly 49 feet in circumference and 141 feet tall, with a 126-foot crown. That gives it a point total of 759 on American Forest’s scale, overshadowing Eastwood’s 629-point eucalyptus.

The registry is revised every two years.

Weedkiller May Make Male Frogs Into Females

A recent study from the University of California, Berkeley, suggests that the popular weedkiller atrazine can cause mutations in frogs, giving male frogs female sex organs and curtailing their croaks — a key to attracting mates.

The study indicated that even very low levels of the herbicide can cause the mutations. Although the frogs appear normal on the outside, mutated frogs have both male and female sex organs, and often, their testicles do not function properly. The study showed mutated frogs have a lower-than-normal level of testosterone and a smaller larynx — making it more difficult for them to croak and attract mates.

The decline worries scientists because amphibians such as frogs respond to environmental dangers before other species.

According to the report, published in the Proceedings of the National Academy of Sciences, “Atrazine is the most commonly used herbicide in the U.S. and probably the world.”

Tree-Sitter Dies in 150-Foot Fall

A tree-sitter who climbed 150 up a tree to protest a timber sale fell from the tree and died just days after the sale she was protesting was called off.

Officials told the Associated Press that Beth O’Brien, 22, of Portland, Ore., was using a rope to get from one platform to another in the treetops of Oregon’s Mount Hood National Forest when she slipped.

The timber sale she had been protesting was canceled three days before her death, but protesters were waiting for the final paperwork to be signed before they climbed down from their perches.

It took rescue crews over two hours struggling up snowy dirt roads to reach the camp after fellow activists called rescuers, Clackamas County Sheriff’s spokeswoman Angela Blanchard said.
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A Question of Hair

By Derek Patch

Have you ever looked through a magnifying glass at a young shoot of a tree or a shrub? It is a most revealing, not to say fascinating and beautiful, experience. A beech (Fagus sylvatica) leaf, for example, has a delicate fringe of hair, while some limes (Tilia species) have stellate hairs on their abaxial (underside).

To a plantsman, the presence or absence of hairs can be critical in determining the identity of a plant. In most tree species, such hairs are generally short lived, but tufts may persist in the axils of the veins, for example. During the time the ephemeral hairs are present, they can prove problematic.

To a tree surgeon, London plane (Platanus acerifolia) is probably the tree best known for having hairy shoots and leaves. After the white poplar (Populus alba), the expanding shoots and leaves of the planes are possibly the most densely clothed in hairs. On London plane, the covering of hairs, known as farina, quickly weathers away during early spring.

The mass of fine hairs falling from London plane trees is not of consequence to the general public walking along the urban pavement. This is because air currents quickly disperse the hairs over a wide area.

For anybody working in the crowns of a London plane in the spring, however, the farina can be far from benign. Intimate contact with the hairs, as occurs when pruning street trees in spring, can lead to problems. The fine hairs find their way into the respiratory tract where they cause irritation and, in some cases, hay fever and asthma, resulting in lost work time. Hairs of the less frequently encountered Oriental plane (P. orientalis) have been recorded irritating both the respiratory tract and the conjunctiva of the eyes.

The problem is not solved by having all tree workers taking a vacation in the spring, because in the autumn, the fruits of London plane – those bristly spherical balls – also contain a mass of fine hairs, which are just as irritating to the respiratory tract.

Would the solution be to issue all tree workers face masks in spring and autumn when they are working on London plane? Imagine the reaction of the general public walking around the city seeing men wearing masks pruning trees! There would be widespread calls for all plane trees to be felled – a scenario that we must not fuel! A more practical approach – and one that would not affront the public and may even reduce complaints about pruning being done at the wrong time – would be to prune London planes only in the dormant season. In an emergency, tree could be pruned when they are in full leaf and the farina has weathered away.

Even though the farina is a purely physical irritation in the respiratory system, the resultant sneezing and streaming eyes do place tree workers in potential danger. Taking steps to minimise the risk should, therefore, form part of a job risk assessment.

Derek Patch is part of Tree Advice Trust in the United Kingdom. Tree Advice Trust’s Tree Helpline, available in the UK only, can be reached at: 09065 161147. Reference: Mitchell J., and Rook A. (1979) Botanical Dermatology. Plants and Plant Products Injurious to the Skin. Greengrass, Vancouver.
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