ENJOY
SUPER PROFITS

from the
SUPER SMOOTH

60” Pushback

Cuts 24” Deep

America’s Favorite

RAYCO
“The Stump Cutter People”
Toll Free 1-800-392-2686
Nationwide and Canada
4255 Lincoln Way East • Wooster, Ohio 44691

Please circle 35 on the Reader Service Card
DEPARTMENTS

2
OUTLOOK
By Robert Felix
How phone calls to your firm are answered could affect your business.

10
INDUSTRY INPUT
The candid comments of TCI readers.

14
MANAGEMENT EXCHANGE
By Susan Haupt
Ratios can give a good idea of how well your business is doing.

THE BRANCH OFFICE
By Dan Kinter and Howard Eckel
News for the business of tree care.

22
BENEFITS OF TREES TO GO ON-LINE
The National Arborist Foundation has received a grant to develop computer models and other materials showing the benefits of maintaining mature trees.

24
COMMUNITIES SLASH TREE BUDGETS
Tree care programs are receiving a smaller share of municipal dollars as communities grapple with the increasing costs of providing services.

28
THE BRANCH OFFICE
By Dan Kinter and Howard Eckel
News for the business of tree care.

29
INDUSTRY ALMANAC
Important regional and national meetings and activities.

30
ARBORIST INNOVATIONS
By Jeff Jepson
This veteran climber has perfected two techniques that make his job a bit easier.

34
CUTTING EDGE
New products and news in the industry.

36
CLASSIFIED ADVERTISING

FROM THE FIELD
By Raymond C. Matz Jr.
Preventive maintenance can save a life.
The temperature went up to 50 degrees today. The sky was blue. The snow was beginning to melt. It was refreshing to go outdoors. I can imagine my friends in Florida saying, “ Fifty degrees? Is this guy some kind of a nut? Start the smudge pots and get out the sweaters.” While you read this in April, I had to write it in March.

If this kind of day occurs on a weekend in the Northeast, you can be sure that your phone will ring on Monday. Your residential clients would have surveyed their estates and looked at their trees. They would have thought about spring cleanup, gypsy moth possibilities and everything else connected with their trees, shrubs, lawns and gardens. In the Northeast or the upper Midwest, there is nothing better to get business pumped up than a sunny weekend. Conversely, there is nothing more depressing than a cold, rainy spring weekend. We get them as well.

I’m sure that each of you can identify the weather conditions and other factors in your own area, storms notwithstanding, that stimulate your marketplace. What a great feeling it is when the flood gates of customer interest open, especially after a cold winter. You know that you should be able to sell 90% of those calls.

What about those calls? An inquiry is the first contact that a customer may have with your company. Are the calls being handled well? When customers call, do they feel that you want their business and that their problems are important to you? Does that initial contact convince them that they need not go further?

It’s worth investigating. What you think is happening may not be the case. That first impression may be very different from what you want. I called a tree company this morning. I know the owner prides himself on the quality performance of his employees. My cheery response to an opening “XYZ Tree Service” was followed by, “Give me that name and number again and I’ll tell ‘em you called.” If I was a potential client, I wouldn’t want to hang by my thumbs until that call is returned.

How about you? Do you respond to your messages promptly? If you don’t respond to an inquiry, the customer will call someone else. Wouldn’t you?

Nobody in business today can afford to let business slide by. Even a call from someone in your office saying that you are getting back to customers as quickly as you can and will call within a certain time continues the feeling of interest and confidence. Ignoring a call can only have a negative effect on your business.

A well-established firm has the same need to provide good customer service as the young company trying to build a customer base. You know, it’s harder to stay on top than it is to get there. You can never stop working at it.
Tree care professionals are very particular about the tools they use. We know, because we asked for their help in designing the Shindaiwa 357 top handle chain saw, the newest addition to our full line of outdoor power equipment.

The results are very impressive.

