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Getting our attention ...

I had an experience recently that highlighted for me how difficult it is to get and hold people’s attention. I was picked for jury duty in December. I showed up at court at the appointed time and began what the legal system is famous for – waiting. When we finally went in for a jury briefing with one of the judges, I realized very quickly that I was having a hard time paying attention. It was as basic as, “Here is where the jury box is. Here is where the judge sits. Here is where the clerk of the court sits,” etc., etc. I thought I was trapped back in Civics 101 and wasn’t going to be let out. I tried hard to quit looking at my watch and wondering when we were going to get down to work. All of a sudden in the middle of this VERY basic intro, there was a nugget of information that was new that I really needed to know in order to do my job well. If I had not been forcing myself to pay attention, I could have really messed up.

So I’ve been thinking about how hard it is, in the world we live in, to get people’s attention and to get through to them. We have so much information that comes at us in any given day that communicating something really important takes more and more creativity and repetition to get through to people. In addition, people are at so many different levels on the receiving end. I realized part way through the instructions that they were being given for the lowest common denominator. Now that may not say a lot about our justice system, but as I looked around the room I realized this was actually an indication of knowing your audience – the nervousness most people feel being a part of a court proceeding, and the fact that it really is a cross section of society that is present.

This has a lot of relevance to us when we think about employee training on a day-to-day basis. Think about safety training for guys who have been at this for 10, 15, 20 years – getting and holding their attention may not be the easiest thing. On the other hand, they just may be the guys who know how important it is to pay attention, and they can help the newcomers grasp why day after day, being in a safety briefing and paying attention is as important as life and death. For me, it reminds me of how important it is to engage people in their own training. If there had been some audience participation, questions and answers where all of us were expected to participate, I bet my attention would not have wandered so much. Adult learning specialists tell us that adults want hands-on and participative learning experiences – no more spoon-fed, institutional-style learning.

So the lesson for me is that when you think you’re getting through to your staff because they were present and you said it, or because you went through the training materials, that doesn’t mean they got it. They just might have been wondering when they were going to get out of there.

Next time you hold some training, see whether or not you’re getting their attention – ask some questions and try to get them involved, and then ask some questions to see what they’ve learned. I’ve learned that getting my attention takes some work. Holding it is even more challenging. In fact, I wonder if I held yours all the way through this article?
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Hard to believe it but the stump grinder is more or less celebrating a golden anniversary. It was back in the mid '50s when stumpers went from a farm-built, tractor-powered prototype into mainstream production, and thus was the birth of a new part of our industry.

Over the years what began as a rotating wheel fitted with, essentially, metal bits used for mining minerals such as coal has evolved into a sophisticated, highly engineered technology largely transparent to the user who only wants to know if the equipment works and what it will cost. Technically, all stump grinders are a function of optimizing four things: the wheel, speed of rotation, horsepower and the number of cutting teeth. So, after 50 years, what’s to be expected when it comes to the business end – the tooth area?

“We started as an original manufacturer of stump grinders with Vermeer (the brand generally credited with launching the business),” says Rick Lemaux, plant manager at Border City Tool & Manufacturing and a 38-year veteran of the business. Lemaux, a fountain of history, describes how the stump grinder idea came from one farmer, how mining and carbide cutting tools were adapted for the purpose, and how teeth selections evolved from essentially bent steel bars to heavier teeth with high-wear carbide cutting surfaces. A decade ago, the need for heavier duty teeth became more evident along with the need to keep down the cost of the teeth. Lemaux says that, because of a desire to optimize the half-inch square profile (“the best tooth” dimension in his opinion), instead of putting “all the metal” in the tooth, great advances were made in the pocket.

On the evolutionary front, because “you never know what you will get when you cut a stump – cement, rocks, metal – the best thing to do is make the teeth as durable as possible, but also the least expensive and easiest parts to replace,” he concludes. Border City’s strength is focusing on that, Lemaux says. “For years we’ve made teeth for other manufacturers; now we sell to the end user.”

Lyle Clemenson, president of CEI, says “We’re always working on new products, like the new Dual 800, double-tooth.” It’s an outgrowth of the venerable 800 that’s been around a long time. The new type Gladiator, which will be called the Dual Gladiator, is being designed to turn 180 degrees in the pocket for a second fresh cutting surface. “Customers can get twice the life out of a tooth if they can turn it 180 degrees,” he says.

But the real advantage, says Clemenson, is the ability to reverse the tooth 180 degrees in the same pocket versus swapping from one side of the cutting wheel to another. Designed for the typical stumper machine in the 25-80 hp class, creation of the double-tooth was in direct response to competitors with multiple cutting surfaces. They will be joined by a bigger, more
The stump grinder in ’56,” says Green. “In those days they’d put a half-inch by half-inch steel with a tip in a pocket. In ’57 the carbide tip came along and, with the pocket and Allen bolt, became the industry standard.” In the ’80s, he says, the heavy duty, forged tooth and pocket tooth made their debut, then, as the quest for bigger, stronger and more durable cutters continued, along came the one-piece forged pocket and tooth combination.

“In the mid ’90s, Green Manufacturing introduced the first non-standard tooth to the industry,” Green says. “These were forged alloy steels, heat treated and thru-hardened.” They were designed to be used on any mainstream machine. The tooth was designed to use three cutting edges with minimal to no downtime, and they could be sharpened. The retail cost was less than $9 per tooth with three edges. The unique feature was that all the operator had to do was loosen it, turn the tooth to a new edge, tighten and it was done in 30 seconds, even in the field and without removing the pocket. No gauging was required.

New this year for Green Manufacturing will be a new line of Greenteeth models, redesigned and streamlined around a unit’s horsepower range to improve the cut and minimize climbing. They are for various ranges: 500 for 25 hp, 700/50 hp, 900/75 hp, and 1100/100-plus hp.

Also introduced at TCI EXPO in Detroit and in the offering for the first quarter is the new easy-out Greenbolt, with a ¾-inch external drive head, smooth shank through the wheel, and a slot at the threaded end for easy extraction. Its mission is to minimize “broken bolt time,” says Green.

Husqvarna Turf Care offers a single model stump grinder powered by a 13 hp Honda and aimed at the landscaping market. “We prefer the carbide tipped, removable blade because they are easier to sharpen and a lot less expensive to maintain and repair than some that run complete welded-on teeth,” says Sean Dwyer, associate product manager for Husqvarna. The 14-inch wheel with eight cutting teeth allows a 12-inch deep cut, and the cutting head is supported on cast iron pillow blocks to make the Husky “structurally stout,” he says. “We are investigating a special cutting blade for better survival in sandy California and Florida conditions.”

Joe Leonardi, vice president at Leonard Manufacturing, says one issue with early designs was having to gauge the tooth, setting the depth using a setting gauge. The two-part tooth and pocket arrangement,
self gauging teeth and beefier tooth profiles were vast improvements in maintenance, performance and strength, but the torque required to tighten the tooth and pocket setup led to broken bolts, pinched shanks and possible wheel damage. (That can run $300 to more than $1,000 depending on the unit size.) Leonardi offers a full range of teeth and pocket setups starting with the standard half inch, ⅜-inch Tuff Tooth and ⅝-inch Tomahawk.

“We use alloy steel that’s heat treated and precision milled. The result from the metallurgy and tolerance design is a release of the tooth from the pocket,” he says.

Leonardi offers a tooth with a pin at the end of the shank, a safety feature that prevents a tooth from being thrown out of a loose pocket. “The pin is short enough to pass between the bolts but if they get loose it can’t fly out of pocket and knock the wheel out balance,” says Leonardi.

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Cutting through several inches of stump is all in a day’s work for strong machine parts. But just as easily as these cutters shred stumps, operators can easily be shredding years off the life of their machines simply by not replacing stump cutter teeth when they turn dull, according to Mark Rieckhoff, environmental segment manager for Vermeer Manufacturing Company, arguably the pioneer in the stump grinding industry.

Owners can erase years off the life of their machines by waiting too long to replace stump cutter teeth, says Rieckhoff. The reason, he points out, is that too much vibration can be detrimental to any machine, causing welds to crack and fasteners to loosen and/or fail.

“Dull cutter teeth can have a huge financial impact on a machine,” he says. “Thinking you can go through an extra stump (with dull or broken teeth) may save money in the short term to get the job done faster, but it may be worse in the long run on engine performance and engine life.”

There are some simple steps operators can take to ensure their machines continue to run as well as the first day they bought them. The first step to maintaining optimal performance is knowing what routine maintenance checks to conduct. Operators should check the teeth daily (at least each day it’s in use), or when a drop in machine performance is noticed, says Rieckhoff. He adds that operators should always consult their operator’s/maintenance manual before conducting any inspection or repairs, especially the daily/hourly interval checklist that covers maintenance requirements.

Teeth should be at the top of the list, he says. After properly shutting down a stump cutter, rotate the cutter wheel by hand, and look for any worn or broken teeth. When looking at the carbide tips on a tooth (note that the carbide area is what does most of the work), make sure the body of the tooth isn’t bent or hasn’t lost its contour, becoming oval-shaped. Once the tip becomes rounded, it loses its cutting ability and will affect performance, Rieckhoff says. “When you check your machine at the end of the operating day, check for any missing carbide tips.”

Signs that you may need to replace the stump cutter’s teeth include:

- Shape of the shavings coming off the stump have changed
- Engine sounds as if it’s laboring or working harder
- Machine vibrates more during operation
- Performance of the machine drops - it takes longer to get jobs done

Replacing cutter teeth isn’t like changing the oil in your car - there’s no time-based maintenance schedule. Instead, says Rieckhoff, when an operator should replace or sharpen the parts varies, depending on the type of trees and ground conditions in their region and how far down they go when cutting a stump.

Expect the unexpected

Factors other than the type of tree being cut can affect the wear of cutter teeth. Everything from nails and rocks to fence posts and other unusual items are found in stumps because trees grow around anything in their way. These foreign objects can cause major headaches for operators by bending and breaking cutter teeth. Oftentimes, Rieckhoff says, newcomers to the tree service industry don’t factor in the added cost of these field repairs and may not even carry spare parts. “If you encounter a rock and it breaks a tooth, you don’t want head back to the shop.”
an in-the-field tooth exchange, including a probe to remove dirt from the Allen head, an Allen driver, and thread chaser.

The latest innovation at Leonardi is the company’s “Phantom Wheel,” a contoured wheel – not round – with slots that allow the operator to see through the wheel while it is in use to inspect work in progress – the cut, condition of debris and what might be in the way. Leonardi sees the ability to see through the wheel not only as a functional improvement, but as a safety feature as well. For now the Phantom wheels will be limited to new OEM models.

One of the more intriguing new innovations is the system developed by UK-based Multi-Tip, a relative newcomer in just the past few years and which expects about two-thirds of its business to come from U.S. customers. Designed by a user who couldn’t stand the frustration caused by, and time lost to, changing teeth, he set about to build a cutting system that was quick-change and that would result in a lower running cost. Though the objective was not necessarily a better cutting system, David Saul, vice president of marketing, says that’s become a byproduct, especially in the smaller machines.

Multi-Tip features a specially hardened, slotted wheel with specially designed teeth. The design takes up impact forces through the wheel and not the mechanism itself.

Multi-Tip’s quick-change tooth is replaced with one that holds the bit in place but does not take the strain of the grinding. A slick hammer tap out the bit and the whole change can be accomplished in about a minute.

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One look at the oddly shaped wheel tells you this is different. In addition to looking like a wheel with shaved sides, the Multi-Tip features a specially hardened, slotted wheel with specially designed teeth. The design takes up impact forces through the wheel and not the mechanism itself. The quick-change tooth is replaced with one bolt that holds the bit in place but does not take the strain of the grinding. “There’s less gum and debris. A slide hammer cleverly taps out the bolt and the whole process can be accomplished in about a minute,” Saul says.

Furthermore, and the math is a bit complicated here, the design provides for more cutting surfaces to be at work at any given time. For example, a standard 16-inch wheel will have eight-pairs of clamp-on teeth; Multi-Tip just six teeth. Instead of 16 cutting surfaces, Multi-Tip presents 24 (four cutting tips per tooth). As Saul explains it, a traditional setup puts 12 surfaces to work at any one time – Multi-Tip has 18 at work.

The geometry of the squared wheel plays a critical role, essentially presenting sets of inner and outer teeth for deeper cuts, less wear and less vibration, according to Saul. Cost, he says, is about $3 per tip in “sensible quantities.” Economy-wise, users who move worn teeth to the inner position spread the wear more evenly and further extend the life of each cutting tip.

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Available in towable and Self Propelled.
ty big wheels,” he says. Still a single bolt mounting system, Saul expects to release the product as soon as it clears patent—likely in February/March 2005. Right now they are intended as replacement units, but Multi-Tip expects to appear as an OEM spec this year as well.

According to Ken Monyak, product development manager at Sandvik, his company set out to design a new tooth and along the way had to “reinvent the wheel,” at least as far as stump grinders go.

