STUMP CUTTER SAFETY and PRODUCTIVITY CAN WORK TOGETHER

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Making Great Leaders

An oft-cited quote from the legendary Vince Lombardi is that, “Leaders are made, they are not born.” When you think about it, he has an excellent point. Truly great leaders are those who have put in the effort to hone leadership skills as they would any other ability. As Lombardi continues, “They are made by hard effort, which is the price that any of us must pay to achieve any goal that is worthwhile.”

So, how do we make great leaders?

Perhaps the first step in making great leaders is to truly embrace the idea that we need to invest in the effort. While we all intrinsically agree with Lombardi’s observation, we seemingly cannot help but continue to believe that we can identify and hire natural-born leaders. To some extent, this stems from our own inability as leaders to appreciate the work, mentorship and learning that fostered our own development.

Another critical error is mistaking talent as a sign of leadership ability. You may have very talented tree climbers, excellent salespeople and outstanding customer-service representatives, but those skills in and of themselves do not make great leaders. It is crucial, then, that those of us already in management positions recognize that growing more leaders will require thoughtful cultivation and support on our part.

Recognizing that great leaders do not just show up and lead is important, but now we are left with determining how to best grow those leaders. In this column in the last issue of TCI, I talked about one important resource, mentorship. Identifying potential leaders, imparting your wisdom and providing them with opportunities to practice and develop are valuable ways that you can foster good relationships and good managers. The next time you need to tackle a project in your business, think broadly about who you might guide in leading that initiative in your place.

While experience is a valuable tool in developing leaders, so, too, are formal training programs. Unfortunately, not every firm has the resources to create and staff an internal management development program, but TCIA can help. Our Crew Leader Qualification program guides participants through nine facilitated activities that marry real-world experience with the development of key management skills. Professionalism, performance management, communication, safety and production are just some of the topics covered in this program. For more details, turn to page 34 of this issue of TCI.

Making leaders is in no way a sure thing. By accepting that leaders are not born with innate ability, but rather must be developed and molded, we can begin to dedicate resources to that effort. Through mentorship, we can impart what we already have learned and provide opportunities for future leaders to develop their own skills. And by taking advantage of formal learning such as the TCIA Crew Leader Qualification program, we can leverage industry best practices and experience to enhance those skills. Please join us in creating the next generation of tree care industry leaders.

Dave White, CAE
Publisher

Tree Care Industry Magazine is the official publication of the Tree Care Industry Association.
For TCIA membership information, call 1-800-733-2622, or visit www.tcia.org.

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

ON THE COVER: An employee of Pathfinder Tree Service, an eight-year TCIA member company based on Norwood, Massachusetts, grinding stumps during a 2017 Massachusetts Arborists Association Arbor Day event at Elm Bank, in Natick, Mass. Photo by Kathleen Costello. An article about stump grinders begins on page 10.

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Get a Bandit stump grinder for your workflow, from the occasional stump cleanup or for the everyday grind. Circle 7 on RS Card or visit www.tcia.org/Publications

See how Bandit can Build Your Bottom Line.
Contact your local authorized Bandit dealer to learn more!
By Rick Howland

So, you’re thinking, “Another stump-cutter safety feature sure to cut into my productivity. Say it ain’t so!”

OK. It ain’t so.

It turns out that the perception of productivity loss due to stump-cutter safety devices and procedures is more a fear and a myth than reality.

What we found out researching this article was that it’s often the opposite. Advancements in stumper safety have increased productivity, at least according to the manufacturers we talked with.

Says JR Bowling of Rayco Manufacturing, now part of Morbark, “Rayco has been in the stump-cutter business since 1978, and I have been in the business for more than 20 years. Obviously, we’ve seen a lot of advancements, including safety. “Historically,” he says, “among the first things we paid a lot of attention to was chip deflection, working to see that the operator or a bystander is not struck by a piece of wood coming off the stump. Later, we took steps to help keep the operator safer by focusing on keeping the operator away from the cutter wheel and moving parts of the machine.

“If we look back over the years,” Bowling continues, “progress started with a lot of those simple things, but safety advanced dramatically throughout the industry. The big thing that Rayco worked on in an effort to remain at the leading edge was to keep the operator safely at the control station rather than having the operator abandon the machine controls while it is running to clear an obstacle, for example. Rayco recognized the importance of keeping the operator at the control station – the safest spot. It is well guarded from chips and flying debris, and the operator is less likely to come in contact with moving parts – and the cutter wheel.”

Continuing, he says, “Over the years, we have added a number of safety features. We were the first to come out with the hydrostatic cutter wheel.” Bowling adds that one of the more significant contributions to safety has been Rayco’s Quick Stop cutter wheel.

“The advantage with Quick Stop is the ability to control the cutter-wheel speed independently from engine RPM,” he explains. “Now, you can have the engine running at full high-idle and be able to run the cutter wheel at varying speeds between zero and 1,100 rpm – adjusting to conditions without changing engine speed. With the Quick Stop, if you are running the machine at full high-idle and the cutter is also at full...
high-speed grinding, you can bring the cutter to an almost instantaneous complete stop. And by that, I mean in about three seconds.

“This provides a level of safety not available in other stump cutters where the cutter wheel has to coast to a stop. For example, the technology allows the operator to stop the cutter wheel almost instantly if a bystander approaches, and the operator gets to shut the cutter wheel off without shutting off the engine.”

This is important to the productivity benefit side of the equation, he notes, because, “it saves time if the operator has to walk away from the machine, for example, to remove an obstacle or object, such as a buried rock. The cutter wheel is stopped quickly without having to shut down the engine and then bring it back up to speed to resume working. Idling down and then coming back up to speed takes a long time, and people tend to skip that as they try to get the job done.

“The object is to increase safety without affecting productivity – or by adding to it. If the stump-cutter operator needs to pause for a brief period, the Quick Stop feature takes far less time to stop the cutter wheel and then resume work rather than coast to a stop or shut down, which we estimate to take two to three minutes or more. This could occur multiple times, especially in rocky soil. Those minutes quickly add up.

“Quick Stop is built into all of the Rayco stump cutters that feature the hydrostatic-drive cutter wheel,” he states, specifying that it is featured on its RG70X and RG100X machines. The company also makes cutters with a traditional (belt-driven) drive train and featuring a braking system that cuts wheel rotation much earlier than systems without a brake, according to Bowling.

“Of course, we continue to do things to improve guarding around the cutter wheel, for example, a guard at the cutting wheel on remote-controlled machines to keep the operator away from the cutting area as well as color-coded areas to indicate potential danger.”

To Bowling’s way of thinking, “There is no reason safety and productivity cannot go hand-in-hand. I have always felt that the most productive work site is a safe one. Think of it this way. You can never be less productive than during a ride to the hospital.”

JR Bowling

“I have always felt that the most productive work site is a safe one. Think of it this way. You can never be less productive than during a ride to the hospital.”

Aaron Foster, engineer and project manager for J. P. Carlton, maker of stump cutters and wood chippers, comes at the safety and productivity issue from another angle. “I think the advancement of wireless remote-control systems has helped safety and productivity significantly,” says Foster.

“He goes on to explain that not only does the remote-control technology help protect the operator and keep productivity up by providing a better view of the job, it also allows the operator to be watchful for potential obstacles and bystanders. The added visibility can alert the operator to potential hazards that could halt production.
temporarily, or worse, put the machine out of commission so repairs can be made.

Foster also points to what he sees as a major development for the Carlton stump-cutter brand, the Razor Wheel. “We developed a new cutting wheel about 12 years ago called the Razor Wheel. It was designed for two reasons: safety and productivity,” he maintains.

“The Razor Wheel was designed to reduce the amount of chips flying due to the cutting process. In doing so, it contains the chips better. That, in turn, saves on the mess and, of course, cleanup time,” Foster explains. The Razor Wheel is said by the company to provide five major advantages: higher cutting efficiency, longer tool life, less chip spread, lower maintenance and lower induced vibration.

Taking an overall look at the stump-cutter market going into the summer, “Demand for stump cutters is way up,” Foster reports, explaining that, in his opinion, factors influencing the uptick include an improving national economy and a plethora of major storms.

Foster concluded his remarks expanding on Bowling’s comment about safety adding to production. “Keep in mind that safety is inherently productive. If a worker is not injured and if the machine remains functional in difficult environments, the throughput productivity remains on track. Also, if a worker is safer and not as fatigued, productivity automatically goes up.”

Jason Morey, sales manager at Bandit Industries, notes that the company has long been promoting safety in the tree care industry. “We have gone to great lengths to increase safety awareness by partnering with trade organizations that focus on safety, such as TCIA,” says Morey.

“Taking it one step further, Bandit has designed and implemented safety features to our lineup of stump grinders” he states. “Of course, operators should always wear the correct personal protective equipment. The best protection an operator can have is an awareness of the machine and any potential hazards when operating it.”

Morey adds that, “All Bandit stump grinders feature emergency shutdown switches within easy reach of the controls – even on remote-controlled units. Triggering the emergency-shutdown switch will immediately cut the engine of the machine, shutting down all power to the unit.”
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Continuing, he says, “Bandit has also included a protective cutter-wheel guard on all stump grinders that discourages operators, or anyone within the area of the stump grinder, from accidentally coming into contact with the spinning cutter wheel.”

Additionally, “Standard rubber curtains contain chips, as well as help protect the surrounding area from flying debris. The contained chips also make cleanup easier,” Morey notes.

“Select Bandit stump grinders have optional swing-out operator’s consoles with durable Lexan protective glass. This allows operators to be next to the machine for greater visibility while being protected from dirt and debris,” he reports, adding, “and optional radio remote controls keep operators at a distance while grinding stumps.”

Matt Hutchinson, product manager for Vermeer, takes pride in the Vermeer claim that, “In 1957, Vermeer invented the stump cutter, a patented apparatus created to help make stump removal easier for tree care professionals.

“Today, Vermeer continues to equip stump cutters with features to help owners be more productive in their day-to-day work,” Hutchinson says, adding, “Some of these productivity and safety features include the SmartSweep control system and the Yellow Jacket cutter system and its cutter-wheel guard, which floats over the stump and other obstacles as the cutter wheel sweeps across the stump.” The SmartSweep control system is designed to monitor engine speed and automatically adjust the cutter-wheel sweep rate to maximize power to the cutter wheel while reducing engine stress. The Yellow Jacket cutter system is designed to provide faster, easier serviceability, as well as extended pocket and tooth life, according to Hutchinson.

“Vermeer stump cutters are also equipped with a patented capacitance-sensing operator-presence system,” Hutchinson says, “designed in collaboration with the U.S. National Institute for Occupational Health and Safety (NIOSH).” According to company literature, the user-friendly operator-presence system is intended to help protect the operator and enhance operator safety. If the operator’s hand(s) leave the cutter-wheel controls for more than one second, the cutter wheel will disengage and come to a stop, and the cutter-wheel (operating) indicator light will go out.

So, what all this means is not only do you not have to choose between safety and productivity, but choosing safety in almost every case will improve productivity, with a slew of products and innovations available from manufacturers who know the value of both to your business.

Some of Vermeer’s safety features include the SmartSweep control system, Yellow Jacket cutter system and cutter-wheel guard that floats over the stump and other obstacles as the cutter wheel sweeps across the stump. Courtesy of Vermeer.

Toro’s STX-38 stump grinder has an improved cutter head designed for better chip management and a greater ability to grind below grade. The guarding has been reshaped and raised to improve chip space and ground clearance under the head. Toro has made these improvements to the machine without reducing cutter-wheel visibility. Courtesy of Toro.

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Bandit Industries to go 100 percent employee owned

Bandit Industries owners Mike Morey, Sr., Dianne Morey and Jerry Morey announced in June they would sell 100 percent of the company to their employees in an employee stock-ownership plan (ESOP). Under the ESOP, Bandit will retain its current leadership, and key management personnel will remain in place. It will also allow Bandit to always remain Bandit.

The announcement comes after two previous attempts to sell Bandit Industries – once to another manufacturer and once to a private investment firm.

“We realized neither was a good fit for Bandit, so we made the decision to sell to our trusted employees,” says Dianne Morey.

“It will be fun to watch our crew take it to the next level,” says Mike Morey, who developed the very first Bandit chipper in 1983 and who founded Bandit Industries.

Bandit is growing rapidly, with 20 percent growth per year, two plant expansions currently underway and several new products being introduced later this year, according to a statement from the company.

Bandit will celebrate its 35th anniversary this September with a dealer meeting and a field day open to the public. All of the Bandit products will be shown, including new products that are about to be released.

“We are a leading supplier in all of the markets that we are in,” says Jerry Morey. “We have a very strong, dedicated dealer organization and a great crew, which is the key to our success. Our employees are experienced, smart and loyal to us. That is why we are so confident that an employee-owned company is the right fit for Bandit. All our employees will have a stake in the company.”

Bandit Industries also recently entered into an agreement with Germany-based Arjes GmbH (ARJES), a manufacturer of slow-speed shredders and rock crushers. Bandit will sell and distribute the Arjes products in the Americas, Australia, New Zealand, South Africa, Indonesia and other parts of the world.

Bandit large-equipment dealers from select markets will offer sales, service and parts on Arjes machines. Those dealers were introduced to the new equipment in early June at Bandit’s mid-Michigan facilities.

“As Arjes equipment fits perfectly in our full product line,” says Jason Morey, Bandit sales manager. “Arjes believes in the same principles that guide Bandit Industries – build machines strong and stand behind customers every step of the way. It’s what both of our companies have done, Bandit for 35 years and Arjes for more than 10 years, and it’s what we’ll continue to do.”