Quiet and compact, the 357 has the best power-to-weight ratio in the industry—which means less fatigue, because the saw’s working harder, not you.

Its exceptional balance and anti-vibration system make cutting easier and less tiring. And since an arborist’s life has its ups and downs, it’s also the ultimate climbing saw, with a rounded shape that hangs bar-down to help avoid hang-ups.

And even though you can expect 1000 hours of engine life from the 357, it won’t take a lifetime to pay for. In fact, you can expect it to set new standards both in performance and value.

Call 1-800-521-7733 for your nearest Shindaiwa dealer and see the saw designed by arborists for arborists. The Shindaiwa 357 climbing saw. Helping you reach the top.
Arborists & Wires: 1995

By Peter Gerstenberger

The average person comes close to electricity in everyday activities, but arborists encounter electricity in forms that are potentially more hazardous, often on a daily basis. From the first time an arborist firm began clearing trees from overhead lines, it has been common sense that workers should be trained not only to avoid this hazard, but also to work safely around electrical conductors.

While employees in the line clearance tree trimming industry have the most exposure to potential electrical hazards, arborists working in the private residential, commercial or public sectors face the same risk. Electricity does not discern. Neither do the safety standards regulating employers and employees who work on trees where an electrical hazard exists.

Employers are now required to self-certify that employees are competent to work near electrical conductors. The ramifications of that requirement are many.

Self-regulation

The first entity to regulate the line clearance industry was the industry itself. The first standard to address electrical hazards was the ANSI Z133 Standard, a document drafted by a voluntary committee of arborists and others. As a matter of fact, development of Z133 was largely the result of an electric-related fatality. The committee was formed in 1969, before the Occupational Safety and Health Administration was established. The Z133 standard was first published in
Quick action by industry representatives preserved the accepted practice of line clearance tree work for the restoration of power after potentially dangerous storm conditions have subsided.

1971, almost 20 years before any federal OSHA standard specifically regulated line clearance tree trimming.

The Z133 Standard defines a line clearance tree trimmer as someone who through experience and training can work safely within 10 feet of electrical conductors. Anyone who does not meet these qualifications must maintain at least a 10-foot clearance from all conductors. The Z133 Standard was revised in 1994, with some changes relevant to electrical hazards.

Until OSHA drafted a specific standard for utility line clearance, the agency used Z133 as an enforcement document, and citations were issued under OSHA’s General Duty Clause.

Since 1990, however, tree workers not qualified to work within 10 feet of an electrical conductor have been governed by OSHA’s CFR 29, part 1910.331, the Electric Safe Work Practices Standard.

The standard covers general industries as well as tree workers. Thus, a house painting firm and a tree care firm may both be governed by 1910.331 if their work is within 10 feet of a conductor.

The Vertical Standard

After nine years of research and legal wrangling, OSHA has promulgated 29 CFR 1910.269, commonly known as the Vertical Standard. Now, an explicit OSHA standard applies to all those who do tree work near electrical conductors.

The Vertical Standard affects all those in the utility industry, including line clearance contractors and municipal or commercial/residential arborists who may work near the conductors incidentally or purposely. It took effect on May 31, 1994. The training requirements kicked in this past January.

According to OSHA 1910.269, a “Line Clearance Tree Trimmer” is a tree worker or trainee who through related training and on-the-job experience is familiar with the special equipment, techniques and hazards involved in trimming trees near overhead conductors.

A tree crew with a worker within 10 feet of an electric conductor is considered to be engaged in line clearance tree trimming. This means that even though your employees may not be under contract for line clearance, they are covered under 1910.269 if they are trained to work within the 10-foot limit.

Note that the designation of line clearance tree trimmer is conferred upon the individual, not his or her employer. However, if the employee’s qualifications are questioned, the burden of proof is on the employer.