He explains it as a “unique tooth in that it is also threaded to fit through disk. There’s a special holder in the disk, you don’t have to buy any bolts; just put on a nut in the back. The nut is protected by the pocket. And it’s very simple — no lefts or rights.”

At Bandit Industries, President Jerry Morey says the company, which is relatively new to the stumper business, does not manufacture its own teeth. Bandit, he says, prefers to assess the tooth technologies available and offers those that work best all around. “Because certain types work better on different species and in different regions of the country, it’s a matter of customer preference as to the teeth that go into the machine.

“Bandit will get aggressive this year,” Morey warns. “We just started in this business two years ago with a prototype and put out our first production units a year ago.” With the assembly line up and running, he expects last year’s 100 unit sales to increase five fold or more.

With the likes of Bandit and other newcomers now grinding out a niche for themselves in the market, it should be interesting to see what other innovations — in teeth and other parts — stump grinder and grinder parts manufacturers will come out with in coming years.
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From a presentation by Scott Jamieson, Eric Schultz, Trent Sible and Tom Tolkacz

Landscape contractors and arborists sometimes work together, and if they don’t, they should. There has been a trend for landscape contractors adding on tree care services and some landscape contractors have spun that business out to companies that just focus on tree care. So what are the benefits, pros and cons, of having an in-house landscape contractor – or arborist – and how can arborists and landscape contractors work together?

Scott Jamieson: At The Care of Trees in Chicago, we work with landscape contractors a lot. We have tried to position ourselves to be their tree division. Our position has always been to add value to the landscape contractor. We have all sorts of relationships with landscape contractors and they range from bidding on removals to where we are actually part of their tree division and their marketing materials position us as their tree division. When we work with landscape contractors our primary focus is, can we work as a team and add some definable value for their clients? Our mission is to bring value to our landscape contractor clients by bringing value to their clients.

Tom Tolkacz: Eric Shultz with Shultz Industries happens to be one of our key landscape clients at Swingle Tree and Lawn Care. We all like additional revenue streams and I truly believe that a strong relationship with landscape contractors in your marketplace can bring you additional revenue streams at probably a lower cost than getting new business yourself. They key difference is that at Swingle, we do some of the services that Shultz Industries offers. We do aeration and fertilization, so there are points in time where we have to be very cognizant of what properties he manages and what property managers he deals with. We run into this type of situation, but there is a great opportunity for arborists to partner with landscape contractors and increase the revenue stream – help the landscape contractor out and also help yourself out. There are some great seasonal influences, especially with commercial properties. We tend to take care of a lot of our commercial properties in the fall and winter months, which helps us when our traditional residential business may not be in such high demand. It also fits the commercial properties from a mowing maintenance standpoint, and we can work together on that property and not be interfering with each other.

Trent Sible: I serve as a project manager in our maintenance division for Moore Landscapes out of the Chicago area. Moore is currently and has always been a family-owned business. We are a full-service firm. We have landscape architects on staff as well as maintenance and construction divisions. However we do have a pool of subcontractors that we rely upon heavily, one of which is The Care of Trees.

Eric Schultz: I made a decision years ago that we wanted to market and focus our

When to Call an Arborist or Landscaper
services on things that we did well as a landscape contractor. A lot of landscape contractors try to do tree work, but they really don’t do tree work well. We found that the insurance requirements and the equipment and all of the overhead to get a division ramped up wasn’t worth what we could generate in revenue because we had so many other things going on. We struggled for a couple of years trying to find a tree company that we could work with because most of the arborists in the Denver metro area are treating commercial landscape like a typical residential client. They put the job on a list and maybe get to you in two to three months. It wasn’t until we got in with Tom at Swingle that we realized that there are things that you need in a partnership between an arborist and a landscape contractor and it can work well both ways. Today, we get a bit better service than the typical person off the street. We also have somebody we can refer work to. We do not subcontract all of our tree work. A lot of the time we will give Swingle’s name to a client or give the name to somebody that is asking for information and Swingle will deal directly with the client. There are a lot of different ways that the partnership can work as opposed to just us generating work.

Scott Jamieson: Trent and Eric, what are the advantages and disadvantages of keeping tree care in-house – what has been the greatest advantage to outsource tree care and what have been some of the disadvantages of doing this?

Eric Schultz: You can certainly spend an awful lot of money moving into tree work and you have to be able to recover those equipment costs. A lot of landscape contractors can’t do that. You have to be a pretty good-sized company to invest revenue and not pursue or market that section of your business. Insurance is another big issue. We have a tremendous safety program, but when you start swinging guys out of trees it is a different story. While we can perform the services and we do have a certified arborist on our staff to assist in dealing with the client relationships, a business owner really has to look at the cost associated with tree work, then ask your-

“Being sensitive to both sides – trying to understand each other’s worlds, and trying to get our industries to talk – makes a huge difference in the relationship. In the end it will not only be better for the trees but also the clients.”

Scott Jamieson

Who is doing the scheduling? Who is in direct contact with the client? A lot of basic things, but questions that oftentimes we forget to ask and which eventually become problems. It is very important to go through these questions and give a copy to the contractor. This way we both know what is going on and we know that there are some agreed upon terms. From that standpoint, we try to avoid as many problems and eliminate the disadvantages by going through this set of questions.

Scott Jamieson: I used to sell quite a bit in the city of Chicago. I worked with a lot of landscape contractors and found them to be extremely demanding from the standpoint of needing prices as soon as possible – if not yesterday. For them, contracting tree care is often relegated to the last line item on the landscape contractor’s bid. It is often not high on the priority list. What also happens quite often is landscape contractors are getting last minute calls from their clients, which cascades down the ladder. It has been a challenge in my firm trying to get my salespeople to realize this and deal with it. It is crucial that we understand the needs of all of our clients. If they need it now, it is up to us to figure that out and serve our best clients.

The other challenge we face is that our salespeople often take on a “holier than thou” attitude when it comes to landscape contractors doing tree work. There is a lot of bad tree care that goes on with landscape contractors but there is also a lot of good stuff. One more than one occasion we have been on a site maintained by one of our top landscape contractor partners. Our arborists talk to the client about how the tree was planted too deeply, or about something else that the landscape contractor didn’t do. When we are called out to a site by a landscape contractor one of our jobs is to make that contractor look good to the client. One of the hardest things our organization has to deal with is to learn how to quit throwing stones at the landscape contractor, or the landscape architect, and get rid of the “holier than thou” attitude.

Being sensitive to both sides – trying to understand each other’s worlds, and trying to get our industries to talk – makes a huge
difference in the relationship. In the end it will not only be better for the trees but also the clients. We often bring the sales team of our landscape contractor clients in for lunch meetings. We will exchange ideas and do presentations back and forth. The landscape contractor will explain who they are and what they do and tell us what is important on different sites. We will do the same for them, talking about why they should be looking up as much as they are looking down. I don’t believe you could ever do too much cross education back and forth.

Eric Schultz: We have pretty good relationships with our customers. We give them good service at a fair price. If somebody else comes in and can do that job better, the customer will leave – it’s that simple. Once we lose those relationships and they start looking for somebody else you often run into bad situations: they don’t pay their bills and you end up in court over nickel and dime issues. When it comes to competition, if one of our contractors wants Swingle to do their irrigation work, then Swingle will do the work. We overlap with Swingle on a lot of different service lines, such as irrigation and fertilization. We do all of our own shrub pruning in house because we have an arborist on staff. We partner where it makes sense. If Swingle gets a client that needs full service, they will sub-contract the lawn mowing to us since they don’t mow. It is a good partnership. If you’re worried about a partnership from the standpoint of losing customers, then you probably are not doing enough to keep customers.

Scott Jamieson: We have a great relationship with Moore Landscape and we also work with a number of other landscape contractors in the Chicago market, so how do we form relationships with others that may be competitors? Even though we don’t do the work, often we are serving competing clients. We are given tree care bids from five or six different landscape contractors for the same property.

One of the best ways to develop a relationship with a landscape contractor is to give them referrals. That is one of the toughest things our sales people have to do. Our approach has always been that instead of narrowing the competition, let’s expand and extend the market. If a client asks me who I would recommend for a large landscape project I may tell them that Moore or Chalet or another great landscape contractor in the area is the best project manager for this sort of project. I may tell them at the same time that there are four or five others that they can contact as well. I then call the landscape contractors and tell them that I had just given their name to a potential client.

Tom Tolkacz: We have clearly found that a good relationship with a maintenance contractor can get us on more properties. When we are unsuccessful on our own, we find out who the maintenance contractor is and we let them know how much tree work the property needs. We ask the contractor if we can show them what we are talking about. We have been compelled during Denver’s drought situation to share the value of trees with our clients, both residential and commercial. We have had to tell them how much it costs if they lose even a 5- to 8-inch ash tree. When you have to cut it down, grind the stump and bring a new tree in, the cost is $1,500 to $3,000. What does it cost to prune the tree properly, spray it or do some additional fertilization? We have been very successful with landscape contractors taking our recommendations and selling those recommendations. They mark it up 10 to 15 percent, so they are making more money than they would on their normal mowing maintenance, and we get in the door. It is a win-win situation.

It is amazing the money the condo, golf course and association boards will find if you convince them about the value of the trees and what it would cost on a two-, three- or five-year-cycle basis. We do budget cycle pruning for our commercial
**Vermeer**

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<th>Part No.</th>
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**Asplundh**

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**Mitts & Merrill**

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customers, where we might do one-third of the work per year for three years. These types of opportunities are waiting out there on a lot of commercial properties. I really suggest that you try and find a contractor on some key properties. You will find some revenue out there.

Scott Jamieson: In our experience, the best landscape contractors are the ones whose values match up with ours; landscape contractors who have some sense of the value of trees. When we started seeing Moore’s people show up at ISA meetings and workshops we got a little nervous. We thought, here is one of our best clients getting trained on tree care. We thought they might want to start their own tree care division. That didn’t happen, but now they have very educated people on staff. When they go out to sites and bid projects, they look up and are aware of the trees. They know how important it is to have a good tree company come in and do the work for them. If you are considering or trying to enhance your relationships with landscape contractors, it is important to encourage them to get educated. Encourage them to learn more about trees, or find companies that have the same set of values. As Tom said, budgets will expand more than you think is possible. Don’t get narrow-minded or focused into thinking the budget is whatever the landscape contractor dictates. You can expand that budget quite well.

Eric Schultz: I made the comment earlier that a lot of landscape contractors don’t understand arbor care and don’t take it seriously enough. Tom brought up the point that the clients will find the money. We just went through a drought and I could not get a client to water a 2-inch to 14-inch tree in the Denver market to save my life. It is a big deal in Denver because we will go for two or three months with no moisture in the middle of winter and the wind will blow. People are not interested and say the trees are fine. In the wake of the drought, the money came. We sold more water than ever. We have more watering accounts this year and the people expect it. The money is there, but you have to convince the landscape contractors that the money is there. Often, landscape contractors chase a little piece of the pie and they don’t understand the potential. You have work with your landscape contractor to develop the mindset that the property’s potential is more than just mowing grass. It is taking care of and managing all of that landscape, of which tree care is a big part.

Trent Sible: Getting back to tree value, Scott mentioned that some of our staff are certified arborists. It has actually become a requirement for our entry-level supervisors. As landscape contractors, it is critical that we understand the value of trees in terms of the overall landscape. I think you should communicate that to your landscape contractors. I feel that as a landscape contractor we have the responsibility of communicating the value of trees to one’s property.

Scott Jamieson: Planting depth is a big controversy in Chicago right now and it is whipping up a frenzy. The nursery plants too deeply and then the landscape contractor plants too deeply. There is a positive side to this problem, because landscape contractors and nurserymen came together and formed a task force to look at this planting depth issue. For the first time in history these separate groups are starting to talk versus shooting at each other. The answer for arborists and landscape contractors also lies in communication and education. There is no easy answer but certification and TCIA’s accreditation program are things that can help us.

Scott Jamieson is president of The Care of Trees and a TCIA board member. Eric Schultz is president of Schultz Industries Inc., and president of The Associated Landscape Contractors of Colorado. Trent Sible is project manager-maintenance for Moore Landscapes Inc. Tom Tolkacz is president of Swingle Tree in Denver, Colo., and a TCIA board member.
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**Meta-Miner gloves**

The Illinois Glove Company has redesigned their Meta-Miner Metacarpal Gloves to provide more versatility, safety and protection. Originally designed for use in mines – one of the harshest work environments – the incredible features of Meta-Miner gloves are ideal for the demanding arborist work environment. Meta-Miner Metacarpal Gloves protect the back of hands from falling debris, thereby reducing hand injuries. Each glove comes with a thick, flexible foam-padded back and a reinforced leather palm and stitching for maximum protection. The gloves have a cotton lining, and a knit wrist to keep out debris. An Amerglo strip comes standard on all new styles, reflecting up to 300 feet for additional safety. Meta-Miner gloves comply with ASTM impact, abrasion and cut resistance standards. Available in half-finger or full-fingered styles, the Meta-Miner Metacarpal gloves provide options for the level of dexterity and sense of touch needed on the job. Features include the use of rugged suede cowhide, a half-finger first finger and thumb combination, and a full-fingered style now in XXL size for big hands. For dealers or more information, call 1-800-342-5458 or visit www.illinoisglove.com.