Bartlett Tree Experts buys Seattle Tree Preservation

Bartlett Tree Experts expanded its presence in the Pacific Northwest in May with the acquisition of Seattle Tree Preservation. Bartlett already has an operation serving the Seattle area from nearby Kenmore, Washington, which is expanding to include the new staff and clients gained in the acquisition.

Seattle Tree Preservation has been a TCIA member company since 1988.

John Hushagen, owner and a founder of Seattle Tree Preservation, selected Bartlett to purchase the business when considering his options for retirement. “When Seattle Tree Preservation was founded in 1987, we chose the name to distinguish ourselves from the many businesses at the time that did little more than remove trees. I’m proud to have been a leader here for many years, and now the time feels right for me to retire and pass my vision of urban tree care onto a company that shares my values,” reflects Hushagen.

This development to expand service in Seattle follows Bartlett’s 2017 acquisition of Northwest Plant Health Care in Spokane, Wash. – an entirely new service area for the company. Both investments are part of Bartlett’s commitment to growing its business in the Pacific Northwest.

Joe Kramer, 30-year TCIA member, dies

Joe Kramer, owner of Kramer Tree Specialists, Inc., an accredited 30-year TCIA member company based in West Chicago, Illinois, passed away peacefully at his home on May 9, 2018.

Joe is survived by his two sons, Todd and Jeff Kramer.

“Joe loved his family, friends, employees, career in arboriculture, pets and golf. A list of all of Joe’s passions could go on and on,” his sons wrote in a memorial for their father. “His fire and passion that he exuded when he would speak with you about anything was infectious and gratifying. He was one of the hardest-working, most caring and respectful human beings that you could have ever met.”

Joe founded Kramer Tree Specialists in 1974. He had worked in various jobs prior to this, including with another tree care company, where he felt things could be done better and in a more efficient manner.

“He began Kramer Tree Specialists with the vision of promoting the practice of safe and professional arboriculture and empowering property owners to be the caretakers of their trees. He was a leader in the arboriculture industry through his innovative ideas of how to create the best service in arboriculture and providing an exceptional client experience,” his sons wrote.

Joe was actively involved in the Illinois Arborist Association, Illinois Landscape Contractor Association and TCIA. He was part of the very first class in the state of Illinois in acquiring his ISA Certified Arborist credential. He encouraged all of his staff to develop professionally in their careers and to strive to be the best at their trade and help to empower others.

Plans for a memorial service were to be announced at a later date.
These full-day workshops combine all aspects of Plant Health Care (PHC) for both technicians and managers, and feature live demonstrations of PHC techniques. PHC services are based on combining the principles of Integrated Pest Management (IPM) with proactive tree care management. Novices will learn about PHC concepts and methods, while managers can compare and evaluate their company’s PHC program against the latest industry recommendations.

**Subjects will Include:**
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- Diagnosis
- Insect Management
- Disease Management
- Pesticide Application
- Abiotic Disorders

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**Aug. 9** > Cleveland, OH  
*Instructed by Dr. Mike Raupp & Sylvia McNeill, BCMA

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To register, call  
800-733-2622  
or visit TCIA.org/PHC

*Tree Care Industry Association*
**Fecon FGT Viking Axe knife**

Fecon Inc.’s new FGT Viking Axe knife tool, part of its Viking Tool Series, includes an integral, easy-to-use gauge that ensures proper cutting angles are maintained. The tool is double sided and easily flipped for a brand-new cutting edge when the first side is completely worn. This doubles the tool life. The thicker blade creates a more durable edge, increasing the overall life of the knife. The angle is also easier to sharpen, according to Fecon. The knife’s pointed edge is designed to allow the knife to flow through material better in an open drum and provides self-sharpening benefits while still being able to be manually sharpened. Ribs behind the knife’s edge lend to increased strength and durability. (www.fecon.com)

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**Bandit’s Model SA-25 stump-grinder attachment**

Bandit Industries, Inc., has expanded its line of skid-steer loader attachments to include the Model SA-25, a hydraulically powered stump-grinder attachment that operates off a loader’s existing high-flow hydraulic system. The SA-25 features a 24.5-inch-diameter Revolution cutter wheel, the same size cutter wheel found on some of Bandit’s largest self-propelled stump grinders. The cutter wheel has a depth of 21.625 inches and a swing of 50 inches. (www.banditchippers.com)

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**Echo PPF-2620 Power Pruner**

Echo has expanded its Echo X-Series of tools with the new PPF-2620 Power Pruner designed for arborists, landscapers and orchardists. Echo’s 25.4cc engine has been integrated into the fixed-length pruner. Designed to be lightweight with optimal cutting performance, the PPF-2620 features increased power and torque over Echo’s PPF-280. Features include a see-through oil tank with a large opening for easy filling, a rubber engine mount for reduced vibration and a rubber grip and a rubber sleeve for operator comfort. The main pipe of the 96-inch-long pruner is made of steel for added stiffness and strength. The PPF-2620 will be sold through Echo’s dealer network. (www.echo-usa.com/Products/X-Series)

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Aerial Lift Specialist Workshop***
Livermore, CA
Contact: montana@bridgewoodtreecare.com

**July 10, 2018**
Georgia Arborist Assn. Bi-Monthly Training & Meeting
Lawrenceville, GA
Contact: georgiaarborist.org/event-2778604

**July 12, 2018***
Plant Health Care Workshop
Massachusetts Horticulture Center, Wellesley, MA
Contact: www.tcia.org/training

**July 13, 2018***
Electrical Hazard Awareness/EHAP Workshop**
Arcadia, CA
Contact: www.tcia.org/training

**July 17, 2018***
Electrical Hazard Awareness/EHAP Workshop**
Urbana, IL
Contact: www.tcia.org/training

**July 17-18, 2018**
Illinois Arborists Association Summer Conference
Champaign, IL
Contact: illinoisarborist.org

**July 19, 2018**
CT Tree Protective Association Summer Meeting
Farmington, CT
Contact: www.CTPA.org

**July 21, 2018**
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**August 5-8, 2018***
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**August 9, 2018***
Crew Leader Qualification Workshop
ISA Annual Conference, Columbus, OH
Contact: www.isa-arbor.com/2018conference

**August 9, 2018***
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Cleveland Botanic Garden, Cleveland, OH
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**August 15-16, 2018***
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**August 16-18, 2018***
TX Nursery & Landscape (TNLA) Trade Show
San Antonio, TX
Contact: www.nurserylandscapeexpo.org

**August 17-19, 2018***
NY State Woodsmen’s Field Days
Oneida County Fairgrounds, Boonville, NY
Contact: www.starwebhosting.net/woodsmen/

**August 18-19, 2018***
PTCA of San Diego Annual Field Day
Balboa Park Club, San Diego, CA
Contact: WCISA.org

**August 22, 2018***
Crew Leader Qualification Workshop
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**August 24, 2018***
Crane Operations Workshop
Benson Park, Omaha, NE
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**September 18, 2018***
Saluting Branches – GAA Volunteer Day
National Cemetery TBD, GA; and nationwide
Contact: neil@georgiaarborist.org; salutingbranches.org

**October 11, 2018***
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**October 19, 2018***
Chipper Operator Specialist Workshop***
Lawrenceville, GA
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**November 6-7, 2018***
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**February 11-16, 2019***
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**Susan Harwood Grant-funded workshop; does not include lunch
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**What’s Coming in TCI?**

Each issue of *TCI Magazine* contains a variety of articles tailored to the specific needs, concerns and interests of arborists. *TCI* solicits a number of articles from outside writers to keep its editorial content fresh. Do you have a story for *TCI*? The editor will be happy to review your idea or manuscript and discuss it with you. Here are some of the upcoming topics for the next two issues:

**August**

- **Machinery & Equipment**: Right-of-Way, Wood Processing, Biofuel/Mulch
- **Tools & Supplies**: Pest Management, Climbing Gear, Preparing Storm Response
- **Services**: Tree Appraisal, Insurance
- **Safety**: Ergonomics
- **Bonus Circulation**: ISA Conference

**September**

- **Machinery & Equipment**: Trucks, Storm Prep & Response
- **Tools & Supplies**: Fertilization/Soil Amendments
- **Services**: Maintenance & Repairs
- **Safety**: Aerial/Lift Safety, CEU Quiz
- **TCI Equipment Locator – Fall**: Guide to New & Used Equipment

Contact editor@tcia.org

Advertising opportunities: Sachin Mohan, smohan@tcia.org
This year, TCIA has been working with the federal Occupational Safety & Health Administration on something OSHA calls its Safe+Sound campaign. The campaign culminates with Safe+Sound Week, August 13-19, 2018, in which OSHA, TCIA and other cooperators will plan special activities to encourage safety in the workplace.

The Safe+Sound campaign falls completely in OSHA’s outreach/education/assistance bucket and imposes no regulatory burden on employers.

This summer, as things literally heat up across the country, TCIA suggests that you check out the non-regulatory guidance on heat-illness prevention available on OSHA’s website. Go to www.osha.gov and search for “heat illness” or look it up in their A-Z Index.

OSHA and TCIA have put together a Tree Care Industry Hazard Information sheet with a summary of some of the most common safety issues in the tree care industry, a list of resources from which to learn about and address them and some suggestions for activities to help keep them front-of-mind for your employees.


You also can access a number of other health and safety resources on OSHA’s webpage dedicated to the tree care industry: https://www.osha.gov/SLTC/treecare/

This Safe+Sound Week campaign aims to encourage every workplace in the U.S. to have a safety and health program that includes management leadership, worker participation and a systematic approach to finding and fixing hazards.
Accidents involving detached trailers happen every day across the country. Many end tragically. Some trailer accidents may be unavoidable, as when road debris blows a tire or when a weld on part of the trailer fails. Such accidents can happen even to drivers who are serious about highway safety and conscious about what they pull down the road.

Human error can be involved when drivers do not understand how to attach a trailer safely to a truck, or how to load the trailer so that the truck will steer properly. If negligent, the driver pulling a trailer can be civilly and criminally responsible. And by default, the business owner may also be brought into a lawsuit and future litigation.

More important, it doesn’t really matter whether a driver was uninformed, careless or negligent. When people are hurt or killed in trailer accidents, excuses can’t replace lives or take away pain and suffering. Using trailers with care isn’t just about shielding yourself from liability; it’s about being safe for everybody on the road.

In practice, a truck’s tow rating matters much less than the maximum towing capacity of the entire hitch assembly, which consists of the receiver, insert, ball and truck itself. The entire hitch assembly is only as strong as its weakest component. The weight of a trailer and its load should never exceed the rating of any hitch-assembly component.

Each truck has a specific tow rating, which depends on its design. Trucks with higher tow ratings usually have high-performance features such as heavy-duty engines, springs, transmissions, frames, U-joints, rear axles and brakes. These features have nothing to do with whether the truck is called a three-quarter-ton or half-ton. Pay attention to the tow rating in a truck’s manual and don’t exceed that rating.

When a truck tows more weight than it is designed to pull, drivers can lose control of the truck and trailer. For example, if a car suddenly stops in front of a truck pulling too much weight, the truck’s driver may slam on his brakes, but the trailer’s momentum can push the truck forward and into the stopped car because the loaded trailer exceeds the truck’s brake ratings.

You also need to consider that you can shorten a truck’s useful life if it tows loads beyond its limitations. When you purchase a new or used truck, make sure you choose one that has a rating that exceeds the normal weights you typically will carry or tow.

For example, you might find a truck with a maximum tow rating of 9,150 pounds. That doesn’t mean you should haul or tow the maximum weight every...
day – don’t operate your truck on the extreme end of what it was designed to do. Instead, select a truck with a higher maximum-tow rating so you are not always maximizing the load capacity. This ensures the truck has a longer service life and makes driving it safer.

Types of hitches

There are many different frame-mounted hitches. Generally, frame-mounted hitches can be placed in one of three main groups, depending on how the trailer’s tongue weight (sometimes called dead weight) is distributed:

- **Weight-carrying hitches**: These hitches carry the tongue weight on the hitch at the back of the truck.
- **Gooseneck hitches**: These hitches are mounted in the center of a truck bed. This allows the truck’s frame, springs and axles to support the trailer’s tongue weight.
- **Weight-distributing hitches**: These hitches are actually accessories that are often used for extremely heavy trailers.

A weight-distributing hitch does not bear all the vertical load from a trailer’s tongue weight. Instead, it uses springs, levers, bars or chains to distribute the vertical load from the rear of the truck to the front of the truck and to the rear of the trailer. When a driver adjusts and tightens the support bars on the hitch, that lifts up the back of the truck.

Component ratings

Each component of a hitch assembly is individually rated for the maximum load it can tow. This is an important safeguard that can reduce the risk of trailers detaching on the road. Just as a chain is only as strong as its weakest link, so a hitch assembly is only as strong as its weakest component. Operating safely means working within maximum load limits for each component of the hitch assembly. The components of a hitch assembly are:

**Receivers.** It is common for trucks to have factory- or professionally installed receivers attached to their frames. A receiver forms the base into which you can place attachments and pins to hold them in place. Convenience and flexibility have made these types of hitches quite popular among users. In contrast to bumper hitches, hitches mounted to frames are made of heavy-duty steel and have many more attachment points. Each receiver has a permanent label attached to it that is marked with the maximum trailer weight it can tow.

**Inserts.** Inserts may be hollow in the center or made with solid cores. Solid inserts have a number of holes that allow you to insert pins, depending on which ball you use, as you rotate and place it in the receiver. Each insert has a rating stamped into the metal or written on a permanent sticker. The ratings provide the maximum towing and tongue weights it can support. Without a tag, you will not be able to know how much the insert is rated for. As with receivers, do not exceed the limits for what a hitch insert can safely tow. Using an unmarked insert is dangerous.

**Hitch pins.** Most hitch pins do not have ratings. Notice that most hitch pins are solid steel with a place to insert the keeper. Some designs even include a lock within the hitch to prevent the insert from being stolen. All pins are subject to corrosion and can be difficult to remove if you do not lubricate or remove them when you’re not using the hitch. You should replace any pin that is bent, worn, or badly rusted.

**Hitch balls.** The most common hitch-ball sizes are 1-7/8 inches, 2 inches and 2-5/16 inches. Don’t assume that balls of the same diameter have the same tow ratings. Each ball has its own rating regardless of its diameter. Often, the shank diameter and length determine the ball’s tow rating.
Trailers

Trailers, like trucks and hitches, have various ratings associated with how the trailer was manufactured. Metal or plastic plates on the fronts of trailer tongues indicate:

- How much tongue load is expected when the trailer is fully loaded;
- The maximum weight the trailer can carry based on the design of the trailer, its axles and tire size; and
- The size of the ball to be used with the coupler.

Coupler latch pin

All couplers need to be secured with safety pins to ensure the hitch stays securely attached to the ball hitch. You need to safely secure the trailer’s coupler to prevent the trailer from disconnecting from the truck. While the trailer’s tongue weight can keep the coupler and hitch attached, potholes and loads distributed too far to the back may cause the trailer tongue to pull upward and off the ball. That’s where the safety pin, bolt or padlock provide added protection. They keep the trailer and hitch from disengaging.

Safety chains

Safety chains provide secondary protection if a trailer detaches from a truck’s hitch system. If your trailer has safety chains with a suitable size and grade, they can keep the trailer and towing truck attached long enough for the driver to pull over. Without properly attached safety chains, a detached trailer can skid off into the road, and then could strike another vehicle.

When selecting safety chains:
• know the chain’s breaking strength;
• use the proper chain length;
• connect chains to the right part of the truck;
• attach chains to the trailer frame properly;
• replace, don’t repair, worn chains;
• use the right bolts, nuts and spacers.

Breakaway switches

Most states require trailers of certain gross weights to have both trailer brakes and a breakaway switch mounted on the tongue of the trailer. A breakaway emer-
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Emergency brake helps a trailer stop itself if it separates from a towing truck. The way breakaway switches work is fairly simple. A short cable goes from the trailer to the truck. If the trailer breaks loose, the trailer pulls the cable, which engages the trailer brakes. Working together with safety chains, the emergency brake will help stop the detached trailer. Batteries, which are often recharged by the truck, power the emergency brakes.

It’s important to remember that the breakaway switch only works if the brake cable is attached to the towing truck’s frame, not to the safety chains. If the cable were attached to the safety chain, the cable would not be pulled when the chain is pulled. When no other attachments are available, the attachment point for the cable might be on the hitch.

Replaceable, rechargeable batteries power emergency trailer brakes. They recharge off the towing truck. Extend the life of the battery by bringing them inside during freezing weather to charge.

If you have a ball insert that is designed to move up or down, you can use it to help level the truck and trailer.

You must maintain the emergency-brake cable in good condition if you expect it to do its job. If the cable snaps before it can engage the brakes, then it doesn’t do you any good. When you attach an emergency-brake cable, unhook the trailer but leave the safety chains on. Then, drive the truck forward just until the chains are tight. At this point, opinions diverge on how long the cable must be.
Conclusion

Never view your hitches as simple mechanical devices. Instead, you should view them as a complex integration of components that work together to keep the trailer connected to the truck. Hooking a trailer to a truck creates a “single” truck through a hitch mechanism, safety chains, emergency trailer brakes and load distribution and securement. Experienced drivers understand that the way a truck steers, brakes and turns can be altered when a trailer is attached.

The consequences of a trailer unhitching from a truck on the highway can be catastrophic. People are killed or injured and the environment damaged each day from these types of accidents. Nobody wants to be that person whose trailer slams into a van carrying a family or spills chemicals into a creek. Read and follow the ratings of the truck, hitch and trailer when towing so that accidents are prevented.

Frederick Whitford works for the Purdue Cooperative Extension Service in Purdue University’s College of Agriculture in West Lafayette, Indiana. He received a BS in wildlife management from Louisiana Tech University and MS and Ph.D. degrees in entomology from Iowa State University. He has authored more than 250 research, extension and regulatory publications and has delivered at least 4,000 presentations to a wide array of audiences. This article was based on his presentation on the same subject at TCI EXPO 2017 in Columbus, Ohio, last fall. To listen to an audio recording of that presentation, go to this page in the digital version of this issue online, under the Publications tab, and click here.

Accidents involving detached trailers happen every day across the country. Many end tragically.

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By Rob Sample

The mechanic informed Steve Farrelly his truck was out for a test drive, but Farrelly suspected otherwise. Sure enough, his GPS tracking system showed where the truck had been the entire morning — and it had never left the shop. Nor had any test drive been done when he went to retrieve the now-repaired truck and settle the bill.

“With my GPS tracking system, I can see where any of my trucks are at any given moment,” recalls Farrelly, owner of Emerald Tree Care of Scarsdale, New York. As with many arborists who own a fleet of service trucks, he knew that GPS is a great way to stay on top of vehicle and equipment maintenance. But this was a benefit of GPS that Farrelly never anticipated.

“With GPS, you can see right away when people are BSing you,” Farrelly

Pittman’s Tree and Landscaping has used GPS tracking since 2012, and is now evaluating the second generation of GPS tracking systems. Manager and crews can use it to track other crews or equipment at any time. Photos courtesy of Pittman’s.

Pittman’s Chris Cain aims to make GPS an integral part of a company-wide information network, with systems such as accounting, billing and other functions all tied together.
notes, adding that this is not the only time it has happened. “We call them on it right away… and the repair shop has to back down. There’s nothing, really, that they can say.

“Repairs for our trucks are way more expensive than automobile repairs,” Farrelly adds. “We’ve saved money on some expensive repair bills, thanks to the data GPS provides. And this is just one of the many ways GPS has helped us to become a data-driven company. The more data we have, the more efficiently we can run our operations.”

**Tailored solutions**

Tree care companies of every size and geographic location are learning that equipping their fleets with GPS is a smart business decision. And it doesn’t matter how large or small your company is. As with so many technological innovations that may seem too expensive when they first come out, the cost of GPS sensors and the systems that enable enterprise-wide equipment tracking have become affordable enough for even the smallest fleet operators.

Farrelly’s company has a fleet of 20 trucks and 40 people in the field, servicing New York City and the city’s northern suburbs. In contrast, Phil Prickett has a dozen employees and 10 vehicles – but in a similar fashion, GPS tracking has yielded a myriad of productivity benefits including helping to resolve a thorny personnel dilemma.

Prickett is the owner of All About Mowing and Trees of Alvarado, Texas, which services the Dallas-Fort Worth metro area with both landscaping and tree care. In such a small company, crew productivity – or the lack thereof – shows up immediately on the bottom line.

In the spring of 2016, Prickett noticed that two crew members’ reports were riddled with mistakes, and there were numerous time gaps. More critically, simple jobs seemed to take much longer than they should have. This made Prickett quite suspicious. The clincher was when his dad told him he saw one of his trucks parked outside a shopping center for two hours in the middle of a work day.

“I assumed that putting GPS trackers on my fleet would be far too costly for a company such as mine, but it wasn’t,” Prickett recalls. “So I had the sensors installed on my entire fleet.” After the system went live, Prickett took a careful look at the results.

“After leaving our yard at 8 a.m., the two men stopped and had breakfast, then went to a bank, then a gas station,” Prickett pointed out. “Then they visited a Harley Davidson store. They arrived at their first job at 12:55 p.m. They had eight assignments to complete that day, and they only went to four.”

When Prickett called the two men out on their results, they both said they arrived at their first stop at 10:30 – and that the job took longer than planned. But Prickett had GPS records showing otherwise, and the two were fired. Later that month, he used the GPS data to prove to the state labor authorities that they had been terminated with cause, thus preventing them from collecting weekly unemployment checks.
Exponential benefits

The installation of the GPS tracking system raised an unexpected dilemma for Prickett. Installing GPS trackers is fast and simple, and Prickett intentionally had it done without telling anyone. He still had not done so when interviewed for this article. And while he suspects that several crew members already know about the devices, they have not brought the topic up.

“I just haven’t figured out how to broach the topic,” Prickett says. “I agree, it’s potentially more beneficial if you do let your crews know. Still, I have a couple of people who have been with me almost since I started my business in 1999. I think they’d find it highly offensive.”

As GPS use becomes more widespread, this situation is bound to become less common; drivers will expect a fleet owner to be using GPS before they even climb into the cab. Plenty of service trucks are out and about these days adorned with bumper stickers that brag about their employers’ use of GPS and the drivers’ safe-motor ing habits.

This use of technology follows the same principle of at-work computer use, where there is no expectation of privacy. In such settings, a company’s IT network will tell you that when you log in. Within this vein, Prickett is now considering notifying employees upon hire of the presence of GPS tracking.

Mike Triplett, territory sales manager with ServicePro, counsels all his customers to be up front with employees. “With any new technology, it’s always wise to obtain employee buy-in … but ultimately, it’s up to the company owner,” he says.

James Schoonmaker, fleet manager at SaveATree, headquartered in Bedford Hills, N.Y., pointed to an especially novel use of GPS – developing employee reward systems. “GPS provides us with a lot of great metrics, such as who is safest and who’s driving the most,” he says. “That can be the basis for award programs, and the safety data can also help lower your insurance rates.”

All-seasons operation

Nick Araya runs TreeCareLA based in Inglewood, California, a small company in another large metro area – Los Angeles. But where Prickett has opted to cover an extremely large geographic area, Araya has chosen to focus his firm’s attention on just a portion of Los Angeles County. Traffic in Greater Los Angeles would make covering a larger territory impossible, Araya explains.

His service area is triangular and is bounded on the west by the Pacific Ocean, on the north by the Ventura Freeway and on the east by the Harbor Freeway. The southern point of the triangle extends to the city of Torrance. This firm also has a decidedly ecological bent, from the electric car Araya drives to consultations with potential clients to the disposal options it imparts to customers who must part with a beloved tree. One such tip involves hiring a woodworker to use the wood to fashion a custom counter or tabletop.

The area’s legendary traffic jams are one reason TreeCareLA opted to install AutoMile GPS tracking on its three-truck fleet. “I notified everyone about it at the beginning – I didn’t want to seem big-brotherly about it,” says Araya. “Right from the start, they saw it as something that would help them in their work. Each of my eight employees has a personal login and at any time during the day, they can all open up a screen and see where everybody else is working.”

That information enables crews to pair up on jobs, if needed. Crews can also meet up at midday to compare notes on jobs and take lunch as a group.

“We noticed that we were spending a lot of time sending ‘where r u’ text messages,” Araya recalls. “Just keeping track of where everyone is located is the biggest advantage. The system also gives us the ability to plot alternate routes, which is a big plus when traffic is heavy.”

One of Araya’s other challenges is that, unlike most of North America, his is a 365-day-a-year operation. Most of the trees that you’ll find in Greater Los Angeles are evergreen. Because they never stop growing, they must be pruned often to preserve both their appearance and health, says Araya.

That translates into constant work for the company, Araya points out, adding that less time spent on logistics means more time to spend on the company’s true mission – saving beautiful trees through proper care.

New municipal requirements

To the north, the climate of southern Ontario, Canada, provides Advanced Tree Care’s Steve Farrelly. “The more data we have, the more efficiently we can run our operations.”
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Care with a much shorter warm season. Still, this Queensville, Ontario-based firm stays busy year-round thanks to a host of municipal tree- and brush-cutting contracts. It equipped its fleet with GPS in 2014, when many of those municipalities began requiring it as part of the bid process.

“In particular, we wanted to pursue some of the larger towns outside Toronto, which were beginning to require GPS,” notes Kevin Mengers, the company’s president. “We wanted to get ahead of the curve from a competitive standpoint. Once we installed it on our fleet, we found it very handy knowing where our units were, where they had been and how long a job actually took.”

The GPS information made for a few pleasant surprises. For example, he knew every crew would make a pit stop for coffee after leaving the shop – but the GPS data revealed that the longest stop was just eight minutes in duration. More critically, the system enabled the firm to be more proactive about fleet maintenance. It enables users to establish maintenance intervals, which automatically alert crews when maintenance is required.

Nor did Mengers realize that he’d get a tax rebate by using GPS. This owes to a peculiarity in Canada’s treatment of diesel fuel for off-road versus on-road vehicles. Under the law, farm machinery and other off-road equipment can use a product known as Dye Diesel – so named because it is tinted with red dye. It is identical to ordinary diesel fuel but costs less because it carries a lower fuel tax.

A fleet owner who puts dye diesel in his trucks and then operates them on roadways in Canada runs the risk of being caught and paying a hefty fine. “But if you have a fleet of bucket trucks, you’re operating them off the road for six hours at a time – burning road fuel,” says Mengers.

“Now, with GPS, you can provide a report on the time your vehicle was not on the road, and obtain a tax rebate.”

When Mengers initially weighed vendors, several suggested keeping the system under wraps. “But the Fleetmatics people pointed out that doing so would actually be counterproductive,” he recalls. “After three or four months, my people found it as handy as I do.”