**Cutting Edge - Products**

**Vermeer ColorMaster 101**

Designed for use on Vermeer horizontal grinders, the ColorMaster CM101 coloring system converts low-value wood waste into profitable, color-enhanced landscaping mulch. A durable, entry-level device, the CM101 attaches to the fender of any trailed Vermeer horizontal grinder model. A pump, two spray bars, multiple hoses and up to 19 colorant nozzles, powered by the grinder’s hydraulic system, fuse liquid colorant into the wood fiber ensuring pure color. Two simple, adjustable controls regulate color and water flow in relation to the material and conditions of the job. The spray bars attach quickly to specified locations ensuring full material coverage with minimal set up time. The CM101 operates directly off of the horizontal grinder’s hydraulic system, so there is no need for an additional power source on the work site. The liquid concentrate penetrates the wood fiber producing rich color. The pigment, delivered in totes or barrels, dilutes completely into the water stream producing complete coverage of the mulch. The encapsulation process further ensures that the mulch will retain its vibrant color. Attachment installation can be completed by the factory or through a Vermeer dealership on any new or used Vermeer horizontal grinder models. Contact Vermeer Manufacturing Company via www.vermeer.com.

**Rayco RC 6D - performance, safety and low maintenance**

Rayco Manufacturing’s move into the brush chipper market is beginning with its 6-inch disk brush chipper, the RC 6D. A 25 hp Kohler V-twin engine produces torque ratings of 39.5 ft/lbs at 2,800 rpm, generating high performance, while providing long-life and easy maintenance for the RC 6D. Reversing auto feed keeps the RC 6D at the correct rpm level to create more uniform chips, uses less fuel and minimizes vibration, which reduces wood shifting to keep the operator safer. Strong but lightweight, the RC 6D Brush Chipper is easily towed behind a pickup truck and its highway lighting features conform to Federal Motor Vehicle Standards. The RC 6D Brush Chipper was introduced at the TCI EXPO in Detroit, Mich., in October. Production models are available immediately from authorized Rayco dealers. For more information on the RC 6D, visit www.raycomfg.com or call 1-800-392-2686.
**Dow Accord XRT herbicide enters utility market**

Dow AgroSciences LLC has had a new more concentrated formulation of its glyphosate offering available for use since January. The product, Accord XRT herbicide, offers fast brownout and long-term control of woody vegetation including oak, blackgum, sweetgum, elm, cherry along with broadleaf weeds and perennial grasses. The U.S. Environmental Protection Agency accepted it for use in October. Accord XRT has a built-in proprietary surfactant that makes it easy to handle and convenient to use. And because it's loaded with 5.4 pounds active ingredient (glyphosate) per gallon, it offers the convenience of lower use rates and more treated acres per gallon as compared to that of Glypro Plus and Accord SP herbicide formulations, which offer 4 pounds of glyphosate per gallon. In order to fulfill existing bid obligations, Dow AgroSciences will produce Glypro Plus and Accord SP formulations through March 2005 and phase them out as inventory is depleted. Neither will be produced in 2006. Accord Concentrate herbicide will continue to be produced. Accord XRT will be available through Continuum Prescription Control & Container Management System, which provides herbicides in returnable, refillable containers. The Continuum system eliminates the need for container rinsing and disposal while decreasing the need for on-site mixing. It also helps prevent worker exposure to products. Accord XRT herbicide is not yet labeled for use in all states. Visit www.accordxrt.com to learn more.

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Arachnophobia fans rejoice in big lift

Teupen America recently delivered the largest spider lift used in the tree care industry in the United States to Pro Tree Service in Jonesboro, Ga.

Pro Tree Service purchased the Teupen model LEO 26T, which has 86 feet of vertical reach, 43 feet horizontal reach and 29 feet side reach at 79 feet in height. The Leo 26T is just 5 feet, 2 inches wide and weighs 7,600 pounds. The lift comes equipped with wireless remote controls, adjustable tracks and automatic outrigger deployment and leveling. Teupen hyLIFTs are distributed by American Spider Lifts/Teupen America www.spiderlifts.com

Burridge New SMA President for ’05

The Society of Municipal Arborists has new officers for 2005. With the resignation of Jude O’Conner as president of SMA, Vice President Lloyd Burridge is now the SMA president. The position of vice president was filled by long time board member Andy Hillman as of Jan. 7.

Burridge takes over the presidency with 25 years of experience in the Municipal Arboriculture/Urban Industry field. He has played an active role in the SMA as a member of the Board of Directors. As a long time member of the ISA and its Ontario Chapter, Burridge also served as a founding member of the Municipal Specialist Certification committee. Burridge recently retired from his position as the director of Parks, Recreation and Forestry with the City of Windsor, Ontario.

FMC, Wilbur-Ellis partner on IVM herbicides

FMC Corporation has partnered with Wilbur-Ellis Company to commercialize Portfolio 75 DF and Crossing 75 DF, new herbicides with registration received from the Environmental Protection Agency for use to control many weeds and maintain bare ground on railroad rights of way, as well as on highway, roadside, industrial areas, fence rows and other non-crop sites. Both products are dry flowable formulations containing 75 percent of the active ingredient sulfentrazone, representing a new class of residual chemistry for the industrial vegetation management market.

“Portfolio 75 DF provides excellent long-season residual control of certain broadleaf and sedge species of weeds, including Russian thistle, kochia, pigweeds, mustards and wild lettuce,” says Don Claus, director Specialty Products Business of FMC. “Since sulfentrazone is a PPO-inhibiting herbicide, it is effective at controlling those resistant strains that have developed as a result of repeated use over many years with herbicides that target the ALS enzyme system or other key physiological functions of the plant.”

Portfolio 75 DF and Crossing 75 DF can be applied as tank mix partners in the late summer, fall or early spring with adequate rainfall available. FMC and Wilbur-Ellis have agreed to partner to distribute sulfentrazone to the IVM market in 12 western states.
**Events & Seminars**

**February 1-3, 2005**
New England Growers 2005 Green Industry Conf & Expo
Boston Convention & Exhibition Ctr.
Boston, MA
Contact: (508) 653-3009; www.NEGrows.org

**Feb 2, 2005**
Ornamental Disease Management in the Landscape
Michigan Green Industry Association
Double Tree Hotel & Conference Center
Novi, MI
Contact: (248) 646-4992

**February 4, 2005**
Estimating & Bidding: Charles VanderKooi
Huntington Hilton
Huntington, NY
Contact: Patricia Voges, (631) 665-2250 or NSLG@optonline.net

**February 5-6, 2005**
Winter Management Conference
Tree Care Industry Association.
Los Cabos, Mexico
Contact: Carol Crossland, 1-800-733-2622, Ext. 106; crossland@treecareindustry.org or www.treecareindustry.org

**February 8-10, 2005**
Pennsylvania-Delaware Chapter of ISA
Annual Shade Tree Symposium and Trade Show
Lancaster, PA
Contact: Elizabeth Wertz (215) 795-0411

**February 11-15, 2005**
ISA Arborist Certification Exam Prep Workshop
Columbus, Ohio
Contact: (949) 454-2409

**February 12, 2005**
Ohio Chapter ISA 6th Annual Clays Tournament
Benefiting the Arbor Fund
Sunbury, Ohio
Contact: Al Shauck (216) 854-0508

**February 12, 2005**
Ohio Second Annual Tree Climbing Competition
Arizona Community Tree Council Inc.
Mesa, Arizona
Contact: Doreen Orist (480) 999-9831; www.ahtrees.org

**February 13, 2005**
ISA Certified Tree Worker/Climber Specialist Exam
Columbus, Ohio
Contact: ISA International, 1-888-ISA-TREE

**February 14, 2005**
ISA Arborist Certification Examination
Columbus, Ohio
Contact: ISA International, 1-888-ISA-TREE

**February 15, 2005**
Winter Plant ID at Cranbrook - Trees
MGIA, Cranbrook Institute of Science
Bloomfield Hills, MI
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**February 16 & March 28, 2005**
Arborist Innovations, Techniques & Solutions Seminar
Rutgers’ Cook College, New Brunswick, NJ
Contact: (732) 932-9271; oxpe@aesp.rutgers.edu

**February 20-22, 2005**
Michigan Forestry & Parks Association
(Also, Michigan Chapter of ISA) Winter Conference
Lansing Holiday Inn South Conference Center
Lansing, MI
Contact: (517) 337-4999; www.mfpa.isa.org

**February 22, 2005**
ISA Arborist Certification Examination
Davey Tree Institute, Kent, Ohio
Contact: ISA International, 1-888-ISA-TREE

**February 22-25, 2005**
ASCA 2005 Consulting Academy
Los Angeles, CA
Contact: www.asca-consultants.org

**February 23-26, 2005**
ISA Ontario Chapter – 56th Annual Conference
Niagara Falls, Ontario
Contact: (519) 376-1882; www.isaontario.com

**February 27 through May 11, 2005**
12th Arborists’ & Tree Workers’ Certificate Prep Course
Brea Conference Center
Brea, CA
Contact: (949) 454-2409

**February 26, 2005**
Woodsy Plants Symposium: Reclaim Your Woodlands
Chicago Botanic Garden, Glencoe, IL
Contact: www.chicagobotanic.org/symposia

**March 1, 2005**
Nassau Suffolk Landscape Gardeners Association
37th Annual Professional Turf & Plant Conference
Huntington, NY
Contact: Patricia Voges, (631) 665-2250; NSLG@optonline.net

**March 1-3, 2005**
Western PA Turf Conference & Trade Show
Greater Pittsburgh ExpoMart, Monroeville, PA
Contact: (717) 243-1349; www.paturf.org; georgenethompson@comcast.net

**March 23, 2005**
MGIA 18th Trade Show and Convention
Novi Expo Center, Novi, MI
Contact: (248) 646-4992, 1-800-354-6352; www.mgia.org
March 2-4, 2005
The Work Truck Show 2005 & Annual NTEA Conv.
Indianapolis, IN

March 3-4, 2005
Missouri Community Forestry Council Annual Conf
Lake Ozark, MO
Contact: Justine Gartner (573) 522-4115 ext. 3116; www.mocommunitytrees.com

March 4 & 5, 2005
EHAP & CPR-First Aid
Arizona Community Tree Council Inc./Tucson Electric
Tucson, AZ
Contact: Doreen Orist (480) 899-9831; www.aztrees.org
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March 4-5, 2005
Ecological Landscaping Assoc.
2005 Winter Conference & Workshop
Marlborough, MA
Contact: (617) 436-5838; www.ecolandscaping.org

March 5-8, 2005
ISA Southern Chapter Annual Conf. & Trade Show
Savannah Marriott Riverfront
Savannah, GA
Contact: Southern Chapter Office at (336) 789-4747; www.isasouthern.org

March 7, 2005
Hazardous Tree Identification
Rutgers Cook College
New Brunswick, NJ
Contact: (732) 932-9271; ocpe@aesop.rutgers.edu.

March 8-10, 2005
Certified Applicators or Registered Techs training
MGIA & Michigan Department of Agriculture
Novi Expo Center
Novi, MI
Contact: (248) 646-4992

March 9, 2005
Solving Landscape Plant Problems
MGIA, Double Tree Hotel & Conf Center
Novi, MI
Contact: (248) 646-4992

March 10, 2005
Modern Techniques: Large Tree Climbing and Rigging
Rutgers Cook College
New Brunswick, NJ
Contact: (732) 932-9271; ocpe@aesop.rutgers.edu.

March 15, 2005
Pesticides: Environment, Your Company & the Applicator
MGIA, Double Tree Hotel & Conference Center
Novi, MI
Contact: (248) 646-4992

March 17, 2005
Large Tree Pruning and the ANSI A 300 Standards
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Contact: (732) 932-9271; ocpe@aesop.rutgers.edu.

March 21-22, 2005
Spanish Cert. Applicators/Registered Techs training
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Bingham Farms, MI
Contact: (248) 646-4992

March 31, 2005
New Jersey Chapter ISA Annual Meeting
Rutgers’ Cook College, New Brunswick, NJ
Contact: Nick Polanin (732) 574-9100

April 18-20, 2005
Trees & Utilities National Conference
National Arbor Day Foundation, Omaha, NE
Contact Steve Pearson, (402) 474-5655; conferences@arborday.org

April 22-23, 2005
Capel Manor’s 3rd Celebration of Trees
Capel Manor College
Enfield, Middlesex, England
Contact: Lea Spicer, 020-8366-4442;
fax: 01992-717544; www.capel.ac.uk

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“Utilities must work toward achieving a higher level of effectiveness than they have been expected to meet in the past, and failure in this important activity can result in significant fines, lawsuits, and damage to brand image, not to mention the significant personal and financial impact to utility company residential and commercial customers.” – eVMS brochure from Enporion, ViryaNet, and CN Utility Consulting.

Without a clear plan of attack, utilities face a complicated struggle to keep their rights of way maintained while still meeting myriad other uses (as wildlife refuges, fire breaks, etc.) served by utility passages. Power companies each generally have to keep track of hundreds of miles of power lines. Since proper line clearance can mean the difference between steady power and a total blackout, every tree in a ROW is vitally important.

Keeping track of the trees, brush and other growth in ROWs, and of the tree care companies that provide maintenance crews, is not a simple task. But it is something that can be assisted today by several different pieces of computer software, all targeted toward the large utilities that have to keep track of huge tracts of land and find it imperative to have excellent working relationships with the tree care companies contracted for the work.

Whether you are part of a small tree care company that does occasional line clearance, or part of a regional or national powerhouse that is working in ROWs every day, it’s comforting to know that modern technology can take what would be mountains of tree inventory paperwork and reduce it to a few laptops and computer hubs – making work easier for all involved.

Before starting a project, planning crews go out to sites and plot the work on a GIS map that is integrated into the software, explains Brent Repenning, inventory production manager at Davey Resource Group. Site-specific information gathered during the planning stage generally includes such items as diameter and species of trees, and type of trimming that needs to be done. This information can be used to turn out maps and summaries – including area calculations – as part of the bidding process.

The information and maps in ROWKeeper can be stored using the PC version of ROWKeeper, or through an
online Web site interface, called ROWKeeper Online.

“Once they have it all mapped out, they can produce maps and summary sheets, and hand it over to tree crews,” he adds, quipping that using the software will essentially “attach a prescription to that part or section of work.”

ROWKeeper has been constantly evolving since it was created several years ago, says Repenning. “It’s one of those things that we continually try to improve. Davey takes input from users and then updates the software in-house to reflect the new changes.

It’s all about “getting the right people to the right places,” says Repenning.

Used mostly by Davey offices, ROWKeeper is also available to outside clients, and can be customized by programmers at DRG to suit a company’s needs.

Rick Johnstone, system forester for Conectiv, which services more than 1 million homes and businesses in Delaware, New Jersey, Maryland and Virginia, uses ROWKeeper and was actually on a committee that helped layout the framework for it several years ago. Today, he uses the software extensively. As a forester for a utility, top priority is, of course, line clearance. Johnstone’s forestry background, however, also allows him to integrate other important environmental issues when working in the field. In this regard, having utility vegetation management software is critical.

“You can mesh Conectiv’s info with info from state and federal agencies – U.S. Fish and Wildlife might have info that … an endangered species is in a certain area.” Johnstone elaborates. While maintaining a ROW in an endangered species’ neighborhood, work planners can take into account the habitat that the animal needs, and create that while at the same time providing the necessary line clearance work.

“We try to meet as many needs as possible, so that the right of way serves as many things,” he notes. You can “tweak what you
are managing to combine the needs of the utility as well as the conservation needs for various habitats.”

One other advantage of working collaboratively with the software at the crux of it all, he continues, is that “We don’t have to go through a lot of hoops” before getting the work done. All the experts from various interests get together beforehand and use the software to come up with a collaborative plan that meets everyone’s needs. For example, “we don’t have to write an environmental impact statement as long as there’s an agreement” beforehand. This saves time, money, and just simplifies how the job can get done right.

ACRT

Comparable to ROWKeeper is ACRT’s Utility Tree Manager software. Joe Marshall, new business manager at ACRT, points out that Utility Tree Manager handles crew management, budget management and resource allocation. It crunches the numbers for invoicing, tracks production and can work with customer call-ins as well.

Additionally, it is fully customizable to meet the needs of the particular utility. “We don’t necessarily have an off-the-shelf package. Every utility (that uses our software) is different.”

“We have a foundation – Utility Tree Manager – and 99 percent of the time, we have to customize it,” Marshall adds.

So how does all the information come together? “We take our customer’s GIS … database and our software lies on top of it,” says Marshall. On occasions when GIS maps haven’t been available from the utility, “we have done the field development of GIS maps.”

Utilities with several subsidiaries can have all the different offices tie into the same central database, he adds.

Indeed, the efficiency and thoroughness of a comprehensive utility vegetation management software program has a clear value in the amount of time and money that it can save a utility. Those who speak from experience say it best:

“Before, we were only trimming about 600 miles a year,” notes Winston Smith, vice president of operations for Nashville Electric. “Now, we’re trimming between 1,600 and 2,000 miles a year.” Keep in mind that the total amount of ROW hasn’t changed – it is the same 5,200 miles of overhead lines that they’ve maintained for the past few years. So what changed?

“Trimming tripled,” says Smith. “We went from a 10-year trim cycle to a three-year trim cycle.”

To make the new system work, ACRT
Serving as one of the main customer contacts for a large utility’s vegetation management program would make most people want to pull their hair out. But most people aren’t Henry Wallace.

Wallace, who has spent seven of his 27 years with Duke Energy as a vegetation management communications specialist, is the kind of person who enjoys working with customers, even if they might be upset when meeting him initially.

“If you don’t like people, you probably don’t belong in this field,” he says.

Some people view electric utilities as large, faceless organizations that aren’t concerned about the average customer. While this might seem unfair, it only takes one aggravating experience with a utility for a customer to develop a negative perception and share it with others.

Wallace is one of three specialists at Duke Energy who battle this perception by getting out and meeting with concerned customers on their property. It might seem like a time-consuming process, but it’s an effort that pays off for Duke – not to mention, it is Wallace’s favorite part of the job.

“Meeting with customers gives me the chance to meet lots of different folks and give Duke Energy a friendly face,” he explains. “A large part of my job is handling complaints, but an equally important part is meeting with focus groups, professional organizations and community groups to inform them of our vegetation management program and prevent problems from occurring in the first place.”

In addition, Wallace works with contractors and the general public on proper tree pruning and planting practices, and also assists in developing Duke Energy’s vegetation management toolbox, recommending when and where to use herbicides, mechanical trimming and other maintenance methods.

Onsite visits

Wallace has the largest coverage area, which encompasses 20 counties between North and South Carolina. He meets with eight to 10 customers a day.

ACRT created a customized reporting system that can keep track of vital statistics such as tree makeup, tree crew performance, invoicing and billing. “We give ACRT information from our GIS mapping system,” explains Smith, “and they generate circuit maps for the circuit trimming that we’re doing. Along with the circuit maps, they generate work manifests for the crews.”

Tree crews working for Nashville Electric have had a positive response as well. “We provide them with a much better work document than they’ve ever had before,” explains Smith. “It’s helped them increase their productivity.”

The current software also keeps track of customer contacts. Before they had the

**Taking Landowner Notification One Customer at a Time**

Henry Wallace doing what he likes best - talking with a customer.
software, “we didn’t have as much good contact with the customers, and we didn’t give as good instructions to the crews, so we weren’t getting as good a trim job as we are now,” Smith elaborates.

eVMS

So what’s new on the horizon for utility vegetation management software? A brand-new product, called eVMS (electronic Vegetation Management Solution), created by a collaboration of Enporion, ViryaNet, and CN Utility Consulting, is just breaking into the market with a beta version of its software.

Described by sales support manager Dianne Palmieri as “a soup-to-nuts solution,” eVMS is designed to handle everything from tracking vegetation assets to predicting how tall a tree is going to
What’s a Small Tree Care Company to Do?

By Araina Zora Ziminsky

Although these complex, robust UVM software packages may sound appealing, for many small tree care companies it’s far more than they need. Luckily, there is other software out there with the small tree care business in mind:

ArborSoftWorx

ArborSoft’s ArborSoftWorx software provides a data warehouse for tree inventory information that is later presented using third-party software. Simply explained, “we supply a user-friendly database that the average computer user can use with ease,” says Mark Smith, owner and president. Software such as AutoCAD or Arcview is then used to create maps that can be taken into the field. GPS coordinates are a standard part of the ArborSoftWorx tree inventory database. ArborSoftWorx handles history, work orders and scheduling as well as the fiscal aspects of running a tree care company.

Tree Management Systems, Inc.

Tree Management’s ArborGold software is a customer job management software for commercial companies specializing in managing customer accounts, from the initial phone call to billing and payment. ArborGold handles specialized marketing and uses field devices and handheld computers for mobile computing and synchronization. The software links to Quickbooks, and users who are on the road can grow and when it will need to be trimmed.

eVMS is designed to serve both the utility as well as the tree care crews directly. When it comes to invoicing, for example, a tree care contractor “could log in (to our Web product) and see which invoices are outstanding.” Likewise, “the utility could log in and see to which tree company they owe money.”

One of the biggest features of eVMS, explains Palmieri, is that it not only tracks the work that needs to be done, but it also takes into account such conditions as drought, fluctuating budgets and even per-
mit changes, working those variables into the maintenance equation.

“(eVMS) creates intelligent work orders,” says Palmieri. “It has a very intelligent scheduling engine.”

Similar to ROWKeeper and Utility Tree Manager, eVMS works with GIS maps. Additionally, eVMS has three main components: Field, Dispatch and Web, which provide solutions for PocketPC or a ruggedized Mobile Data Terminal; an office work station; and an off-site Web interface, respectively.

So what works best?

There seems to be a clear advantage of having a software-driven utility vegetation management system vs. a paper-based one. Although several solutions are available, the best one is one that can be customized to a utility’s needs while offering clear work orders and maps for contracting tree care companies to work with as well.

Ariana Zora Ziminsky is a freelance writer and a former assistant editor of TCI magazine.
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Healthy trees grow on healthy soils. Anchored to the soil by its root system, a tree obtains from the soil most of the elements (nutrients) it requires, such as carbon (C), hydrogen (H), oxygen (O), nitrogen (N), phosphorus (P), sulfur (S), potassium (K), calcium (Ca), magnesium (Mg), iron (Fe), manganese (Mn), molybdenum (Mo), boron (B), zinc (Zn), copper (Cu), and chlorine (Cl). Trees get oxygen for respiration and carbon dioxide for photosynthesis from the atmosphere. Trees need nutrients for their metabolism and to complete the plant life cycle – to germinate, grow and reproduce. Soil may contain essential elements as organic or inorganic compounds. Soil microorganisms, such as mycorrhizae, fungi, bacteria, protozoa or algae, convert the nutrients in a soil from a non-absorbable form to an absorbable form that a plant can use. In addition, microorganisms recycle nutrients in the soil. Earthworms in an organically rich soil constantly aerate the soil by their movements and enrich the soil with the worm casts.

Carbon and oxygen together contribute approximately 90 percent of the dry weight of a plant; hydrogen, nitrogen, potassium, calcium, magnesium, phosphorus and sulfur – the macronutrients – make up nearly 8 percent of the dry weight of a plant. The rest of the elements – chlorine, iron, manganese, molybdenum, boron, zinc and copper – contribute to less than 0.1 percent of the total dry weight of a plant; they are the micronutrients or trace elements.

In the presence of sunlight a tree photosynthesizes, taking carbon oxide from the atmosphere and hydrogen from the soil water to make carbohydrates (glucose) that serve as a carbon skeleton to synthesize all the other organic compounds (amino acids, proteins, fat, etc.) necessary for sustaining its life and reproduction.

A soil should have adequate supplies of macro and micronutrients and make them available for root-uptake in absorbable form in the soil solution. When a soil is too sandy or clay, acidic or alkaline, too wet or dry, or poor in soil microorganisms there is a decline in one or more nutrient elements. Under any of these conditions, one cannot expect healthy growth of trees. But, one can amend the soil by adding elements to change the not-so-ideal conditions to ideal conditions for healthy tree growth. An addition of chemical fertilizers alone will not help when one fails to amend the soil.

Ideal conditions for healthy growth may or may not be present in a landscape soil. Prior to tree work, it may be necessary to test the soil for its physical properties, nutrient content, pH and microbial composition. Obtain a kit from a soil testing laboratory or agricultural extension center for collecting soil samples. Collect samples from several locations and seal them in a bag according to the instructions in the kit and send them to the laboratory. The technician will analyze the soil thoroughly and return the results along with an explanation of problems with the soil. It is good to consult the laboratory technical staff for
correcting the problems.

What are the ideal soil conditions for healthy development of a root system that can absorb and deliver nutrients to various plant parts? Roots should be able to breathe and develop an extensive network of fibrous roots.

In a sandy soil, with loosely held soil particles, water drains quickly, depleting the moisture needed for uptake of nutrients. Water shortage becomes critical especially on hot, dry summer days when there is a high rate of transpiration that could cause wilting. Drainage and ventilation are good in a sandy soil, hence it is good for drought-tolerant trees that require very little water. But certain nutrient ions, such as phosphorus and nitrogen, may leach from the sandy soil during rainy season. Microbial populations are also low in a dry sandy soil.

Planting a tree is often a one-time investment. When planted in an amended, healthy soil, and with proper care, a tree can last for decades, adding beauty to any landscape.