**Options to consider**

Some GPS providers only measure mileage, but the GoGPS system Mengers’ firm uses instead begins with the running of a vehicle’s engine to power a secondary function. This might include an aerial lift or a chipper used by a tree crew. This enabled the production of reports detailing hours of road-diesel use while stationary at job sites.

“Our firm evaluated four different providers and chose Verizon/Fleetmatics because it offered the greatest support,” notes Farrelly. “Installation was very quick, and they took care of everything. We put the sensors on everything we have, including chippers and Bobcats. We have had our system for a year and a half and they took care of everything, with nothing coming loose – even on equipment that encounters intense vibration. Verizon gave us what we wanted.”

This level of equipment tracking is especially important during busy periods, when multiple crews are out in far-flung locations, he says. Somebody is bound to leave something behind, and GPS makes locating and retrieving such items easy.

“In addition, you can set up an ‘off-hours’ period in your system,” says Farrelly. “Ours is between 8 p.m. and 4 a.m. We will get notified right away if there is any activity during that period. This is a benefit that I never realized GPS offered until I had it installed, but it is a great way to keep tabs on all your equipment and eliminate theft.”

**A crew leader who arrives early at a site no longer has to call others to learn when they will show up. By calling up a tracking screen on a phone or iPad, the leader can see this right away and estimate their time of arrival.**

Farrelly encountered no complaints, he notes, because employees saw the system as beneficial to them as well as to the company. For instance, a crew leader who arrives early at a site no longer has to call others to learn when they will show up. By calling up a tracking screen on a phone or iPad, the leader can see this right away and estimate their time of arrival.

**What’s next?**

Chris Cain, general manager of Pittman’s Tree and Landscaping based in Front Royal, Virginia, is in the middle of a GPS systems upgrade. His firm has used GPS tracking since 2012 and is now evaluating the second generation of GPS tracking systems for his company. Cain, a software industry veteran, is focusing more on software than on hardware, since the former is what gives any system its capabilities.

Pittman’s has 250 trucks, 300 employees and operations in Virginia, West Virginia, Maryland and North Carolina. Cain ultimately aims to make GPS an integral part of a company-wide information network, with systems such as accounting, billing and other functions all tied together.

Working with the company’s owner, Calley Pittman, Cain’s team has evaluat-
1. A truck’s tow rating is less important than:
   a. the minimum towing capacity of the entire hitch assembly.
   b. the equipment being towed.
   c. the rating of the hitch ball.
   d. the maximum towing capacity of the entire hitch assembly.

2. When a truck tows more weight than it is designed to pull:
   a. the towing operations go much quicker.
   b. drivers can lose control of the truck and trailer.
   c. the excess weight causes cracking in the pavement.
   d. the tow rating goes up.

3. Why is it important that each hitch-assembly component be individually rated for the maximum load it can tow?
   a. It is a key factor to increase the risk of trailers detaching on the road.
   b. Individual components can carry the full weight of the towed load.
   c. A hitch assembly is only as strong as its weakest component.
   d. The vehicle driver can be fined if the components are not individually rated.

4. The tow-rating plates on trailers indicate:
   a. how much tongue load is expected when the trailer is fully loaded.

5. A detached trailer can skid off into the road, and could strike another vehicle:
   a. only in the same lane as the towing vehicle.
   b. only in the opposite lane as the towing vehicle.
   c. if the safety chains are not properly attached.
   d. if the safety chains are properly attached.

Your Full Name: ________________________________  CTSP#: __________________

To obtain CEU credit: you may copy this page, answer the questions and either fax the answer sheet to TCIA at (603) 314-5386; scan and email it to ctsp@tcia.org; or mail to: TCIA - CTSP, 136 Harvey Road - Ste 101, Londonderry, NH 03053. Only current CTSPs in good standing who qualify for professional development CEUs may obtain CEUs for this quiz. Other readers are encouraged to use TCI’s safety articles for training and may wish to use this quiz to test comprehension.
NEW CREW LEADER WORKSHOPS ENABLE YOUR STAFF TO REACH THE NEXT LEVEL

By Bob Rouse

Most company owners and crew leaders are great arborists who would rather be in the trees or talking with clients about trees rather than working on business issues. Company owners and crew leaders usually know how to improve their technical skills. TCIA and other groups have technical training aids to help with that.

Finding training programs that are geared specifically to help arborists learn business skills is a different matter. While there are many canned business training programs, very few are designed to help those in the green services industries, and there are almost none for the tree care industry.

That is why we are excited about our new Crew Leader Qualification. This program helps small company owners, crew leaders and aspiring crew leaders learn the “soft” business skills they need to excel.

The Crew Leader Qualification program is very simple. The first step is to pre-qualify to attend the workshop. You do this by buying and completing TCIA’s Tree Care Academy (TCA) Crew Leader manual. All you have to do is read the manual and take the chapter tests. You send the tests into TCIA and we grade them and let you know how you did. Once you satisfactorily complete the TCA Crew Leader manual, you can then attend the one-day Crew Leader Qualification workshop.

The discussions and activities in the Crew Leader Workshop make all the difference

TCIA’s Crew Leader Qualification workshop is built on the collective experience of crew leaders. The experience of the attendees is used during the workshop. Group activities and discussions build upon participants’ current experience and provide opportunities to learn from each other and then practice new techniques.

Some key points that make the Crew Leader workshop different:

Crew leaders are adult learners

We acknowledge and respect that you, the participant, have a significant amount of experience. Sharing that experience during discussions and activities will be valuable to all workshop participants.

A crew leader’s time is valuable

You want to get straight to the point, and you probably have little patience for needless background information or rote learning that does not have direct value to you in your workplace. The nine activities are laser focused; we put all discussions and activities in context and offer tips for how to employ what you learn when you return to your job.

Participation makes it fun

People learn in different ways (seeing, hearing, reading, doing, etc.) and at different rates. One thing that is almost universal is that you will learn more and retain it longer if you participate in an activity. This course is designed to engage you in activities that employ and reinforce the course content. You are encouraged to share your experiences and learn from one another.

Here is an outline of what you will do at the workshop:

Introduction

Course opening: Information, expectations, objectives, scope

Activity 1: Icebreaker; working in
groups, learn and practice how to provide feedback to crew members.

**Quality control and professionalism**

Activity 2: Professionalism: learn and practice the do’s (and don’ts) of being a professional tree worker.

**Leadership**

Activity 3: Leadership self-assessment: this one helps you figure out your leadership style.

Activity 4: Leadership how-to’s: an activity to help you practice good leadership skills.

Activity 5: Dealing with crew conflict: this activity gives you a chance to learn and practice an effective technique for dealing with disagreements and other issues among the crew.

**Performance management**

Activity 6: How to give praise, it’s not as easy as you might think: this activity gives you a chance to practice a number of techniques that will have the outcome you are looking for.

Activity 7: Addressing behavior problems: you will practice an effective technique for addressing various behaviors.

**Communication**

Activity 8: Communicating with clients: this activity will help you learn how to turn negatives into positives when dealing with clients.

**Developing crew skill and knowledge**

Activity 9: Tell-show-do training technique: learn and practice one of the most effective, basic training techniques in our industry.

Review: We summarize key points and you get a chance to ask more questions.

At the end of the workshop, you will take the Crew Leader exam. Good news: If you participated in the activities, you get to take the short version of the exam, only 30 questions. If you decided to take some breaks, make one too many calls, etc., you will have to take the long version of the exam, a full 50 questions.

If you pass the exam, you earn the Qualified Crew Leader certificate. The certificate is valid for five years. There are no CEUs required to maintain the certificate, however TCIA is working on building a community for Crew Leaders with some more advanced training opportunities for Qualified Crew Leaders.

At the end of five years you can take the Crew Leader workshop again to renew your Crew Leader qualification, or, you may have already moved on to even bigger things!
Thomas Rogers, president of Lewis Tree Service, Inc., says it was really easy for him when asked to contribute to TCIA’s Arborist Safety Training Institute.

“I didn’t even have to think about it. It was an automatic yes. I got there very quickly. One, I have spent my entire life in this industry, more than 43 years, and it’s been very good to me,” he says. Lewis is Tree, an 80-year-old, employee-owned company, pledged $75,000 to ASTI to help provide cost-subsidized safety training and education for tree care companies nationwide. Based in West Henrietta, New York, in the Rochester area, Lewis Tree has been a TCIA member since 1988.

The second reason Rogers got to yes so quickly was due to the industry’s fluidity. “People move around from company to company. They may not be my people now, but they may be working for me in six months. Also, support of ASTI speaks loudly about who we are in the industry. The more we invest in our industry and professionalize it, the better off we are, both our leaders and craftspeople,” he points out.

What entity is the best suited to deliver this much-needed training?

“I think TCIA is the right organization for the job because of the people,” says Rogers. “The people I have worked with over the years are passionate about what they do and how they do it. I have known Mark Garvin (former TCIA president and CEO, now retired) for many years and have a great deal of respect for him, not only what he was doing but how he did it. He did a lot of good things for the industry through TCIA. He was the leader, but the whole organization has a good, positive spirit that I’m sure will continue under the new leadership. Their values align with our values.”

Lewis Tree does a lot of utility line-clearance work and is involved with safety promotion throughout the industry in other ways as well.

One example is the development of a “drop-zone” policy that it has shared with the industry. Incidents in the drop zone, the area under and around the tree being trimmed or cut down, are among the leading causes of injuries and fatalities in the business, mainly involving employees being struck by debris or limbs being cut from the tree, according to Rogers.

“We designated an area under the tree, a piece of real estate, that has to be owned by one person in the crew. That person is in charge of when people can walk into it and when people can cut something to drop into the zone. Now it’s universal. Most of our customers demand it,” Rogers says.

“We’re always trying to find the next program or safety initiative that can push us to zero incidents,” he adds.

“I’m a firm believer in supporting our craft workers. Without their success, we don’t have success. The Arborist Safety Training Institute is a way TCIA can help the whole industry be successful,” he says.

To apply for an ASTI grant online or register for an upcoming workshop, or for more information, go to tcia.org/asti, or call the ASTI Grants Office at 603-314-5380.

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Lopper pruning. Intentionally wounding the tree sounds counterintuitive to maintaining healthy, long-lived trees. However, it is often a necessity to get trees and people to get along well together. All photos courtesy of the author.

By Lindsey Purcell

Trees continue to survive despite the many challenges they face in the urban environment, but they need our help. We often place trees in less-than-favorable growing locations that don’t allow natural development and maturity, locations where they often require pruning to develop into long-lived trees.

Guiding young and medium-aged trees to develop good branch architecture is key to sustainable tree plantings. Good architecture created through structural pruning is enormously beneficial and should be the primary objective for pruning. Helping the tree develop better architecture can reduce the chance for failure when nature gets nasty. This benefits the tree owner and the tree and should be the main reason we prune. The benefits of pruning far outweigh the negatives when done correctly – with the tree in mind!

What does a tree think of pruning?

Most arborists and landscape professionals understand pruning as an important arboricultural practice. However, I don’t believe we really understand what a tree “thinks” about pruning. Of course, a tree can’t give a verbal opinion. Pruning elicits some incredible reactions on the insides and outsides of trees – and that says a lot. Because pruning is an important practice for arborists and landscape professionals, it is critical that we know these reactions and outcomes of pruning before we begin the process.

It is impossible to talk about pruning without first mentioning the importance of tree selection and placement. We should plan and plant by “beginning with the end in mind.” “Right tree, right place” is an important concept for tree longevity. Focus on sustainability and maintenance inputs, which include reducing the need to alter the tree to conform and allowing the tree to realize its natural form and function. Simply stated, make efforts to minimize the inputs and maximize the benefits trees provide.

So, what do trees think of pruning? Well, let’s start with the facts that pruning intentionally:

- wounds the tree in multiple locations;
- removes food production capabilities;
- creates a hormonal frenzy; and
- potentially alters stability of the tree.

That’s quite an effect for a process that’s perceived as “simple.” At the very least, we are modifying the physiology and morphology of the plant when live, green tissue is removed. At worst, the loss of food production and reserve capacity from excessive pruning can devastate the tree. In either case, pruning live tissue limits tree processes because there are fewer shoots, a lower carbohydrate supply, less storage and less nutrient uptake. This can lead to decline and dieback in the tree and a predisposition to pest and environmental issues.

Pruning disrupts chemical routes

Let’s take a look at that hormonal turmoil.
All aspects of tree growth and development are regulated by phytohormones (plant hormones). They are chemicals that are often produced at one location and translocated to another where they go to work. Pruning trees creates a disruption in the flow or routes for the many chemicals found in trees. These long, connected pathways not only transport food and water, but also phytohormones tell trees how to respond when pruned. There are several major hormone groups, which include auxins, gibberellins, cytokinins, abscisic acid, ethylene and other minor hormones. Through actions of these major groups, more than 2,000 plant processes are affected!

Severing branches during the pruning process interrupts or disconnects the chemical pathways that influence root and shoot growth, the auxin-cytokinin pathway. The downward flow of auxins, which are produced in the green shoot tips, stimulate root and shoot growth. The cytokinins produced in the root growing tips stimulate canopy growth. Cytokinins produced in roots promote the activity of lateral buds, while auxin produced in the apical meristems and new foliage inhibits cytokinin activity through a process called apical dominance. Branch buds are initiated in the shoot apex, their flushing activity activated by cytokinins.