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Clay soil, with its tightly bound small soil particles, retains water because of poor drainage. Clay soil suffocates the root system. Low oxygen content of clay soil adversely affects root respiration and nutrient uptake by roots. There is a decline in the microbial population in waterlogged clay soil as most soil microorganisms are aerobic (they need oxygen for their survival). During heavy rains, clay, because of its high water adhesion capacity, creates waterlog conditions that lead to root decay. Except for trees that grow in swamps, most trees do not like to have their feet constantly wet. In addition, some nutrients, such as calcium, magnesium and potassium, will tightly bind to clay and, therefore, may not be available for root absorption. Hence, clay is not good for most trees.

The ideal soil is the nutrient rich loam where clay, sand and silt particles are in the right proportions for good drainage, moisture retention and ventilation. One can easily convert a sandy soil or a clay soil to a rich loamy soil by adding soil amendments. An addition of organic compost or peat moss to a sandy soil increases its ability to retain water and nutrients and also helps enrich the microbial population. An addition of sand and organic compost to clay will increase its drainage and aeration, which would enhance root development. A properly amended clay soil will enrich microbial populations, increasing soil fertility.

Soil pH is another important factor that plays a decisive role in plant health. pH is an indication of hydrogen ion concentration expressed in a logarithmic scale. pH ranges from 1-14; in this scale pH 7 is neutral when soil solution carries no charge. When pH is below 7, it is acidic and when pH is above 7, it is alkaline. Most trees and soil microorganisms prefer a pH around 7. However, there are exceptions. Trees such as river birch, flowering dogwood, Japanese cedar, American beech, junipers, pines, heaths, rhododendrons, etc., prefer acidic soil. Trees such as apples, cherries, plums, peaches, almonds, pears, etc., prefer alkaline soil.

When pH is too high (extremely alkaline) or too low (extremely acidic), some nutrients are not available for root uptake. Calcium in clay alkaline soil (calcareous soil) locks up mineral nutrients, such as magnesium, manganese, iron, zinc, etc., and drastically reduces the availability of these nutrients for root absorption. Additions of chemical fertilizers would not help in an alkaline clay soil; in addition, inorganic nutrients may build up to a level that is toxic to plants. In an acid sandy soil, calcium, phosphorus and nitrogen are usually deficient, and less frequently, magnesium and molybdenum are deficient. Unlike in a clay soil, in a sandy soil a careful use of inorganic fertilizers can correct mineral deficiencies. But, applied in excess, inorganic fertilizers may destroy soil microorganisms and earthworms.

Nitrogen, phosphorus, and potassium deficiencies may occur both in acidic and alkaline soils. In an acid soil, clay or sandy, calcium is commonly deficient. Magnesium and molybdenum may also be unavailable in acid soils. One cannot simply assume that a clay soil is alkaline, or a sandy soil is acidic. Test soil first for pH. Then correct the soil pH by adding soil amendments.

An addition of lime to an acid soil will decrease its acidity, while adding sulfur to an alkaline soil will make it less alkaline. Monitor the pH while adding the amendments. Otherwise, pH will drastically change. For example, when the pH changes from 6 to 5, the soil gets 10 times more acidic. When the pH changes from 9 to 10, the soil becomes 10 times more alkaline.

An absence of any soil nutrient might adversely affect a tree’s health. A tree will express nutrient deficiency via symptoms, such as yellowing of leaves (chlorosis), browning of leaves due to a death of tissues (necrosis), or an abnormal coloration. In extreme cases of nutrient deficiencies, stunted growth, a decrease in productivity or even death of a tree may result.

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in the product, an advantage over composted material in a home garden. Some of the popular organic amendments are plant (alfalfa meal, composted green waste, mushroom compost, cottonseed meal, coffee grounds, etc.) or animal (blood meal, bone meal, chicken manure, fish emulsion, cow manure, eggshells, worm castings, etc.) byproducts that contain various amounts of nitrogen, phosphorus, potassium and other nutrients. In addition, organic amendments add bulk to any soil and enrich soil microorganisms, making the soil fertile. Chicken manure, cottonseed meal, fishmeal, soybean meal and blood meal are good as nitrogenous amendments. Bone meal, dried chicken manure and fishmeal are good sources of phosphorus. Bone meal, fishmeal, kelp meal (sea weed), soybean meal and dried cow manure add potassium to a soil. Bone meal also contains calcium. Kelp meal is also a good source of calcium, magnesium, sulfur, zinc, copper and boron.

Composted sewage waste is also available as a fertilizer and a soil amendment. While the treated sludge is free from odor and disease-causing microorganisms, it may contain harmful chemical contaminants from latex paint, household cleaners and a number of other things people often flush into a drain, or heavy metals from industrial effluents. Test the products for the presence of any of these harmful contaminants prior to using them as soil amendments.

One may have to apply large quantities of organic amendments to a soil, since there are lesser amounts of nutrients (i.e. nitrogen, phosphorus, potassium) in organic amendments than in most inorganic fertilizers with specified quantities of essential elements. This certainly adds bulk to the soil, providing an ideal environment for the growth and proliferation of microorganisms and earthworms. And, organic amendments slowly release nutrient elements over an extended period of time.

Bioinoculants, such as algae, fungi, cyanobacteria or mycorrhizae, are good for soils that are depleted of microorganisms due to excessive use of chemical fertilizers.

Mycorrhizae are fungi that form symbiotic associations with a plant root system. Mycorrhizae produce hormones that enhance root development. They increase the absorptive surface of the roots by their extensive network of hyphae. This helps in better absorption of soil nutrients, especially phosphorus. They help to relieve water stress also. Root feeding nematodes cannot easily penetrate the fungal network. And, mycorrhizae produce antibiotics that suppress harmful pathogens.

Rocks also serve as a source of mineral nutrients, such as phosphorus, potassium, calcium, etc. However, a word of caution—the available mineral nutrient for plant use may be much less than the total content of the mineral in the rock. For example, only 1 to 2 percent of phosphate is available for plant use from rock phosphate that has about 40 percent total phosphate. Dolomite is a good source of magnesium (approximately 40 percent) and calcium (about 50-55 percent). It is better to use rock dusts along with organic composts.

Evaluation of various products used as amendments with reference to cost, yield, effectiveness, etc. will help in the choice of the right amendments for a soil. Planting a tree is often a one-time investment. When planted in an amended, healthy soil, and with proper care, a tree can last for decades, adding beauty to any landscape.

Lakshmi Sridharan is a scientist with a Ph.D. in molecular biology, botany and microbiology. She is author of A Practical Guide to Growing Roses Successfully, and can be reached via www.lakshmi-sridharan.com.
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OSHA on First Aid Kits

OSHA, through a final rule effective March 7, is continuing to remove and revise provisions of its standards that are outdated, duplicative, inconsistent, or that can be simplified by being written in plain language. The Agency completed Phase I of the Standards Improvement Project in June 1998. In Phase II, OSHA is again revising or removing a number of health provisions in its standards for general industry, shipyard employment and construction.

Of particular importance to tree care employers when the final rule becomes effective is the changed reference to first aid supplies in Appendix A to the Standard on Medical Services and First Aid (29 CFR § 1910.151).

During Phase I, OSHA revised 1910.151, adding a non-mandatory Appendix A, entitled First Aid Kits. It in turn referenced a national consensus standard, the American National Standards Institute (ANSI) Z308.1-1978 standard, “Minimum Requirements for Industrial Unit-Type First-aid Kits.” The Agency believed that the information and reference to the ANSI standard would provide employers with helpful information in selecting first aid supplies and containers appropriate to the medical emergencies and environmental conditions encountered in their workplaces.

In Phase I of the Standards Improvement Project, OSHA removed from paragraph 1910.151(b) of the medical services and first aid standard, the requirement that a consulting physician approve first aid supplies, because it determined that commercial first aid kits were readily available that would meet the needs of most employers.

What OSHA plans to do is to update Appendix A so that it will reference the 1998 revision of the ANSI Z308.1 Standard. After reviewing the record evidence and based on OSHA’s review of both the 1978 and 1998 editions, the Agency feels that the update to the 1998 edition will provide more compliance flexibility to employers while being as effective, or more effective, in the protection of employees. OSHA found that the 1998 edition permits more compliance flexibility. For example, the 1998 edition identifies three types of first-aid containers, types I, II, and III, designed for stationary indoor use, mobile indoor use, and mobile outdoor use, respectively, while the 1978 edition includes only two types of containers, standard and special purpose, with special-purpose containers designed for use under extreme conditions.

Requirements for the three types of containers identified in the 1998 edition are performance-based, while the 1978 edition provides extensive specifications for each type of container.

Regarding the fill items of the containers, the 1998 edition provides a short list of basic items needed to disinfect and cover wounds, including special items for treating burns. However, it lists optional fill items for use if an employer identifies workplace hazards that may inflict injuries not covered by the basic fill items. The 1978 edition has a single list of fill items, some of which are unnecessary for many emergencies, and is missing several important fill items.

The 1998 edition requires color coding of unit packages that contain specific types of fill items while the 1978 edition has no such requirement.

The 1998 edition, more often than the 1978 edition, identifies fill items according to standardized testing and quality-control methods.

Finally, although OSHA solicited information about other available consensus standards, no suggestions were received.

Companies subject to the Telecommunications Standard, 29 CFR 1910.268, should note OSHA proposes to remove the standards somewhat limited and dated first aid kit language and replace it with a reference to the aforementioned Appendix A of 1910.151.

Peter Gerstenberger is senior advisor for safety, compliance & standards for the Tree Care Industry Association.
Interested parties may pre-register for waiting lists to attend one of the FREE Electrical Hazards Awareness Program (EHAP) seminars, made possible by a federal grant from the Occupational Safety and Health Administration.

The grant was awarded through the Susan Harwood Training Grant Program, which provides funding for nonprofit organizations to conduct training and education programs for employers and workers on the recognition, avoidance, and prevention of safety and health hazards in their workplaces.

TCIA’s Electrical Hazards Awareness Program (EHAP), introduced in 1975, has trained thousands of arborists involved in line clearance and those working on residential properties near energized lines. It is widely recognized as the training standard for complying with OSHA 29 CFR 1910.269 regulations.

The FREE workshops will provide participants with most of the formal requirements of an Electrical Hazard Awareness Training Program (EHAP). Topics will focus on training requirements that serve as a prerequisite for working within 10 feet of an electrical conductor. Participants will learn about identifying electrical system components, the presence and nature of electrical hazards, protective measures available, and common unsafe acts to avoid. Workshops will be offered in English and Spanish, with accompanying TCIA EHAP materials (a retail value of $135) provided at no charge in either language.

Approximately 34 percent of tree care worker fatalities are related to electrical hazards. These workshops will help reduce the number of fatalities and injuries in this industry.

TCIA (formerly the NAA) is an international trade association that develops safety, education and management programs and standards of tree care practices. TCIA is the only accrediting body of tree care firms in the United States.

Companies, organizations, groups, or municipalities interested in hosting an EHAP workshop in their area should contact Lee Gilman at TCIA’s headquarters by calling 1-800-733-2622.

If you are interested in attending a workshop please call Amy Waterstrat at 1-800-733-2622 to pre-register.

Pre-registered parties will be notified of times, dates and exact locations. Pre-registration is for waiting list only. At time of notification, full registration will be accepted. Seminars will be located in most major metropolitan regions.

This is NOT a complete certification program. Passing chapter exams from the manual provided and completing approved CPR and first-aid courses are also course completion requirements which may be used by employers to support designation of qualified line clearance trimmer status. For more information about TCIA EHAP certifications, call 1-800-733-2622 or visit us online at www.tcia.org.

This material was produced under grant number 46A4-HT33 from the Occupational Safety and Health Administration, U.S. Department of Labor. It does not necessarily reflect the views or policies of the U.S. Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

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E
evry year, the chairman of the
tcia board and the president
review the great work of the volun-
tees that make this association so strong.
The Pat Felix Volunteer of the Year Award
is presented annually to a TCIA
member volunteer
who has gone above and beyond
the call of duty as a volunteer, com-
mittng a great deal of time and
effort toward the
success of TCIA
and what it offers
to our members.

This year, as Greg Daniels and Cynthia
Mills surveyed the many contributors to
TCIA’s success, they saw something that
made them decide
to do something a
little differently.

“Cynthia and I
stopped to think
about the
Transformation of the
Industry – the
five outcomes that
we committed to
achieving for our
members between
2003 and 2013,”
notes Daniels. “We
took a look at where the biggest contribu-
tions have been
made and decided
on Outcome 1.”

It reads:
“Consumers will
have a practical,
viable means to
identify qualified
tree care compa-
nies that are
credentialled and
trustworthy in
their business, arboriculture, and safety
standards and practices.”

“I believe that Accreditation for tree care
companies will be the most important thing
to happen to our industry in decades,”
stresses Daniels. “Thanks to the tireless
work of a tremendous volunteer
Accreditation Council, our dreams of just a
few months ago have become a reality.
When we piloted this program, we sought
10 companies to
help us work out
the bugs before we
officially launched
it to the entire
industry this sum-
ner. We had to cut
off the list of com-
panies eager to
sign up at 28.”