Pruning cuts that remove growing tips disconnect auxin-cytokinin pathways in the tree. Shoot-tip removal releases dormant growing points such as lateral and epicormic buds. These unseen dormant buds move outward with the vascular cambium as the tree grows and remain close to the surface. So when something such as removing branches happens to interrupt the pathway, buds may emerge and grow into branches, attempting to restore the pathway from the released sprouts to the ends in the roots. Typically, a proliferation of lateral buds develops into branches below the location of the pruning cut where the apical meristem on the branch was removed.

Basically, the cytokinins follow the established route until the top of the branch is removed through pruning. When that happens, the tree thinks, “Where did those branches go that once connected us all with the roots?” Now, due to the missing shoot that produces auxin, the latent buds on the truncated branches break dormancy, develop new stems and produce new, weakly attached shoots. The concentration of cytokinins increases, flushing new growth below the location of the cut. Also, all this new growth requires resources to survive, such as food and water. This newly formed expansion of growth is often at the expense of the root system and overall health of the tree, as the allocation of resources has changed dramatically. It's a delicate balance of chemicals!

**Pruning disrupts apical dominance**

Apical dominance varies within tree species and influences plant shape, length and number of lateral shoots. Trees with strong apical dominance are more upright in growth (excurrent crowns). Those with weak apical dominance have more horizontal and spreading growth (decurrent crowns). Pruning can alter the shape and direction of growth of both by manipulating branching habit and influencing the hormones involved in growth.

The apical buds in the tree structure produce auxins that are actively translocated down the shoot. As the auxins pass the lateral buds along the shoot, the buds maintain dormancy and are unable to sprout and grow. If the growing tip is still there, auxins flow and these lateral buds remain dormant. However, if the growing point is removed, auxin production is interrupted. This interruption allows the cytokinin present in the stem to activate the growing points and allows flushing of new growth and lateral branches. Heading back or making reduction cuts on an excurrent tree form can alter the natural shape of the plant.

Pruning is about controlling branching and growth. However, many people overlook or fail to understand that when we prune, the hormonal balance is altered and new branches develop locally, close to the cut. Excessive removal of green tissue significantly alters the phytohormone balances, disrupts photosynthesis and carbon balances, which is how the plant feeds itself, and can result in decline or even death.
Minimize the damage, maintain balance

Dr. Alex Shigo once said that to be a good arborist, first you must know your tree. This includes knowing the health, vigor and stage of development before you determine the pruning dose or the amount of green tissue removed during any one pruning episode. Removing dead, damaged or dying tree parts or non-beneficial plant parts such as basal sprouts or epicormic sprouts doesn’t figure into the mass when calculating pruning dose. However, severe pruning, especially at times of stress such as during drought conditions, can have severe consequences on tree health. You want to use the pruning dose that has the least negative impact on tree processes.

Intentionally wounding the tree sounds counterintuitive to what we, as arborists, want to do in maintaining healthy, long-lived trees. However, it is often a necessity to get trees and people to get along well together. But we certainly are wounding a tree when we apply pruning tools to the task.

The tree’s response when wounded is critical for survival, and plant hormones are involved in wound recovery. Many phytohormones are necessary for cell division, which facilitates compartmentalization. The compartmentalization-of-decay-in-trees (CODIT) process is an important tree strategy for surviving the damage of pruning maintenance. Walls are developed internally and wound wood is created externally that, together, “compartmentalize” the wound by sealing off the damage and making efforts to prevent decay from moving farther into the tree. Trees have varying abilities to seal off these wounds depending upon species, health, conditions and their resource allocation strategies.

How would a tree react to activity that could reduce its ability to remain vertical and withstand the forces of nature? Most likely by losing balance and falling! Trees are large, heavy structures subject to both static and dynamic forces. Any significant changes or modificatons...
tion to the canopy can result in a response from the tree that changes its biomechanics. After alteration, the once-stable and safe canopy may be prone to failure during wind and storm events. This has serious implications for practices such as crown thinning, lions-tailing and topping of canopies.

The bottom line is, if you don’t know what you are doing when pruning, it is best to leave trees alone. Removal of large structural branches or large amounts of green tissue can and does have an impact on the tree’s ability to withstand wind loading and other environmental forces.

Timing is everything

Recent research has helped tremendously in determining the optimal times to prune to reduce the impact on the tree and facilitate faster wound recovery. If we want the trees to think better of our wounding activities, we should prune when the trees recover the quickest. This is when they

Pruning effects on auxin-cytokinin pathways.

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are actively growing, since their internal processes are functioning best during their growing season.

Also, get to know which trees facilitate wound recovery more effectively. Some trees are considered good compartmentalizers; others are not so good at the process. This will help with the decision-making process on size of branch removal and amount of green tissue to be eliminated.

Finally, when making the pruning cuts, smaller wounds are always better for the tree. It has been said many times that pruning is one of the “best worst” maintenance practices, but a necessity in the built environment. Working with the tree to minimize the impact of this practice should be a priority for the planner, designer and arborist. This includes abiding by the physiological demands of the tree. Do it right, at the right time and in the right way when pruning. Never let the situation exceed your skills.

Ill-advised pruning cuts and poor timing can create serious concerns for the life of that tree and everything around it.

**Resources**

Dr. Edward F. Gilman, professor emeritus, Environmental Horticulture Department, IFAS, University of Florida.


Dr. Kim D. Coder, Professor, Warnell School of Forestry, University of Georgia.

Lindsey Purcell is an urban forestry specialist in the Department of Forestry and Natural Resources at Purdue University in West Lafayette, Indiana. This article relates to his presentation on the same subject at TCI EXPO 2017 in Columbus, Ohio, last fall. To listen to an audio recording of that presentation, go to this page in the digital version of this issue online, under the Publications tab, and click here.

This article was previously published on the Purdue Extension website and subsequently in Arborist News.

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You can send your congratulations to me any time – I just started my own urban-forest planning and arboricultural consulting company! After 36 years in the industry, I know some people think I’m crazy (bordering on certifiable) for not just calling it quits, hanging up my D-tape and relaxing under a tree instead of working around it.

Well, I am “certifiable,” and proud of it. Throughout my long career as a Certified Arborist and a Certified Forester, I’ve had the good fortune of being able to apply my forestry and arboricultural knowledge to a variety of interesting and challenging consulting jobs. There’s really nothing better than getting paid to do what you love.

I’ll be the first to admit that I’m a Jill-of-all-trades and master of none. Diversity is not only good for a plant community, it’s good for my soul. So I’ve accepted all kinds of consulting assignments ranging from tree and landscape appraisals to tree protection during construction to education and outreach.

I’d like to take you on a short walk with me down memory lane to share some of the unique consulting projects I’ve been involved with, and hopefully inspire you to reach out to different types of clients to grow your business and take on different projects to grow as a professional.

Tree appraisals are a mainstay in the arboricultural-consulting business, and I’ve done my fair share of them. The most interesting ones I’ve been involved with, and hopefully inspire you to reach out to different types of clients to grow your business and take on different projects to grow as a professional.

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One appraisal job for a natural-gas line-expansion project took me to Oklahoma. Interestingly, this one also took me to court.

As you can imagine, the easement negotiation process isn’t always met with open arms by property owners, and disputes over the appraised value of their properties and their trees do come up. So I had to fly to Oklahoma City to be deposed in defense of the appraised value of several property owners’ landscape trees.

Performing expert- or fact-witness work is not for the faint of heart, but it can be pretty lucrative and really interesting if you’re willing to take a chance, learn how to work with lawyers and believe in yourself and your qualifications.

Tree protection

Now I’ll move on from appraising trees that were destroyed to a consulting project specifically designed to save trees. In all my 30-plus years of work, this was the mother of all tree-protection projects that I’ve ever had the opportunity to work on. Washington Park is an historic 10-acre park with an extensive tree canopy in one of the most developed areas of downtown Cincinnati. It was slated for a $4.2 million renovation, which meant new sidewalks, underground utilities, play areas, a dog park, fountains, a pavilion, an underground parking garage – the works.

The challenge was building all of that with the directive to preserve as many trees as possible. I was hired as the owner’s arborist, and this project was the poster child for doing tree-preservation projects right. I was involved from the start – writing specifications, setting penalties for violations and attending pre-construction meetings.

Then I was out almost every day for a year monitoring the work and addressing the issues that invariably pop up on a construction site – everything from “Can this root be cut?” to “Oops, we just hit a tree with our backhoe.”

Even after the successful grand reopening of the park, I’m still involved and getting paid to monitor the mature and newly planted trees.

Although the mature trees were properly protected and the park’s tree canopy continues to provide a shady respite for the users, my point isn’t to say how smart I am or that I know everything about tree protection. My point is to tell you how much I don’t know. Projects like this will expand your knowledge and experience. I learned so much on the Washington Park project, not only about trees and tree-preservation techniques, but also about construction projects in general and how to speak the language of engineers, electricians, equipment operators and other professionals.

Learning how to listen to these other specialists and not be afraid to ask questions is what will really make you a sought-after member of tree-preservation and construction-project teams. And the skills and knowledge that are used in tree-protection projects apply to a wide variety of clients and not just active construction sites. Let your clients, utility companies and local cities know that you’re an expert in tree protection, and you could get some interesting work out of it.

Caring for mature trees

They say “bigger is better,” and when it comes to tree benefits, that adage is certainly true. Mature trees provide more environmental and economic benefits to our clients’ landscapes than anything else. Therefore, the ROI of providing proper care for mature trees is high for property owners. I have some interesting clients who understand that math and who regularly call on me to help them preserve these valuable assets.

Not to oversimplify it, but consulting for the care of mature trees boils down to inspection, prescription and monitoring. This is not a “one and done” service. I’ve been the consultant for the care of mature trees for the Cincinnati Zoo and Botanical Garden for more than a decade and, like me, you can offer the same services to colleges, parks, cemeteries, historic sites and residential properties year after year.

Historic-tree-preservation consulting recently took me to Washington, D.C. The trees around the Capitol grounds are part of an official arboretum that has some fantastic specimens. There are zelkovas with 50-inch diameters and sophoras that are 70 feet tall and greater than 64 inches in diameter. I was awestruck.

The architect of the Capitol wanted a risk assessment done for about 100 trees out of their 4,200-tree collection. So, being TRAQ (Tree Risk Assessment Qualification) credentialed, I got the job. And this was a Level 3 assessment for 100 trees, so I was there for a very long time – right smack in the heat of the summer in the swamp.

These days, security around the Capitol building and grounds is on constant high alert, as you can imagine. I needed to get an FBI background check and be fingerprinted just to get a badge. Once I was cleared and on site, of course, I had all the tools of the trade with me in the field. And you know what those are – hammers, sharp probes, a knife and, the best one, a Resistograph. What
do you think a Resistograph looks like from 200 yards away to a Capitol police sniper on the roof of a federal building? I thought for sure that sometime during my first day on the job I’d be tackled to the ground.

Branch out

We arborists have vast knowledge about trees and all aspects of maintenance, planting and management. You can use this knowledge combined with a little skill at public speaking to offer training courses to a wide variety of potential clients. I’ve gotten paid to train the staffs and volunteers of non-profits, cities and allied professions.

Recently, I provided basic arboricultural training and Certified Arborist test-preparation classes to the staff of the Ohio Department of Transportation. They wanted to step up their game and standards for tree care and held these classes for about 40 people across the state. So you might want to approach your city or county transportation department and see if they are interested in or need any training.

If you’re not afraid of new technology (and have the money to invest in it), you can buy all kinds of gadgets to have in your consulting repertoire. Knowing the extent and location of decay before making the decision to take a tree down is still super-attractive to clients owning mature trees or for trees in locations where there is a high risk. Tomography and the good old Resistograph are good pieces of equipment to have and know how to use. Drones are the technology du jour, and I think lots of money can be made if you know how to pilot one of these over a tree, a client’s yard, a park or along a utility line.

Again, it’s pretty cool to know about trees, and that knowledge can take you on some great adventures. I have a favorite T-shirt with a New Yorker magazine cartoon on it of an upper-class grandfather counseling his grandson as they walk through the woods. It says: “It’s good to know about trees. Just remember no one ever made big money knowing about trees.”

Well, over the years, I’ve made decent money, but, more importantly, I’m happy. My consulting jobs have taken me all across this great nation, and I’ve had the privilege to see a lot of cool trees and do a lot of cool things.

If you want to expand your consulting business, my take-away advice to you is:

• Diversify your knowledge and skills;
• Don’t be afraid to say “I don’t know” or to ask questions;
• Don’t shy away from asking your fellow arborists for advice or information; and
• Just get out there and do it!

Jennifer Gulick is owner and community forestry consultant of Urban Canopy Works, LLC, in Union, Kentucky. This article was based on her presentation on the same subject at TCI EXPO 2017 in Columbus, Ohio, last fall. To listen to an audio recording of that presentation, go to this page in the digital version of this issue online, under the Publications tab, and click here.
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presented by the Tree Care Industry Association
In very simple terms, chippers are machines designed to take large things and turn them into much smaller pieces. While we know the intent is for them to do so with trees or portions of trees, they tend to do the same thing with whatever is placed inside of them. Whether the larger piece that enters them is a branch, tool, rope, body part or entire person, the result is the same; what comes out the discharge chute is always in smaller pieces.

The technology has changed much since the arborist profession began using chippers, but the primary role chippers serve remains the same. They have gotten bigger, more powerful, more mobile and have had additional components attached that were found on other machines. But again, at the end of the day, they do the same thing they have always done.

So, thinking about this from the operator’s perspective, anything I put into the business end of the chipper is going to come out the other end in much smaller fashion, and the end product is often unrecognizable as to what was put into it. We will address some new safety features in this article, but the most important safety feature will always be the person feeding the chipper, which includes all of the education, training, oversight and discipline that is involved in creating a safe, efficient worker.

The total number and frequency of
chipper-related fatalities seems to have gone down a little in the last few years. Not that long ago, it was so bad that there was one every two weeks or so. As a clarification, you may occasionally see a report published by the National Institute of Occupational Safety and Health that significantly underrepresents the number of deaths related to chippers (DHHS (NIOSH) Publication Number 99-145).

TCIA “Accident Briefs” data shows 10 brush-chipper accidents – six of them fatal – from January 1, 2015, to date.

What hasn’t changed is the real reason people are being killed by chippers; they have stuck a part of their body into a machine that turns large things into many smaller things, they allowed something to enter the machine that shouldn’t have or they attempted to perform maintenance without following proper lock-out/tag-out procedures.

Information available from the research shared by Dr. John Ball, well-known compiler of safety and accident statistics for the tree care industry, indicates the fatalities are usually related to one of those three causes. Often, however, one may read in the newspaper or in an OSHA report that it was a “freak accident” or the deceased “may have become entangled” or “lost their balance and fell into the machine.” Nothing in any of the research indicates any of the fatalities occurred this way. With that, I will put my soapbox away and continue.

One other point that needs clarification seems to be how to define or describe the different kinds of chippers. Some have said the main difference is the units are either disk or drum. This isn’t really an accurate description of the main differences, especially when it comes to potential risk of Serious Injury or Fatality (SIF). The key difference related to safety is whether the unit has a mechanical infeed system or not.

The wood or brush chipper was introduced into the tree care profession in the 1950s as a trailer-mounted unit. The design hasn’t changed much since then and it remains a staple, especially in the utility line-clearance sector of the profession. The entry point into these units is a series of rotating knives on a drum, designed so the moment material contacts it, the material is pulled in almost faster than the human eye can see. Chippers of this design have a variety of colorful and accurate nicknames in the field, “chuck-and-duck” being my personal favorite.

There is also a flexible anti-kickback device or curtain, often rubber or plastic, that hangs down to prevent material from being ejected back toward the operator (hence the “duck”). This curtain must be in place and intact or the unit needs to be taken out of service until the curtain is replaced. There aren’t a lot of other features on the unit, because it doesn’t need them. It is efficient and effective, and the risk of serious injury is low.

Although it isn’t very popular with the field user, especially in the colder months, this remains the least likely style to cause a SIF. In fact, there are almost no recorded fatalities in our profession with the use of this type of chipper.

The reason people don’t like to use these is also the same reason people don’t tend to get seriously hurt or killed using them: you can’t get close to the knives because of the speed at which the material goes into them. Inexperienced operators often will get slapped by the ends of brush as they speed into the machine, if they are not in the act of turning and walking away as they are supposed to. In the author’s mind, this makes for a great teaching tool and would likely decrease the number of serious injuries if all new employees had to spend their first six months using one of these.

The limitation of this style of chipper is the size of material it can handle. Keep in mind this was introduced into the utility line-clearance industry first, where most material that was too big to chip was often left behind. There was and always will be a need to chip larger material, including whole trees, so another type of infeed system was needed.

The other primary type of chipper has a mechanical-infeed system, either a single or a series of feed rollers that draw the material into the cutting knives. These units can be either disk or drum, as we noted earlier. The type without a mechanical infeed, discussed above, tend to be of the drum style only. The units with mechanical infeed are usually able to take larger material and are less unpleasant to work with than those without.

The fact that they are nicer to work with also increases the likelihood of an SIF, as it makes it easier to violate safe work practices, manufacturers’ recommendations and ANSI and OSHA standards. It seems the slower speed at which the material is drawn in creates a false sense of security for those feeding the machine. Workers will linger around the infeed area and even reach into the hopper to push material in with their hands or feet – and this is how people chip themselves!

When material whips into a machine like it does with machines that do not have the mechanical-infeed system, people tend to not place their body inside of it. The fatality and injury data indicate the
units with mechanical infeed are where people are going to get seriously hurt or killed. Unfortunately, it is still extremely common to see people reaching into these units or pushing material in with their feet. I have seen several pictures where the individual was actually standing on the infeed table pushing material with both feet! This tends not to happen with the unit that will pull the brush out of your hands faster than you can react.

The big difference to keep in mind is that these infeed systems are designed not to let material, be it living or dead, be pushed, pulled or knocked out and away from the knives. That would go against their design. Once the feed rollers get hold of something, it is going into the chipper unless the rollers or knives are stopped.

General safety guidelines

Here is a list of some general guidelines that apply to all types of chippers and that will make things safer and more efficient. If things work as they should, it will keep the operator from working harder than he or she should and possibly keep the operator from getting frustrated and tempted to cut corners.

All components must be in good working order in general, but specifically:

- All safety features functioning;
- Engine oil and other fluids at proper levels;
- Engine run at RPM designed for chipping;
- Clutch and drive belt adjusted;
- Knives sharp and torqued appropriately;
- Anvil adjusted and torqued properly; and
- If the unit is equipped with a trap door, it must be cleaned often and maintained.

Safety features

Regardless of manufacturer, units with mechanical-infeed systems have had similar safety features for a number of years, primarily related to something that either stops or reverses the infeed system. The ANSI Z133 standard, since the 1982 revision, has required that there must be a bar that runs across the top of and down both sides of the infeed area within reach of the operator, allowing the infeed system to be stopped and/or reversed. Some systems have added cables inside the infeed area that are connected to the reverse bar or have an emergency stop that, if struck, shuts off the hydraulics to the infeed system.

However, the serious injuries and fatalities seem to happen when someone intentionally sticks his or her body inside of the infeed area, often beyond reach of any of the safety features listed above. To be fair, we often don’t know for sure how they happen, as very few fatalities are witnessed. Whether witnessed or not, all are horrific for all involved, including those who investigate or clean up afterward. In some cases, unsafe practices, such as intentionally sticking a body part into the infeed area, were compounded by not ensuring the safety features were working – which is a requirement!

There have been some new features that have added functionality and efficiency and improved safety. There are now much larger machines, allowing for the chipping of whole, large trees. There are tracked units with remote controls that allow access to previously
inaccessible areas. Winches and grapples have been included to reduce the manual material handling of brush and logs. Another improvement to many of the units with mechanical infeeds is a system that automatically reverses the feed wheels when the RPMs drop to a certain level. This feature ensures the unit will not become clogged and also means a worker doesn’t have to stay by the chipper while bigger material is chipped.

While many of the additions and features are again similar across the various brands, each manufacturer has come up with one or more unique to their models. A brief overview of some of the more significant improvements include:

The Altec Arbor Group of Altec Industries
- Modular Production System (MPS)
- Engineless chipper that runs off a hydraulic system powered by the engine of the vehicle pulling the unit.
- The brake system stops the cutting wheel in less than 10 seconds (Note: This system doesn’t just stop the infeed, it actually stops the cutting mechanism!)
- This design has reduced noise and emissions.
- System has fewer moving parts, meaning fewer to wear out and need replacement.

Morbark, LLC
- ChipSafe
  - This system uses a combination of shields installed inside the infeed area of the unit and wearable accessories for each operator.
  - The shield inside can detect when one of the wearable accessories, which contain rare-earth magnets, enters the sensing zone, which then stops the infeed mechanism.
  - One of the magnets/accessories has to be placed next to the sensor on the outer sides of the infeed to get the feed wheels to turn again.

Wearable ChipSafe accessories are required for safety features to function.
◊ Each operator has to wear all of the accessories, one on each wrist, and one on each ankle (or on each boot with the bootlace strap).
◊ The system is designed to work at regular field operating conditions.

Bandit Industries
• Line/rope/shear bar
A bar installed inside of the drum housing designed to cut a rope if it is pulled into the machine, decreasing the chance of the entire length of rope being pulled into the machine. Many may have seen the video that demonstrates what can happen when a line attached to a person is inadvertently fed into a chipper. A dealer filmed a mannequin being pulled into a chipper and the body moves almost faster than the eye can see.

To view a video of a staged demonstration showing what happens when a climber’s rope is fed into a chipper, go to (or click in the digital version): https://www.youtube.com/watch?v=F12LAqs-7GjE. This demo was performed at a Western Chapter ISA safety seminar at Cal-Line Equipment’s Livermore, California, location. The machine in this video was not equipped with Bandit’s rope/cable shear.

Vermeer Corporation
• Mounted over the feed table, the four-position upper feed-control bar enables the operator to stop the feed rollers and select forward/reverse.
• The patented bottom feed-stop bar is strategically located to make it possible for an operator’s leg to strike the bar and shut off the feed mechanism,
either intentionally or automatically, in an emergency situation.

Conclusion

At the end of the day, the key thing to remember is that chippers are designed to take large things and cut them up into small things. The diverse engineering aspects of the different designs and models are important, but chipper safety ends with the operator. Hopefully, it ends at the end of the day with the operator going home to his or her family, instead of it ending with the operator in the hospital, or worse.

Safety systems can be bypassed, tricked or otherwise made inoperative. If people need to remember to do something in order for another safety system to work, and especially if we teach them to rely on the other safety feature, the system is bound to fail. As a profession, we need to ensure all our employees understand the “why” of safe work practices. If everyone understood there is a likelihood of them becoming one of the horrific statistics if they continue doing what they are doing, they just might start to change their behavior.

Tim Walsh, CTSP, is safety manager in the Corporate Safety Department at The Dwyer Tree Expert Company and a frequent presenter at TCI EXPO on a variety of safety topics.

A Vermeer unit showing the four-position, upper feed-control bar and bottom feed-stop bar. Courtesy of Vermeer.
Keith Yetzer founded Yetzer Tree Services, now YTS Companies based in Rogers, Minnesota, with his wife, Jane, in 2006.

“I wanted to create something and be a part of something,” Yetzer says. “I was working for a large utility construction contractor and saw an opportunity in tree work. Hoping to make some extra money, my wife and I started a tree service, pruning and removing trees. She dragged brush and our couple of kids helped out.”

He gradually added employees and bought more equipment to improve safety. In 2012, he had five full-time employees and was still working full time with the contractor as its fleet and purchasing manager.

In 2013, Yetzer left that company and partnered with his cousin, Doug Yetzer, and they renamed the business YTS Companies.

From the beginning they planned to build an employee-owned company, Keith Yetzer says. “That’s been a big portion of our thinking. We want to have a long-term benefit for the employees who help us build the company. We want a united, team effort; it also helps with recruitment and retention.

“Our goal is to be 100 percent employee-owned by 2026,” he says. “We have the framework laid out to do it.”

This is a relationship industry, Yetzer adds. “We have a solid plan for the company; we try to hire the right people and take care of them so they take care of our customers. It’s all based on the team having a shared set of core values.”

Those core values are to have integrity; to be team players; to be professionals, with zero injuries, accidents or incidents; to learn from experience; to be eager to motivate others to perform at a higher level; and to refuse to settle or quit when the going gets tough.

Currently, YTS operates three separate businesses, with its customer base centered around larger commercial clients.

Some 75 percent of all the company’s business is from repeat customers and referrals. “This is something I’m most proud of,” Yetzer says.

YTS works throughout Minnesota and in parts of Wisconsin, Iowa and South Dakota, and has approximately 60 employees in the field.

YTS and its affiliates perform a full line of tree care services, utility-vegetation management, site clearing and wholesaling processed-wood material, including mulch, playground chips and
animal bedding.

“We are making a big push to improve our efficiency through the use of technology,” Yetzer says. Part of that push is their GIS (global infrastructure services) program and SIMS (system integration and management services), which they use to inventory/map, forecast and budget for service work for up to five years in advance on their customers’ properties. Once SIMS is fully incorporated into the business, the company expects to be able to manage its workload much better, especially in plant health care, according to Yetzer.

The company has a full-time safety department with extensive safety requirements. It outsources training for qualifications such as CPR and first aid while performing in-house 46 other training programs. All employees are subject to pre-employment, post-accident and random drug testing. Each new employee completes on average two days of orientation. During orientation, they go through the employee handbook, the risk-control plan, emergency response and PPE; take a driving test; and, depending on their position, must pass operator-qualification testing for all required tasks they will perform and equipment they will operate.

Their team includes 11 ISA Certified Arborists, licensed commercial pesticide applicators, climbers and equipment operators. On the utility crews, each foreperson and climber is a certified line-clearance arborist.


“We wanted to push ourselves to be better,” Yetzer says. “That’s why we became accredited. I liked the whole program, protecting trees and people, and having the processes to ensure that we do great work.

“The hardest part of achieving the Accreditation was allocating the time and resources to put together some of the processes and policies we didn’t have at that time,” he says. They improved their documentation to formalize everything they were doing, to make sure they were in compliance and to add accountability to their training sessions. They changed some job descriptions, made a few additions, changed their safety manual and set up policies and procedures.

Because of the Accreditation process, the company solved one of its biggest problems, which was communication between sales and operations, according to Yetzer. The sales group now uses a very specific language and method to communicate precisely what needs to get done on each project. “Our service adjustments fell off dramatically once we established better standard-operating procedures and better performance evaluations.

“Accreditation has helped us grow at 40 percent a year for the last few years,” Yetzer says. “Our ambitious, 10-year target is to continue this growth rate and get to $50 million in sales. Right now, our biggest challenge is finding the human resources with the right set of core values.”
How do you move your business to the next level in the tree industry? Is your first $1 million the hardest to make? Entrepreneurs will argue that question, but it is generally accepted that when moving beyond that scale, the steps become much more complicated.