Working with
TCIA’s director of
accreditation, Bob
Rouse, were a
group of diverse,
enthusiastic and
visionary people
who have helped
build credibility in
this program, put
dept and teeth
into its content,
and who put in the
eormous amount
of time necessary
to create a pro-
gram that the Better Business Bureau is
currently reviewing for its sanction.

Council members, TCIA would like to
tank you for being
tue leaders for our
industry and for
making the first
steps in the
Transformation of the Industry a re-
ality.

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Accreditation
Council members are:
Anne Baldwin, presi-
dent, Baldwin Tree
Care, San Diego,
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Tree care, Falls Church, Va.; Fred Johnson,
Davey Tree Expert Co., Kent, Ohio; Joe
Engberg, field safety & training manager,
The Care of Trees, Wheeling, Ill.; John
Ball, professor, South Dakota State
University, Brookings, S.D.; Gene Kritter,
a SCORE execu-
tive and former
quality control
director for
Raytheon; and
Mike Galvin,
Maryland
Department of
Natural Resources,
Annapolis, Md.

The Pat Felix
Volunteer of the
Year Award was
presented to
Council members at TCI EXPO in Detroit
in October.

The Wire Stop

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H-2B cap reached!
Contact your Congressman today!

The U.S. Citizenship and Immigration Services (USCIS) announced on Jan. 4 that it has received enough H-2B petitions to meet this year’s congressionally mandated cap of 66,000 new workers. The agency will not accept any new H-2B petitions subject to the FY 2005 annual cap. The H-2B visa category is a short-term seasonal visa that is utilized by many industries, including landscaping, tree care, restaurants and hotels.

This is the earliest date the cap has ever been reached. In fact, 2004 was the first year applications were halted, but that freeze was not imposed until March.

USCIS will use the following procedure for the remainder of FY 2005:

- USCIS will process all petitions received by the end of business on Jan. 3, 2005.
- USCIS will return all petitions subject to the annual cap (along with the filing fee and, if applicable, the premium processing fee) that were filed after the end of business on Jan. 3, 2005.
- Petitioners may resubmit or file new petitions when they have received labor certification approval for work to start on or after Oct. 1, 2005.

USCIS plans to provide further details on these procedures in a new notice that will be published in the Federal Register shortly.

Last summer, congressional supporters filed the “Save Our Summer Act” that would have temporarily increased the visa ceiling. That bill became mired in larger immigration issues, including the question of amnesty and granting driver’s licenses to illegal aliens.

TCIA, through our Voice for Trees political action committee, will be working with other green industry organizations to reach a temporary and long-term solution to this issue. Until specific legislation is filed, we urge all members to contact their elected members of Congress and urge them to support relief for the H-2B visa shortage!

Preparing for and surviving an OSHA inspection

Are you ready should an OSHA inspector arrive at your door? Is your paperwork in order? Do you know what citations are most common in the tree care industry and what regulations apply to your operations?

If your answer to all of the questions above is “YES,” then you won’t need January’s free monthly member giveaway, entitled “Surviving an OSHA Inspection.”

Everyone else should keep this valuable booklet handy. Study its advice. Make a checklist of the top 10 areas for citations and make sure your operations comply.

TCIA’s Model Company Safety and Accreditation programs help companies stay on the right side of OSHA compliance.

For more information on these programs – or for immediate assistance with an OSHA inspection – TCIA members can call 1-800-733-2622.
By popular demand, all U.S. members will receive one free printed copy of the TreeWorker. While many members appreciate receiving The TreeWorker via e-mail each month, others find the file too large or too cumbersome to print out and pass around the shop. Starting in January 2005, members will get both – free!

The TreeWorker is the only monthly newsletter designed and written by arborists for the field employees of commercial tree care companies. Each colorful issue is packed with great technical and safety articles that provide training and motivation for company crews.

Some of the great articles and sections in The TreeWorker include:

- Arborist Tips
- C-Notes
- Driver’s Corner
- Mr. Safety
- OSHA Files
- Pest Notes
- Arborist Quiz
- Safety Alert
- Tech Notes

Additional subscriptions to The TreeWorker are $19.95 a year (12 issues). If you would like to order subscriptions for your field employees as a valuable employee benefit, please call 1-800-733-2622 or e-mail tcia@tcia.org.

New, From SOUTHCO INDUSTRIES, The Exclusive “LOGLIFT” Representive to the Tree Care Industry

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The Art & Science of Plant Problem Diagnostics

By Jim Chatfield

Diagnosis of plant problems is central to plant health management. It is the first consideration. As urban forester Alan Siewert quips: “Treatment without diagnosis is, as in medicine, malpractice.”

Despite the key prerequisite of good diagnostics, it is often given inadequate attention. Diagnostics is both an art and a science, requiring good detective and communications skills, and diagnosticians need a thorough knowledge of horticulture, botany, entomology and plant pathology. This skill and knowledge set may seem impossible to master. And, in fact, it is impossible to master. No one is ever the perfect diagnostician. Whenever you start as a diagnostician, there will always be room to improve and grow, to make and correct mistakes.

Typically, diagnostics is a process to come up with the best possible explanation of why a good plant has gone wrong, but the process almost always involves unknown variables and uncertainties that make an absolute slam dunk of a diagnosis the exception rather than the rule. Nevertheless, if diagnostics is the start to finding the proper treatment, then the place to start a diagnosis is the consideration of which questions must be answered. My colleagues at Ohio State University and I have come up with a series of 20 of these questions that we consider essential. The answers to all of the questions, nor do you have to always ask them in order. Sometimes you walk up and can see the Japanese beetles feeding on foliage of a littleleaf linden and causing the observed skeletonization of leaves. That is all you need to know to proceed directly to, “What is the Diagnosis and Treatment?” Often, however, failure to accurately answer one of these earlier questions is the reason for a faulty diagnosis. There is not enough room in this article to go through all 20 questions, but here is an example of Question 2, right after you have answered Question 1: What Is the Plant?

2: What Is Normal For The Plant?

Plant characteristics are variable enough that what is perfectly healthy on one plant may be a sign of serious problems on another plant. A good example is with deciduous conifers: baldcypress, dawn redwood and larch. All three of these trees bear cones and needles, and to the uninitiated are thought to be evergreens. However, they are indeed deciduous, with fall colors ranging from spun gold to reddish-brown, followed by leaf drop. Many a poinsettia may have a nutrient deficiency, very well also have herbicide injury, the poinsettias is a key to concerns that some yews – such as Taxus ‘Helen Corbit’ – naturally have needles trimmed in bright yellow should give you pause if someone wonders if the yellowing is due to photosynthetic-inhibitor herbicide injury. Knowing that ‘Lemon Drop’ poinsettias are supposed to have yellow bracts rather than the more familiar red, white or pink colors of most poinsettias is a key to concerns that something is wrong with nutrition on the plant. Knowing that the greenish strap-like bracts on lindens turn brown after flowering is key to responding to someone’s concern that the browning is associated with some type of fungal disease.

Knowing that older sweetgum stems and young hedge maple stems often develop corky wings (almost like a winged euonymus) helps the observer know that they are not seeing some strange sort of distorted growth on the plant. All of these examples do not prove that there is nothing wrong with the plant. After all, the Taxus may very well also have herbicide injury, the poinsettia may have a nutrient deficiency, there may still be diseases on the linden, and there may be other factors causing growth distortions on stems. Nevertheless, knowing what is normal is a great early perspective in the diagnostic process.

So, there is a little taste of the Twenty Questions of Plant Diagnostics. One final thought: Remember that there is only one Sure-Fire Rule of Plant Diagnostics. That is – there are no sure-fire rules.

As part of the Michigan Green Industry Association’s Winter 2004-05 Education Series, Jim Chatfield, associate professor at Ohio State University Extension, will host a March 9 workshop, “Solving Landscape Plant Problems,” at the Double Tree Hotel & Conference Center in Novi, Mich. CEU credits are available. For more information, call (248) 646-4992. For additional course listings, check out the TCI Events Calendar on page 27.
Arguably the best way to make a purchase, either personally or for your business, is by making an informed decision. The greater the cost, the more information you probably need.

“Cost” is much more than just the capital expenditure. When it’s equipment for your business, you should also measure your cost, and hopefully your gain, in terms of operational efficiency.

The purpose of TCI EXPO Spring’s Outdoor Equipment Demonstration on Saturday, March 12, is to help you make a more informed decision. You should use the two days of trade show beforehand to gather all the information you can, but stick around for Saturday to actually experience firsthand the equipment of selected exhibitors in operation.


Speaking of informed decisions, here is the information you need to understand why you should stick around for our Saturday events. Before you depart on a bus for the Outdoor Equipment Demo, you can take in an excellent morning workshop from Dwayne Neustaeter and Ken Palmer on “Real World Emergency Response/Aerial Rescue Training.” Their firm, ArborMaster Training, was awarded a 2005 grant from the National Urban & Community Forestry Advisory Council (NUCFAC) to study this important issue.

You still haven’t decided? You might want to factor in the other attractions at this year’s Outdoor Demo Day. The event is being held in Long Beach’s Queen Mary Events Park. As you might guess, the Queen Mary is tethered nearby. Open daily for tours and dining in one of its many restaurants, the Queen Mary is an unbelievably majestic cruise liner from a bygone era. Also docked nearby for you military and history buffs is a Cold War-era, Soviet-built “Foxtrot” class submarine.

The EXPO outdoor event is open from 9:30 a.m. to 2 p.m., leaving you plenty of time for sightseeing.
For Tree Care Operations –
Tree, Shrub, and Other Woody Plant Maintenance
Standard Practices
(Integrated Vegetation Management a. Rights of way)
Draft 1

Publication of this draft standard for trial use and comment has been approved by the ANSI-Accredited Standards Committee (ASC) A300 secretariat, and the Tree Care Industry Association, Inc. Comments from ASC A300 constituents shall be directed to their ASC A300 representative. The representative is responsible for presenting comments to the ASC A300 committee at the next meeting. All other public comments shall be directed to the ASC A300 secretariat. E-mail or fax comments are preferred. Tree Care Industry Association, Attn: A300 Secretary, 3 Perimeter Road - Unit 1, Manchester, N.H. 03103. E-mail Rouse@treecareindustry.org; Fax: (603) 314-5386; Phone: (603) 314-5380; Web: www.treecareindustry.org.

Foreword (This foreword will not be part of American National Standard A300 Part 7-200x)

An industry-consensus standard must have the input of the industry that it is intended to affect. The Accredited Standards Committee A300 was approved June 28, 1991. The committee includes representatives from the residential and commercial tree care industry, the utility, municipal, and federal sectors, the landscape and nursery industries, and other interested organizations. Representatives from varied geographic areas with broad knowledge and technical expertise contributed.

The A300 standards can be best placed in proper context if one reads the Scope, Purpose, and Application. If approved after the public comment period, this document will present performance standards for the care and maintenance of trees, shrubs, and other woody plants. If approved after the public comment period, this document will be used as a guide in the drafting of maintenance specifications for federal, state, municipal, and private authorities including property owners, property managers, and utilities.

The A300 standards stipulate that specifications for tree work should be written and administered by a professional possessing the technical competence to provide for, or supervise, the management of woody landscape plants. Users of these standards must first interpret wording, then apply their knowledge of growth habits of certain plant species in a given environment. In this manner, the user ultimately develops his or her own specifications for plant maintenance.

When approved, ANSI A300 Part 7 – Integrated Vegetation Management a. Rights of way will be used in conjunction with the rest of the A300 standards when writing specifications for tree care operations.

The public review period for this draft runs from January 7, 2005 through February 21, 2005. After the public review period the Part 7 draft may be submitted to ANSI by Accredited Standards Committee on Tree, Shrub, and Other Woody Plant Maintenance Operations – Standard Practices A300 (ASC A300). Committee approval of the standard will not necessarily imply that all committee members voted for its approval. At the time it distributed this draft, the ASC A300 had the following members:

Tim Johnson, Chair (Artistic Arborist, Inc.)
Bob Rouse, Secretary (Tree Care Industry Association, Inc.)

Organizations Represented/Name of Representative
American Nursery & Landscape Association: Craig J. Regelbrugge; Warren Quinn (Alt.)
American Society of Consulting Arborists: Tom Mugridge; Donald Zimar (Alt.)
American Society of Landscape Architects: Ron Leighton
Asplundh Tree Expert Company: Geoff Kempter; Peter Fengler (Alt.)
Associated Landscape Contractors of America: Preston Leyshon
Bartlett Tree Expert Company: Peter Becker, Dr. Thomas Smiley (Alt.)
Davey Tree Expert Company: Joseph Tommasi; Dick Jones (Alt.)
International Society of Arboriculture: John Ball
National Park Service: Robert D'Foe; Dr. James Sherald (Alt.)
Professional Grounds Management Society: Thomas Shaner
Society of Municipal Arborists: Andrew Hillman; Mike Dirksen (Alt.)
Tree Care Industry Association: James McGuire
U.S. Forest Service: Ed Macie; Dudley Hartel (Alt.)
Utility Arborist Association: Matthew Simons; Jeffrey Smith (Alt.)