John W. Anna, Jr., CTSP, founder, president and CEO of Adirondack Tree Experts, a TCIA-accredited member company based in Beltsville, Maryland, has some answers as to how to move to that next level. His company made that jump and has become one of the largest tree care and removal companies in the Washington metropolitan area. It has eight active crews in the field providing crane and bucket services to residential, commercial, municipal and utility clients out of one office.

Anna and his wife, Felicia, started Adirondack in June of 1994 with a 1978 Ford F-350 and two old chain saws. At the start, Anna actually owned a bar in Ocean City, Md., but when his son was born, he and his wife came back to the Beltsville area for a better place to bring up a family. He had a landscaping company before the bar and did a little bit of tree work, so when he came back, he decided that tree work was going to be the main focus.

“One key to success was making the decision to make it a priority. If you keep looking to make the first million, it doesn’t come for the vast majority of people,” says Anna. “And if you are looking to get rich quick in the tree care world, you picked the wrong profession.”

Working part time while in college, Anna was the sole climber for the fledgling Adirondack. “With a truck left over from my landscaping days, I would literally go out – I had a guy who helped me on the ground – I’d put a tree on the ground, hop in the truck and go look at a couple of jobs and handwrite the proposals from a ‘proposal’ pad I bought at Staples. I would then go back to the job and we would load the truck, brush first, butt ends out, and then load the wood on top to hold it down. Then off to the dump and on to the next job. We had no chipper. We couldn’t even ponder purchasing one.”

The next vehicle was a truck that actually dumped, and Anna used the old truck just to haul wood.

So began his arboriculture career. Twenty-five years later, his one-truck tree business has evolved into a multi-million-dollar company with 32 trucks and 56 emp-
How did Adirondack achieve this growth and what advice to reach success would he give other companies starting out?

One way to move forward is to have people willing to believe in you and to trust your character, Anna says. After a year and a half of operating without a chipper, Anna made the decision to visit Vermeer Mid-Atlantic. With not yet a penny to his name, he approached sales rep Harry Eagle, who felt comfortable enough to get approval from then sales manager Mark Boyle to rent Anna a chipper. Boyle made clear the point that “if you don’t pay me, I will come get it.” After renting the used BC1230 for a year and a half, Boyle and then owner John Vos made the decision to “sell” the chipper to Anna.

The cost? “It’s yours, you already paid for it!” was the answer.

“It is people like Eagle, Boyle and Vos who you never forget,” says Anna. “Without them, I really don’t know where I would be today.

Anna was a one-crew company for a couple of years. Then he made a decision to buy a local competitor, Bob White’s Tree Service. “Bobby came to work with me, and we gained another chipper truck, chipper and a log loader, and from there every couple of years we would add a crew.”

He adds, “It was a long, hard road. There was nothing easy about it. Like Freddy Mercury said many years ago, ‘It was no bed of roses, no pleasure cruise.’ We hung in there and stayed with it, and now it’s to the point where we’re seriously thinking of adding another crew,” for a total of nine, or perhaps expanding into another market.

Anna notes, however, that there is no one solution for the various stages of business upscaling.

“It comes down to the person. It’s not, ‘If you do this, it will come’ or ‘if you can dream it, it will happen.’ That is not how it works in the real world, unless, of course, you are dreaming of humping wood and dragging brush. If you are, give me a call, I can make your dreams come true.

“You get up at five, you come to work, and if it takes you working until 8 o’clock at night, that’s what you do. I don’t think people are willing to do that anymore. Our society has changed. We have trouble getting people to come in and apply, when they can just as easily apply for benefits. Currently we would like to hire three or four more people, but we just can’t get them. People just don’t want to do what we do.”

There does come a time in company growth when the company requires more staff, when it becomes physically impossible to earn more than $1 million with just three or four people.

“There are a lot of good decisions along the way,” Anna notes, adding that one of his best was to hire an attorney, William Callahan, 15 years ago to cover the multi-page tomes of government contracts.

“Bill just keeps the company straight, helps us navigate the legal world,” says Anna.

Many say hiring good people to get to the next level is a key component in business growth. For Anna, that is family. Anna’s oldest sons, Shawn and Nate, are his go-to guys for just about everything, and his oldest daughter, Jamie, is the office manager. His youngest daughter, Kara, and mother-in-law, Ginny, share the bookkeeping duties and son-in-law, Vinny, heads up the sales team. His nephew, Miles, is a foreperson. Anna’s youngest

John Anna’s original ’78 Ford F-350 all-around tree truck.
son, Cory, worked in the family business up until a couple of months ago when he decided to follow in his dad’s footsteps and join the United States Marine Corps. “I spent six years in the Marine Corps and loved every minute of it,” says Anna. “When Cory decided he had a duty to serve, there wasn’t a whole lot I could say.”

Felicia watches the four grandchildren so the kids can work. And everyone is certified except for Kara. “The company is heavy into the family and for us it works. It’s not like you feel you want to kill somebody when the day is over.”

Anna notes that Accreditation and certification are also important tools for growth. He adds, however, that he’s had an on-off relationship with TCIA. “I’ve always felt TCIA was geared to the bigger guys and that you didn’t really hear a lot about the rest of us. There is a rest of us, and there are a lot of us, and there is a lot more to this game than the big players.”

Clearly, however, he partners with TCIA. Adirondack has been a TCIA member since 1995 and earned TCIA Accreditation in 2006. “As far as the credentials are concerned, make no mistake, it’s absolutely important,” he says. On staff are two TCIA Certified Treecare Safety Professionals (CTSPs), 16 Maryland-licensed tree experts, 16 EHAP-certified arborists, six ISA Certified Arborists and two who are ISA Tree Risk Assessment Qualification (TRAQ) certified. Each and every employee is a Certified Flagger as well as First Aid/CPR/AED certified.

Anna himself is a CTSP, a Maryland-licensed tree expert, an ISA Certified Arborist and TRAQ and TCIA Electrical Hazards Awareness Program (EHAP) certified. “All these things make you worthy. They give a value so that when you talk to customers, they can look at something tangible and say, ‘This guy knows what he’s talking about.’ In the past, you had the old redneck guy drinking a cold beer and saying to the customer, ‘Yah, you need to do this and that.’ But times have changed, and we’re an educated lot. We’ve spent time honing our craft and our art, and I don’t think you present well when you can’t show you’ve endeavored to do anything.”

Adirondack takes its credentials seriously. It gives each customer a proposal and puts it in a packet with information plus a rundown of the company’s certifications and credentials. “In some cases it doesn’t matter, because for some people price is the only factor. I just hope some will open it up and say, ‘I have a good deal here from a knowledgeable arborist who is presenting a proposal with a fair price, and you can’t ask for more than that.’”

Anna also notes that, in this business climate, a demonstration of green practices such as recycling is important. Adirondack started doing its own recycling seven years ago with specialized equipment to turn everything into mulch. “The young companies, if they can say, ‘We are able to recycle green waste,’ that is an important thing in this world today.”
Anna actually takes time to explain the details of the process to his customers. “People like to see that someone isn’t driving down a dead-end street and dumping the waste because they don’t want to pay for it, or even dumping it in the landfill.” Adirondack has its own place and processes everything itself, “and it works.”

Another issue is managing the workload. Anna notes that when the company is getting to the point of a month-long backlog, you’re defeating the purpose, making it nonsensical to go out and sell jobs.

Everything has to be very measured. He would advise young companies to be very certain of what they are doing, “because once you step out there, you have taken on the expense of all that equipment, the $120,000 truck and the $100,000 chipper, and you need to put it to work every day. Common sense comes into play.

“I spend a lot of time analyzing our backlogs,” says Anna. “When we are booking estimates out a month and scheduling jobs in the same time frame, I need to make adjustments.” Currently, that adjustment looks more and more like another crew and another salesperson. Adding another crew of four – one foreperson, one climber and two ground workers – is a big expense, he says. “If you don’t have work for them year-round, they’re not going to stick around,” he notes.

Has he had any surprises in the growth of the company? “I try to do everything I can to make sure there are no surprises. Everything is anticipated.”

Attorney Callahan, one of Anna’s most trusted employees, has his own ideas about why Anna has been so successful at building Adirondack Tree.

“It goes right back to John and his personality,” says Callahan. “He’s driven, he seeks perfection and he demands it of himself as well as the other people who work for him, and that has been the impetus for the success of this company. He’s the driving force.”

He adds, “John would be successful in any industry he chose to pursue.”

One action in particular stands out. Callahan notes that when he came on in mid-2004, Anna made the conscious and difficult decision to part ways with some employees who had been there for years to bring in other employees who had the capacity to learn more, become certified and take their profession seriously.

“He didn’t let himself be tied to mediocrity, no matter how hard that was, because of the personal relations he had with those employees. He realized the company wasn’t going to move forward, so he made that difficult decision of purging people out of the company in favor of those who would get their tree expert licenses and go to another level.”

Another transition was key, says Callahan, who manages the details of the company’s contracts. “When I came in, I was able to manage these contracts and free him up from doing that and allow him to do what he does best: day-to-day operation of the crews and going out with the principals in these various municipalities and discussing the work with them. With my ability to do contract work behind the scenes, the productivity of the company took off.”

Another boost to success is community outreach, according to Anna. His company is heavily involved in supporting law enforcement, needy kids and education. “I would like to stress to these younger business owners that it is something you’ve really got to do. You can’t just operate in a market and take from it. There has to be some giving back.”

To counteract the biggest competition — the unlicensed, uninsured operators wandering around in a pickup truck who offer cheap prices — he advises young companies to encourage potential clients to scrutinize that company. Ask clients to call the Maryland Department of Natural Resources to see if someone is licensed and to contact insurance carriers on all perspective bidders to ensure that their insurance coverage is valid.

“The bigger problem we are having is those with no Workers’ Comp insurance as well as those who pay cash under the table to their employees,” says Anna. “The playing field is terribly uneven, and those of us who do it the right way are having our prices questioned more and more. Here in Maryland we are required to provide proof of Workers’ Comp insurance in order to maintain our license. However, the law allows ‘family’ members to be exempt. You would be amazed at how many tree companies in Maryland are comprised of nothing but so-called ‘family’ members.

“When we hand out an estimate, we tell folks, ‘Thanks for considering us. We do the most dangerous work on planet earth; please make sure the people you use are licensed and insured.’ If we all did it, we could make a real dent in these people who don’t do it the right way.

“All in all,” says Anna, “it has been a great 25 years. I wouldn’t change any of it! The stress at times is overwhelming, but that is exactly why my ‘flying bag’ sits directly next to my desk. When I have had enough and I need a break, I grab my bag and head up to the airport.”

Having been a pilot of both fixed and rotary-wing aircraft for more than 25 years, flying is Anna’s stress reliever.

“I recommend that everyone have one,” he says. “I have found that when a 100-foot oak is giving me a lot of trouble, it is not that big of a problem when I get 3,000 feet above it.”
Accident Briefs

All items taken from published reports or reported directly to TCIA staff, as noted.

Driver hurt when tree truck crashes

One man suffered minor injuries after his tree-trimming truck crashed into a tree in Goleta, in Santa Barbara County, California, May 1, 2018.

Firefighters responding found the white truck, with a wooden chip box built on the back, that appeared to have lost control struck a power pole, then veered off into a tree.

The male driver, estimated to be in his mid-20s, was trapped and needed extrication. After being removed from the vehicle, the driver was transported to Cottage Hospital via ground ambulance, according to an edhat.com report.

Tree faller hurt

A tree worker was hurt while felling dead trees May 1, 2018, in Crystal Falls, California.

The injured man, 28, from Texas, is a contract employee for PG&E who was clearing trees killed by bark beetle in Tuolumne County. He was transported by Mediflight to a Modesto hospital as a precautionary measure and was later released, according to a www.mymotherlode.com report.

Man cutting trees killed in struck-by

A man cutting wood was killed May 1, 2018, in Penn Township, Cass County, Michigan, when two trees fell on him.

Robert Wright, 73, of Vandalia, Mich., cut down a tree, which fell into another tree, causing it to be uprooted. Both trees then fell on Wright, causing fatal injuries.

Emergency responders extricated Wright from under the downed trees and began medical treatment, but he died from his injuries, according to a WSBT 22 report.

Man dies after being crushed by tree

A man was killed May 1, 2018, when he was crushed by a tree he was cutting in Savannah, Wayne County, New York.

Robert Manley, 57, of Seneca Falls, was using a chain saw to cut down a tree when the tree split lengthwise and fell on top of him. Manley was pronounced dead at the scene, according to a Rochester Democrat and Chronicle report.

Tree worker electrocuted

A tree worker was electrocuted May 1, 2018, while doing line-clearance work in South Kingstown, Rhode Island.

Gregory Hanna, 29, was in a bucket trimming trees over power lines when he was electrocuted. He was pronounced dead at the scene, according to a report from WPRJ 12/Fox.

Man hurt in struck-by

A man was injured May 3, 2018, when a tree branch fell on his head while he was working in Southington, Connecticut. Two men were working on a tree when a branch fell. One of them was transported to an area hospital with at least a cut on the head, according to a patch.com report.

Man hurt in fall from tree

A man trimming a tree was hurt when he fell between 20 and 30 feet May 3, 2018, in Titusville, Florida. A county ambulance took the man to a helicopter, which flew him to Health First’s Holmes Regional Medical Center in Melbourne, Fla., with traumatic injuries, according to a Florida Today report.