1 ANSI A300 standards
1.1 Scope
ANSI A300 standards present performance standards for the care and maintenance of trees, shrubs, and other woody plants.

1.2 Purpose
ANSI A300 standards are intended as guides for federal, state, municipal and private authorities including property owners, property managers, and utilities in the drafting of their maintenance specifications.

1.3 Application
ANSI A300 standards shall apply to any person or entity engaged in the business, trade, or performance of repairing, maintaining, or preserving trees, shrubs, or other woody plants.

1.4 Implementation
Specifications for integrated vegetation management should be written and administered by a vegetation manager.

70 Part 7 – Integrated Vegetation Management (IVM)

70.1 Purpose
The purpose of this document is to provide standards for developing specifications to implement an integrated approach to management of vegetation on rights of way.

70.2 Reasons for Integrated Vegetation Management
The reason for Integrated Vegetation Management is to manage vegetation and to promote sustainable plant communities that are compatible with the intended use of the site, and discourage incompatible plants that pose aesthetic, safety, security, access, fuel load, and reliability concerns. The goal of an IVM system is to manage vegetation and the environment to balance benefits of control, costs, public health,
or unsafe conditions. Choice of control option(s) is used to prevent or remedy unacceptable, unreliable, cultural, manual, and mechanical methods— are control options—which include biological, chemical, evaluated, and selected control(s) are implemented.

72 Definitions

72.1 biological control methods: control and/or elimination of undesirable woody vegetation through insects or fungal pathogens that affect target vegetation; through use of animals and low-growing plants to suppress the growth of unwanted trees through their respective use of competition and allelopathy, or seed and forage consumption by small animals.

72.2 border zone: An area on an electric utility right of way outside the wire zone, extending to the outer edge of the established right of way. Applies to electric utility rights of way only.

72.3 chemical methods: control of vegetation through the use of herbicides or tree growth regulators.

72.4 cultural control methods: Control of unwanted vegetation through establishment and growth of desirable low-growing, stable plant communities, or the active cultivation of a right of way for growing crops, pasturing, managed landscapes, etc.

72.5 danger tree: Trees that could potentially, grow, fall, or bend into conductors from an area adjacent to the right of way.

72.6 hazard tree: A visibly damaged, dead, diseased, leaning or dying tree that, should it fail, could contact the conductors. These trees have the potential to fail into, bend into, or grow into conductors.

72.7 integrated vegetation management (IVM): A system of managing plant communities in which compatible and incompatible vegetation is identified, action thresholds are considered, control options are evaluated, and selected control(s) are implemented. Control options—which include biological, chemical, cultural, manual, and mechanical methods—are used to prevent or remedy unacceptable, unreliable, or unsafe conditions. Choice of control option(s) is based on effectiveness, environmental impact, site characteristics, worker/public health and safety, security, and economics.

72.8 maintenance cycle: Specified length of time between vegetation maintenance activities, indeterminate of other factors.

72.9 manual clearing: Vegetation is cut off as close to ground level as possible with manually operated equipment, including chain saws, pole saws, machetes, brush cutters, string trimmers, and McLeods. This control method is used where it’s not practical to use mechanical equipment, such as riparian areas, steep slopes, unstable soils or rocky areas or in areas where there are low densities of incompatible vegetation and a high degree of sensitivity is required.

72.10 mechanical control methods: A management option, which may be necessary in order to re-establish the right of way and implement IVM due to vegetation height and/or density, location, regulatory requirements, etc. Method utilizes large equipment to cut or grind vegetation to a given horizontal or vertical distance.

72.11 mowing: A mechanical control method of removing vegetation in a non-selective manner using large mechanical equipment. This can include equipment such as rubber-tired or track mounted equipment with cutting or masticating heads/devices.

72.12 non-selective management: Methods used to remove all woody vegetation within the boundaries of the right of way.

72.13 right of way: Linear corridors of land used for a specific purpose that may be owned in fee or controlled by a written easement.

72.14 right-of-way reclamation: Clearing an established right of way that is not currently managed to the full extent of its easement or ownership rights and intended purpose. Conditions on a right of way in need of reclaiming include tall, dense amounts of undesirable vegetation, and facilities that are inaccessible due to these conditions. Reclamation usually involves initial non-selective methods of mowing or hand-cutting, or broadcast application of herbicides.

72.15 selective management: Methods used to target specific woody vegetation within the boundaries of the right of way.

72.16 threshold: The maximum acceptable levels of plant density and height. The lowest level at which a management option application (manual, mechanical, cultural, biological or chemical) can be determined necessary and effective.

72.17 utility right of way: Corridor of land used to transport/operate electricity, gas, communications, oil, water-carrying facilities.

72.18 vegetation, compatible: Vegetation that is beneficial and/or non-detrimental to the intended use of the site.

72.19 vegetation, incompatible: Species of vegetation that are not beneficial, present a safety hazard, or are unsuitable to the intended use of the site and the surrounding environment. They may also include invasive, exotic, non-native species.

72.20 vegetation manager: An individual engaged in the profession of vegetation management who, through appropriate experience, education, and continuous related training, possesses the competence to provide for or supervise an integrated vegetation management program.

72.21 wire zone: An area on an electric utility right of way directly beneath and between the energized conductors farthest out on the pole/tower. This area is the most likely to contain vegetation that could potentially grow into contact with the energized conductors. This area is also typically used as access to the poles, towers, and conductors for repair, inspection, and maintenance. Applies to electric utility rights of way only.

73 IVM a. Rights-of-way practices

73.1 IVM objectives

73.1.1 The vegetation manager (VM) shall define the objectives for managing vegetation based on the intended purpose of the area to be managed. These
purposes may be, but are not limited to, compliance with applicable laws, system reliability, safety, fire hazard reduction, facility access for inspection, maintenance, and emergency restoration, required testing for gas leaks and pipeline integrity, line-of-sight requirements, wildfire concerns, wildfire control, water flow, etc.

73.2 Site inspection
73.2.1 Vegetation Manager shall inspect the management area to evaluate existing conditions and thresholds to determine if, when, and what type of treatment method is necessary to meet the objectives.

73.2.2 The vegetation manager shall evaluate, at a minimum, the following in the initial assessment: Right of way use and type of facility; general conditions and location of the site; ownership; intended uses of the site; existing species represented (compatible and incompatible); topography/slope; soils; sensitive or protected areas; and sensitive or protected species of plants/animals.

73.2.3 The vegetation manager shall identify those species that are compatible with the intended objectives.

73.2.4 The vegetation manager shall identify those species that are incompatible with the intended objectives.

73.2.5 A post treatment inspection should include monitoring for efficacy of methods used, general site condition, environmental quality, and recommendation for future actions.

73.2.6 The results of site inspections shall be documented.

73.3 Management control method selection
73.3.1 Vegetation manager shall choose from available management control methods and implement appropriate methods.

73.3.2 Control method selection should be flexible, dynamic, and adaptive to respond to changing conditions.

73.3.3 Methods based on existing vegetation and expected growth rates should be preferred over maintenance cycles.

73.3.4 Control Methods are based upon various factors including, but not limited to: accessibility; adjacent land use; availability of labor; cultural factors; density and species; economic impacts; environmental considerations (wetlands, streams, etc.); risk of fire danger; terrain; type of facility construction; and, vegetation height.

73.3.5 Long-term implementation
Over time – and with successive IVM applications – biological and cultural methods should be implemented where appropriate.

73.4 Communication with property owners, customers, regulators
73.4.1 Communication with property owners, customers, and regulators regarding IVM activities should be in compliance with federal, state, and local regulations.

73.4.2 The vegetation manager should proactively communicate with property owners, customers, and regulators to prevent them from planting, cultivating, or maintaining woody vegetation that may cause future conflicts with the intended use of the right of way.

73.5 Timing of IVM
73.5.1 The timing of the IVM application shall be taken into consideration prior to starting any project.

73.5.2 IVM should occur during the optimum time for control of the vegetation species so that the desired outcome is achieved. Consideration should be given to wildlife reproductive and migratory periods, fire season, potential transfer of noxious insects or diseases, and other seasonal or site specific concerns.

74 IVM implementation
74.1 The vegetation manager shall recognize and follow all laws, rules and regulations regarding public and worker safety.

74.2 The vegetation manager should employ selective management of vegetation whenever there is sufficient compatible vegetation actively growing on the right of way.

74.3 Control methods should be chosen that promote compatible vegetation.

74.4 On electric utility rights of way, selective management should be implemented in the border zone whenever there is sufficient compatible vegetation.

74.5 On electric utility rights of ways, non-selective management should take place in the wire zone of a right of way.

74.6 Non-selective management should be utilized when a right of way is to be re-claimed.

74.7 Cultural method
This method should be considered for use once incompatible vegetation has been controlled. May involve seeding/planting of compatible species or the use of mulches or other physiological controls.

74.8 Biological method
This method should be considered for use once incompatible vegetation has been controlled. Allelopathic plants that retard surrounding plants and specific insects and diseases that target certain weed species should be used.

74.9 Initial clearing of rights of way
74.9.1 When designing new rights of way, consideration should be given to future vegetation management needs.

74.9.2 When rights of way are being initially established, written easements should be secured defining rights to implement whatever IVM treatments are necessary to meet objectives.

74.10 Quality assurance
74.10.1 The vegetation manager shall implement a quality assurance program to ensure best practices are followed, objectives of IVM are met, and that all specifications are adhered to.
74.10.2 The results of Integrated Vegetation Management treatments and of the quality assurance program shall be clearly documented.

75 IVM applications
75.1 Tools and equipment
75.1.1 IVM equipment used to implement the program shall be in proper working condition. 75.1.2 Equipment and material shall be used according to manufacturers’ instructions.

75.2 Herbicide application
75.2.1 Materials
75.2.1.1 Herbicide applications shall utilize industry best management practices.
75.2.1.2 All material used shall be registered by the U.S. EPA and the appropriate state and local agencies.
75.2.1.3 Consideration shall be given to utilizing products that minimize the risk to humans and the environment.
75.2.1.4 Consideration shall be given to minimizing the amount of materials utilized over time to minimize the risk to humans and the environment.
75.2.1.5 Materials should be rotated in order to minimize the chance of developing resistant pest strains.

75.3 Selective management
75.3.1 In rights-of-way border zones, selective applications of herbicides should be implemented.
75.3.2 Where rights of way cross streams or other bodies of water, selective management shall be utilized to create a buffer, retaining as much compatible vegetation as possible.
75.3.3 When undesirable vegetation with the potential for re-sprouting is manually-cleared, herbicide should be applied to the remaining stump.

75.4 Non-selective management
75.4.1 Right-of-way reclamation utilizing non-selective methods shall be implemented as an initial step toward developing selective management on the site.
75.4.2 On rights of way that contain few or no desirable woody vegetation, or are very dense or not maintained, right-of-way reclamation by non-selective applications should be implemented in the border and wire zone.

75.5 Mechanical methods
75.5.1 Mechanical clearing operations shall utilize industry best management practices.
75.5.2 When performing right-of-way reclamation, mechanical clearing methods should be considered.
75.5.3 Where rights of way cross streams or other bodies of water, selective management shall be utilized to create a buffer, retaining as much compatible vegetation as possible.
75.6 Tree pruning and tree removal
75.6.1 Refer to the current ANSI A300 Part 1 standard, section 5.9, Utility Pruning.
75.6.2 Tree removal on rights of way should adhere to the wire zone-border zone concept, and should be limited primarily to tall-growing species that have the potential to interfere with power lines, inhibit access to right of way, or for special circumstances such as ladder fuel removal in high fire-risk areas.
75.6.3 Trees rooted outside of the established rights of way that require more than 33 percent of crown to be pruned should be removed.
75.6.4 Hazard trees and danger trees should be cut down during normal operations or as noted during right-of-way inspections.
75.6.5 Debris from pruning and tree removal should be disposed, utilized, and/or recycled on-site. Exception: High fire-risk areas, where debris should be taken off-site.
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Emerald Ash Borer – and controversy – spreads in and around Michigan

By Jason Landers

Since its discovery in North America two years ago, the emerald ash borer has proved unstoppable – breaching quarantines and spreading much faster than policymakers anticipated.

"By the time you get to the point where you can identify it, the infestation is so rampant that you might as well forget it," says Steve Turner of American Tree Arborists in Troy, a Michigan tree care professional who works at the core of the infestation. "I think that this is a much larger and widespread problem than the policymakers are willing to recognize."

Emerald ash borer, or EAB, likely hitched a ride from China in a wooden crate that was shipped to the Detroit-area in the early 1990s. It is an unimposing critter, only about the size of Abraham Lincoln’s head on a penny. Some describe its metallic green shell as beautiful. Others say the pest shows signs of craftiness: When disturbed from feeding on leaves, the adult borer drops and feigns death.

However the pest’s appetite dwarfs its size. Scientists blame the gorging of the pest’s larvae for the death of as many as 10 million ash trees in the states of Michigan, Ohio and Indiana and parts of Canada. It even has been found in tainted nursery stock that was shipped from these areas to Maryland and Virginia.