Man helping neighbor killed in struck-by

An elderly man helping his neighbor cut a tree May 3, 2018, in Rowley, Massachusetts, died after he was struck by the cut tree.

The 81-year-old man was helping a neighbor cut down a tree on the neighbor’s property when the accident occurred. It appeared the entire tree fell on the victim, but by the time firefighters arrived, the tree had been cleared. The victim was unconscious and a police officer was performing CPR when firefighters arrived.

He was taken by ambulance to Anna Jaques Hospital in Newburyport, then flown to a Boston hospital, but he died from his injuries, according to a report in The Daily News of Newburyport.

Operator rescued after bucket truck tips

A tree trimmer suffered minor injuries when his truck tipped, stranding him in the bucket May 3, 2018, in Morris Township, New Jersey.

Township firefighters rescued the male worker, who was knocked unconscious briefly and sustained minor injuries. He
was stranded in the bucket 10 or more feet above the ground.

The tipped truck remained upright on two wheels as it rested against a tree, according to a report in the Morristown Daily Record.

Landscaper rescued from tree
Firefighters rescued an injured man trapped in a tree May 3, 2018, in Bethel, Connecticut.

The victim, a landscaper who was in the process of cutting down the tree when he became trapped, was injured and yelling for help. A man nearly 1,000 feet away heard the cries and called 911.

Firefighters were on the scene promptly and made use of Bethel Volunteer Fire Department’s Tower 1 to bring the man to safety. He was taken to Danbury Hospital, according to a patch.com report.

Man killed by felled tree
A man died after a tree fell on him May 6, 2018, in Postville, in northeast Iowa.

Stephen Smith, 65, of Postville, had been cutting down the tree when it fell and pinned him underneath. He was pronounced dead at the scene, according to a www.southernminn.com report.

Ground worker killed by felled tree
A worker was killed May 8, 2018, in Bellefontaine, Ohio, when a tree fell on him while he was working with a crew to clear a lot.

John W. Anderson, 56, of Bellefontaine, was operating a chipper for a local tree service while other workers were using chain saws to bring down trees. One of those trees struck Anderson. He was declared dead at the scene, according to a Bellefontaine Examiner report.

Operator hurt when lift truck overturns
A man doing contract tree cutting for the state suffered life-threatening injuries after the bucket truck he was working in overturned May 9, 2018, in Salisbury, Maryland.

A crew working for a contractor was cutting trees in the area using an aerial lift. While the bucket was extended in the air approximately 25 to 30 feet, the vehicle overturned.

Johny Arnoldo Picon Velasquez, 22, of Lexington Park, Md., the bucket operator, was transported to the R Adams Cowley Shock Trauma Center in Baltimore for life-threatening injuries, according to a WBOC-TV report.

Operator hurt when lift truck tips
An aerial-lift operator was hurt May 10, 2018, in Greenup, Kentucky, when the truck overturned while he was in the bucket.

The worker was flown to St. Mary’s Medical Center in Huntington. Crews on scene say the victim had a few broken ribs but was responsive, according to a WSAZ NewsChannel 3 report.

Worker killed by metal part thrown off chipper
A tree worker in Richfield, Minnesota, was killed May 16, 2017, apparently when the steel disk cover flew off a running wood chipper and struck him in the back of his head.
Bill Pipes, 51, a relatively new employee with the local tree service, was just finishing up a two-day job in the residential neighborhood at the time of the accident, according to a Fox 9, KMSP-TV report.

A Star Tribune Media Company report said the accident happened when another employee was working on the clogged machine.

A Minneapolis Star Tribune report suggested that a co-worker raised the chipper’s disk cover with the disk in motion, the cover made contact with the rotating disk and the cover was then violently propelled, striking the victim in the back of the head.

Utility worker hurt trimming

A utility crew worker was slightly injured while clearing trees May 18, 2018, in Newtown, Connecticut.

The worker was struck in the head by a branch, apparently while doing line-clearance work in the aftermath of storm damage, according to a Newtown Bee report.

Climber killed

A tree company worker died while on the job May 19, 2018, at a Stanford University housing complex in Palo Alto, California.

Jesus Silva Romero, 36, of San Jose, a crew foreman, had been climbing and cutting limbs in a tree with a chain saw prior to the accident. Romero was found lying on the ground next to a tree that was roughly 30 feet tall. He was pronounced dead at the scene, according to a Palo Alto Weekly report.

Man attacks co-worker with pitchfork

A worker for a tree service company was arrested May 21, 2018, in White-marsh, Pennsylvania, and charged with assaulting his co-worker with a pitchfork.

Jonathan Ortiz-Aparicio, of Norristown, Pa., allegedly struck the victim in the back of the head with a pitchfork after they got into an argument while on the job working for a tree service, then fled on foot. The victim was treated for his injuries at the scene and transported to an area hospital.

Ortiz-Aparicio, who had taken off his yellow work shirt to avoid detection, was spotted by police about 20 minutes later and was taken into custody and charged with aggravated and simple assault, according to a report in The Mercury.

Climber electrocuted

A man was electrocuted when he clipped a power line while trimming a tree along Route 42 in Dayton, Virginia, May 25, 2018.

Cody Wesley Keith, 29, of Mount Jackson, Va., had been working for an independent tree-removal service when he’s believed to have made contact with a power line running by the tree he was working on. He was found unconscious in the tree with severe injuries.

Firefighters worked with crews from Dominion Power to remove Keith from the tree, but he was pronounced dead at the scene, according to a WHSV-TV3 report.

Homeowner killed while trimming tree from ladder

A homeowner died of a broken neck suffered while trimming a tree from a ladder May 28, 2018, in Plantation, Florida.

Jerry Fadgen, 72, a member of the Plantation city council, was pronounced dead at the scene after falling from the ladder while trimming a tree at his home, according to an NBC 6 South Florida report.

Tree worker killed in struck-by

A tree worker was killed May 29, 2018, when a limb fell on him in Plantation, Florida. At least two other workers were present at the time of the accident, but no further information was available, according to an NBC 6 South Florida report.

Man dies after pinned by tree

A man died after being pinned under a fallen tree May 29, 2018, in Dunlap, Tennessee.

Don “DJ” Carlos Harmon, Jr., 45, of Dunlap, was preparing to cut down a tree that was leaning on two other trees. The leaning tree apparently had fallen after heavy rains the previous night. While being cut, the tree buckled, knocked Harmon down and then fell on top of him.

People at the house immediately performed CPR until first responders arrived. Harmon was rushed to a hospital but never regained consciousness. He was pronounced dead a short time after arrival, according to a WTVC News Channel 9 report.

Worker hurt in fall from aerial lift

A highway worker in Schenectady County, New York, suffered minor injuries May 29, 2018, when he fell out of the bucket of an aerial-lift truck.

The victim, part of a crew apparently doing tree work, was taken from the scene in an ambulance, according to a report in The Daily Gazette.
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Climber, Baton Rouge, LA


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What's on your hiring bucket list?

Here are five easy tips to ensure qualified candidates read your job listing:

1. Clear job title. How do you draw them in? Job titles don't need frills; be clear what the position is.

2. Think honey, not vinegar. What are you looking for? You have expectations for training and experience – make them clear, but balance clarity with respect.

3. Introduce your company. Who are you? Candidates should get a sense of your size and, more importantly, your company culture.

4. Highlight perks. Why should they work with you? Competitive pay, training programs and health benefits are all important to list if you offer them.

5. Post your job on the TCI JobBoard. Where can they find you? We get hundreds of qualified candidates browsing jobs each day!

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- Boost your post on the TCI JobBoard to be at the top of search results
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- Reach veterans through the Veteran's Network
- Blast your job to 3rd party sites with TalentBoost
- Attract diverse talent via the Diversity Network

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The tragedy of losing someone to an illness is heartbreaking. Losing someone to an accident is avoidable, preventable. That is the very nature of the word accident. Accidents, by definition, can be prevented. When the movie stops due to an accident, there are many significant implications. The movie did not have to stop as the accident could have been prevented. I don’t know that losing someone due to an accident is as or any more heartbreaking than losing a loved one to an illness. What I do know, however, is that when we lose someone due to an accident we know that it could have been prevented. In the workplace, as a business leader, it is difficult to bear.

I recently heard Craig Morrison, the former CEO of Hexion, give a keynote address at a safety conference. He had us all in tears as he told the story of a fatality in his company, in a distant country, that affected him to the core. Craig told the story of the employee’s movie being cut short and how the employee’s family had to move forward without the future of any more memories.

Accidents in the workplace affect so many more than the one catastrophically hurt or killed. The reality is that when there is a fatality at work, there are many others who are affected, hurt, traumatized and emotionally scarred by the event. Those left behind have to carry on in light of the emotional pain. They are left to move forward – they have no choice but to move forward, but without the possibility of more footage, more video, more future memories of their loved one. No wedding, no grandkids, no vacations together, no time just being there when needed most.

Safety is as much about the families, the loved ones, the friends than just protecting that employee. We have to realize that a catastrophic accident affects so many more than just the one who had the accident.

So what do we do? What more can we do? I wake up every morning thinking of this. There is no one answer but yet a journey of continuous focus on people. Of deep caring about teammates and knowing that the caring must extend beyond just them because the consequence of a catastrophic accident sends shockwaves far and wide. One of the best definitions of safety I have ever heard goes something like this – it is our responsibility as safety leaders to recognize and minimize the exposures our teammates face. It is not about keeping them “safe,” it is about minimizing the exposures they face.

Think about that. What are the exposures in your business? Are there exposures you cannot even see? Those are the most insidious of all, as you have to find them before they find someone. Once you can see them, you must take action. But how? Perhaps it is more training on how to deal with the exposure. Perhaps it is completely removing the exposure. Perhaps it is finding ways to minimize the exposure as much as possible. Do something. Take action. Show up. You can only help your people if you are with your people. You can pretend to care, but you cannot pretend to be there.

Keep the moving going.

Scott A. Jamieson, CTSP, is vice president of community partnerships & Midwest division leader, based in Grayslake, Illinois, for Bartlett Tree Experts. He is also a former chair of TCIA’s Board of Directors.
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Knock on wood! Are you superstitious? Are you interested in old-time natural weather folklore? Most of us are probably not as superstitious as our ancestors. And I sincerely doubt that many of us have ever paid enough attention to, or noticed that, “if the leaves on the trees turn up on Monday, it will rain before Wednesday.”

I have been very interested in these types of sayings since I was a wee lad of 4 or 5. I can clearly remember my great grandmother, 90-plus years old in the late 1950s, telling me that “you never plant your potatoes until after Good Friday.”

However, since I have worked with trees in the arboriculture industry for almost 45 years, and my veins are full of cellulose fiber, I thought I would share some old time superstitions and folklore with you that specifically relate to trees.

Tree/Weather folklore
- If frost hangs on the trees in the late morning, snow may be expected.
- If the weather is cool when the dogwood blooms, the term dogwood winter is used for the cool period.
- If a flower or a fruit tree that should bloom or bear but once a year blooms or bears twice in a season, you may look for a hard winter.
- The growing of moss on the south side of trees means that a cold winter may be expected.
- If the nut crop fails, the winter will be mild.
- If the nut crop is heavy, the winter will be severe.
- If you stick an axe into a tree during “dogwood winter,” the tree will die.
- If the locust blooms are heavy, expect a cool summer.
- There will be no chestnuts if it rains on the Fourth of July.
- To protect your house from lightning, gather hazel tree branches on Palm Sunday and keep them in water.
- An acorn at the window will keep lightning out.
- Locust trees are more often struck by lightning than any others.

Farming and gardening/tree folklore:
- When apple trees bloom, plant beans.
- Plant corn when the dogwood blooms.
- When white oak leaves are as big as a squirrel’s ear, plant corn.
- If you have a tree that will not bear fruit, drive a peg into it to make it bear.
- To kill a tree so that it will not sprout, cut it down or mutilate it in the dark of the May moon in June.
- Deaden locust trees in the dark of the moon.
- If you prune a tree in the light of the moon, it will not die.

Personal improvement/tree folklore:
- If you tell your dreams to a hollow stump, they will come true.
- To dream about new trees is a sign of bad luck.
- To knock on wood will avert disaster – notably that follows boasting.
- If you plant a cedar tree in your yard and it lives, you will have good luck.
- You will have bad luck if you burn a cedar.
- It causes bad luck to break a dogwood switch.
- It causes bad luck to burn or haul sassafras wood.
- If a woodpecker picks on a tree in the immediate neighborhood of your house, expect a caller.
- Dreaming of acorns predicts pleasant things and that much gain is to be expected.
- To dream of an old, spreading oak means long life and prosperity. If it is filled with acorns, you are due a promotion or some type of increase in your life.
- String eggshells on the twigs of trees to keep the hawks away.
- An acorn should be carried to bring good luck and ensure a long life.

Health/tree folklore:
- Mulberries are poisonous during the time of the 17-year locust.
- The birch is thought to be a symbol of fertility and guards against evil spirits.
- Used as a rod for water divining, the hazel is considered to ward off evil spirits.

So there you have it! I am sure there are many others and I hope that you will send them to me at Jim@treedoc.com. In the meantime I pray that you will all dream of old spreading oak trees.

W. Jim Cortese, BCMA, is a consulting arborist in Knoxville, Tennessee, and a four-year TCIA associate member.

To see a more complete list of folklore related to trees Cortese compiled, go to https://tcia.org/TCI-publications/tci-magazine/2018/07/Cortese_Long_life_and_Prosperity.pdf or, in the digital version of this issue online, click here.
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