To date, quarantines and eradication have been the chief weapons in slowing the pest. But each year, and often on a seasonal basis, the extent of the quarantine expands, which reinforces criticism by some tree care professionals who charge that aspects of the rules are simply unenforceable.

On Dec. 28, 2004, the U.S. Department of Agriculture passed an emergency rule adding new areas to the quarantine in Michigan, Indiana and Ohio. The rule restricts interstate movement of firewood, nursery stock, logs, lumber and mulch. Policymakers view it as a necessary means to slow the artificial spread of the pest. They suggest that nothing short of total eradication of ash stands in outlying infested areas will slow the natural spread.

In nature, an EAB is believed to travel up to 20 miles a year, though field studies show that in practice it rarely spreads more than a mile a year. On the other hand, laboratory tests indicate it can move much further, much faster. In an artificial environment, entomologists at the Ohio Agricultural Research and Development Center found the borer could travel as far as six miles a day.

Emerald ash borer has no known natural enemies in North America, though researchers are studying parasites, predators and pathogens in Asia that show some promise in killing the pest. Several insecticides have demonstrated an 80 percent success rate in killing the pest as well. Of these, researchers are encouraged by Imidacloprid and Bidrin when it is applied by soil or trunk injections. They say it delivers a high kill rate with the least environmental effects. Yet, in order to get the desired results Imidacloprid must be applied in amounts that far exceed the insecticide’s labeling – a fact that requires special experimental use permits for its application.

Hard to discover

In 2001, Dr. David Roberts, a plant pathologist with the Michigan State University extension service, was contacted by an arborist who was concerned by the sudden decline of a few hundred ash trees at a condominium where he worked. The decline was far more profound than anything Roberts had encountered in nature and no one was offering an explanation. Some said it was ash decline. Others blamed it on ash yellows. The pathologist wasn’t convinced.

Roberts applied for grants to study the decline and was turned down. In the meantime, he noticed that it wasn’t hundreds of infested trees. It was thousands. He said the closer he looked, the more decline he saw. “Thousands turned into tens of thousands and tens of thousands turned into hundreds of thousands,” he says. Still, “I couldn’t get anybody interested in this.”

The pathologist took matters into his own hands. He called for a meeting at which about 80 individuals and municipalities attended. The meeting raised $5,000 for a study. He identified EAB in 2002 as the culprit both in the United States and Canada.

Since then, Roberts has been an outspoken critic of aspects of Michigan’s eradication and quarantine policies. “I think it is a totally useless policy,” he says of eradication in the outlying areas. He
contends that the areas that the state views as being on the fringe of infestation are actually at the epicenter. And, he says, the infestation has spread much farther than regulators are willing to admit.

“We keep finding new areas every year, every month practically,” Roberts says. “From my perspective the lower peninsula in Michigan is a lost cause. Rather than spending millions on these outliers, which the insect is going to spread to anyway, why shouldn’t we spend millions on protecting the other states … on keeping the insects from escaping Michigan.”

An area often will be infested for two years or longer before trees show outward signs. The first signs are typically D-shaped exit holes on the tree trunk. These can be very difficult to spot. Michigan has begun using baited logs to identify the extent of the infestation. However, visual inspections remain the primary diagnostic tool.

“Visual inspection is a very crude technique at this time,” acknowledges Keith Craegh, of the Michigan Department of Agriculture.

Roberts also is concerned with the artificial spread of the pest through firewood and what he describes as an inadequate effort to track down tainted nursery stock. He also worries the pest may be carrying a disease that is causing as much, if not more, damage. Of the latter, he says he has noticed that many of the diseased trees have cankers that have not yet been identified.

Both tainted firewood and nursery stock has been blamed for the pest jumping hundreds of miles outside the infestation core. Roberts says the policy regarding quarantine on firewood lacks teeth and that the enforcement is shoddy. In Michigan, the fine for taking firewood – if the rule-breaker gets caught – is not less than $25 or more than $100. By contrast, the fine in Ohio is up to $4,000.

As for tracking down nursery stock, Craegh contends the state and federal government are working hard to find plants that were sold prior to the quarantine. Regulators have contacted nurseries to determine where ash stocks were shipped, which led to discoveries in Maryland and Virginia. But he concedes that the list the state has is not exhaustive.

Whenever it has a paper trail to follow, either Michigan or USDA investigates, insists Sharon Lucik, a USDA spokeswoman. She emphasizes the word “whenever.”

Growing controversy

Roberts isn’t the only critic. For such a small pest, emerald ash borer has created a giant rift between the Michigan green industry and state policymakers.

Nancy Carpenter, executive director of the Michigan Forestry and Parks Association, says the rift is a concern for the association’s 500 members. “It’s had a tremendous impact on our industry and taken a lot of our members away from their normal routine activity.”

One of the association’s chief complaints centers on a tree removal policy that many claim favors large out-of-state companies to the detriment of smaller in-state firms.

“It hasn’t divided the industry. It has divided the industry from the government,” says Diane Andrews, executive director of the Michigan Green Industry Association. “The arborists are still united. The industry is very upset with the government and feels that the government hasn’t listened to or involved them (in policy decisions).”

There are also charges that the state became a middleman and fixed prices in favor of larger firms.

Chris Smith, owner of Smith Tree and Landscape in Lansing, is among the critics. He contends the state should let the free market decide the price.

Craegh acknowledges that the state Department of Agriculture is aware of the criticisms. In December, he says, the state
addressed “a majority of the concerns.” The state made the contracts more site-specific, changed pricing structures and began encouraging municipalities to contract out work in smaller blocks so that in-state companies can compete. The changes appear to have brought more in-state companies into the process. Of the 26 firms qualified by the state to compete for contracts, he says, only one is from out-of-state.

“At least for the majority of the small firms we were hearing from, we have solved a majority of their problems,” Craegh says.

Smith’s view of the spread of the pest is somewhat fatalistic, though he is hopeful that it will prove more treatable than Dutch elm disease.

“There is no question that this is not containable,” Smith says. “I just hate to see an absolute waste of taxpayers’ dollars. For those outside of Michigan, hold your hats because it’s coming. There is going to be no containment.”

In addition to a chemical application business, Smith owns a small nursery. When the quarantine went into effect he, like other nurseries in the quarantined area, had to destroy hundreds of his most saleable shade trees. “Who knows how many thousands were lost?” he says.

Actually, USDA estimates the quarantine has cost Michigan nurseries $2 million in sales. Counting timber, nursery stock and landscapes, the agency says that as much as $11.7 billion in trees are at risk in a six-county region in Michigan alone. Some estimates have suggested the price tag of a widespread outbreak could eclipse a trillion dollars.

Regardless of the losses, Smith maintains the quarantines are necessary and should remain. “You want to do what you can within reason,” he says. What he disagrees most with is the eradication policy of removing all trees within a half-mile radius of an outbreak. He says, “the policy is crazy” because the borer simply flies farther for its next meal. He advocates treating the most valuable trees in the outlying areas with insecticides.

Smith isn’t the only one who advocates this. Turner of American Tree Arborists concurs. “Some of the industry is upset that the focus is on removal instead of treatment now that the treatments have proven successful,” Turner says. “They should allow options if the homeowner is willing to spend money to save a tree.”

Andrews, of MGIA, agrees. She says many in the industry were treating trees before the pest was identified. She adds that they were having success doing so, too. Once it was identified, she says, eradication became the exclusive policy “when our industry has had phenomenal success with treatment.”

Treatments are allowed in areas considered to be at the core of infestation, but not on the fringes or outlying areas. Turner says that using injections of Imidacloprid in the soil and trunk, he has witnessed dramatic results. Some of the treated trees were far beyond 20 percent infested when the treatments started. “The bugs in those trees are gone now,” he says.

American Tree Arborists is among a handful of companies with special experimental use permits to inject insecticides at doses that exceed the labeling requirements. Turner believes a labeling change will be necessary to mimic the results they are witnessing.

But for now, eradication is the only accepted treatment method in the outlying areas. “There is not a treatment that is 100 percent effective,” says Lucik of USDA. “If it were 100 percent effective, it would be different. When you remove that ash tree, that is 100 percent.”

Another downside to treatment is that it must be administered yearly. “Eventually the only ash trees that will be alive are the trees treated with insecticide,” says Dr. Deborah McCullough, professor of forestry and entomology at Michigan State University. She is a leading researcher on the subject of insecticides that combat the borer.

Ongoing research

“Using insecticides is very promising,” McCullough says, adding that injections of Imidacloprid have produced the most promising results. The chemical is similar in structure to nicotine and has few consequences for people and animals.

“The best way to use these insecticides is to treat the trees that are lightly infested and not heavily damaged,” McCullough
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says. She agrees with the state and USDA, however, that eradication is the best treatment in outlying areas of infestation.

“We’ve got to eradicate the outliers,” McCullough says, adding, “It may be that we get better and better with the insecticides … And in the future we may mix insecticide with eradication.”

In addition to researching insecticides, McCullough is leading research to discover the host range of EAB. So far, research in North America suggests the pest is only attacking white, black and red or green ash. In Asia, limited evidence suggests it may also use elm, walnut and wingnut as a host.

Laboratory tests have also shown that the borer may be able to sustain itself on privet. “It would complicate things,” if it can fester on the invasive plant, McCullough says. “We don’t know yet. We did some tests and we’re still not sure.”

Tests showed the borer would lay eggs that hatched in privet. Larvae fed on the shrub and made tunnels as it would on ash, though McCullough says the larvae didn’t look exactly like the ones seen on ash. She says the researchers haven’t yet witnessed adults springing from the privet, in part because the branches are so small. She adds that privet bushes in parks where borers had infested ash trees appeared unharmed. “That is a more realistic kind of test than a lab test,” she says.

Additionally, researchers are investigating possible natural enemies present in China, Korea, Japan and Russia. In China, four parasitic wasps attack various life stages of the borer. One attacks the eggs. Another digs through frass created by the feeding pupa and attacks it. Two others attack the larvae.

“These last two species have been parasitizing up to 80 percent of the emerald ash borer in localized outbreaks in China,” says Juli Gould, of USDA. She says research in China has been concluded on one of the parasitic wasps and specimens will be shipped to a U.S. quarantine in February for host-specificity testing. Research in China on the second one should be completed later this year, she adds.

Gould says, “Once research has determined that field release is safe and potentially effective, parasitoids will be released in the United States to contribute to the control of this difficult pest.”

Lucik adds, “The one thing I would ask tree care professionals to do is get on board and support the program given the fact that the public is coming to them for advice and direction. Everyone should know about the borer, but not everyone does.”

Jason Landers is a freelance writer living in Glenco, Alabama.
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For Tree Trimmers, Access to Power Lines Was Never Easy

By Elmer Pyke

Last August, at the age of 78, I found myself up an 80-foot honey locust tree, trimming it. Am I bragging? You bet! But I have a hunch there are other 70-years-plus tree climbers out there.

The Davey Tree Expert Company hired me in 1943, at age 18, to trim trees along power lines. The pay? Sixty-five cents an hour. Frank Groves, Davey Tree foreman in Buffalo, N.Y., was my boss for six months. He put me up my first tree. Frank was a decent man, a no nonsense man. It was up the tree or down the road!

I was surprised when I found out he was paid a bonus for training me, and the man who hired me also received a bonus. The manpower shortage caused by World War II was only part of the reason. The rest of the reason was a surprise, and how I found out was a shock while working on Frank’s crew clearing power lines.

Before trimming any trees, permission had to be obtained from the property owner. Frank ordinarily took care of this. If for whatever reason this had not been done, the climber had to get permission before trimming the tree. So, I asked one owner for his permission – he pointed a shotgun at me and ordered me off his property. I left immediately! When I told Frank about it, he then filled me in on the reasons for the man’s actions.

The power companies had a big job constructing the electric lines, providing electricity for this country. They weren’t always greeted with open arms. Some owners refused to give them permission to put their lines up. The electric companies did whatever they had to do to get the lines up – not all of it ethical or even legal. Erecting lines when an owner wasn’t there was only one of their tactics. Once the lines were up, the property owner was powerless to do anything about it. Butchering trees and wholesale tree removal were everyday operations for them. Eventually, this all caught up with them. When they had to do their regular maintenance, line clearing, repair work or putting lines back up after storm damage, they found a lot of the property owners unwilling to let them back on their properties. The electric companies’ public be damned attitude had changed to “the electric company be damned.”

Some of the power companies, determined to improve and change the public’s perception of them, changed their methods. Davey, a leader in tree care, took over the line-clearing operation. They showed the power companies and public that trees and power lines could co-exist by using trimming methods new in line clearing at that time – directional pruning, clearing the lines every three years and finding bad trees and limbs before they could damage the lines. They also placed getting the property owner’s permission before doing any work first on the list. It took a while, but it worked. At least I never had any more shotguns pointed at me!

Elmer Pyke is the retired owner of Elmer Pyke Tree in Syracuse, N.Y.

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