One part of the training now required by OSHA is that the line clearance tree trimmer must be able to recognize maximum nominal voltages. That is, a line clearance tree trimmer must be able to identify energized wires, the nominal voltages of such wires and the minimum distances to be maintained from such wires. This means that the tree worker, to quote an OSHA official, “has to know in essence that electric overhead power lines are carrying enough voltage to kill him. He has to be able to determine what the voltage is from the lines because the clearance distance depends on the voltage of the line.”

Let’s clarify what “nominal voltage” means. Nominal refers to a rating. For instance, a climbing line has a minimum nominal breaking strength. Similarly, in XYZ Utility Company’s system, a certain size conductor on a certain type of insulator has a maximum nominal voltage. This is the maximum voltage the system is designed to carry. It may actually be carrying less voltage, but under normal circumstances should not be carrying more.

The NAA has revised its Electrical Hazards Awareness Program, EHAP, to include much more information on electrical construction and recognition of electrical apparatus. ACRT, Inc., of Kent, Ohio, has a number of programs dealing with electrical hazards.

Employer certification

If it did nothing else, the Vertical Standard cleared up a grey area with respect to qualification. OSHA stipulates that employees must be trained in work practices and safety procedures to perform their everyday operations. That training must be documented and be ongoing.

The Z133 standard was vague about the credentials of the line clearance tree trimmer; the OSHA standard spells out what that person needs to know. While Z133 said nothing about who decides what qualified is, OSHA says: “The employer shall certify...” Certainly OSHA aims to make you - the employer - accountable, but it also gives you some latitude to train employees the way you see fit.

Training can be classroom or on-the-job type, but it must establish employee pro-
Those who must comply should make note of a critical point of the Vertical Standard: The standard requires that the employer self-certify that each employee has received the training required. Thus, the employee must demonstrate proficiency in the work practices involved and the employer must verify and document the employee's proficiency.

When confronted with the prospect of self-certification, line clearance contractors felt they needed a universal training standard against which they could evaluate their programs. Therefore, in the 1994 revision of Z133, there is a line clearance tree trimmer training outline in the Annex titled "Recommended guidelines for standard performance and safety training for qualified line clearance personnel."

OSHA and ANSI also require training in aerial rescue. As a practical matter, aerial rescue is a skill that is sharpened with practice. The tree care employer or supervisor should sit down with employees prior to aerial rescue practice to review techniques, equipment and procedures that will be used. Aerial rescue practice or actual rescue should not expose the rescuer or victim to risk beyond that which is normally encountered when climbing or operating an aerial lift.

NAA's role

Often the promulgation of a new OSHA standard leaves industry scrambling to comply. However, the tree care industry saw this one coming for a long time and was instrumental in shaping it. There are problems with the promulgation of any standard, often the direct result of involvement by parties not familiar with the industry and the nature of tree work. The Vertical Standard had those sorts of problems, but they have largely been ironed out.

For more information on compliance training relative to tree work and electrical hazards, call the NAA at 1-800-733-2622, or ACRT at 1-800-622-2562.

Originally, the Vertical Standard and subsequent drafts contained many sections that were unworkable for arborists. One early draft would have prohibited tree trimmers from working after a storm. This would have delayed power restoration after
100 Trucks In Stock

1990 OLATHE Pallet: Wood & Debris Chipper; 6 Cyl. Cummins Diesel $26,500

1990 VERMEER V555; Deutz Diesel; 350 Hours; 7 Trenching Bar $15,900

1984 INT'L 4x4 DT466; 5+2 Spd.; 113,000 Miles $19,500
1987 GMC 4x4 8.2 Diesel; Auto.; 56,000 Miles $22,500
1973 FORD C/O 900 4x4 Gas; Auto.; 55,000 Miles $5,500

(10) Digger Derricks In Stock $4,500 & Up (Call For Current List)

(2) 1986 Crane Carrier Chassis, 6 Cyl. Detroit Allison Auto With Peterson-Lunden And 16 ft. Dump Body $24,500

1983 International; 6x6 DT466 Auto With Holan Bucket Model 29-E75; 70 Ft; 2 Buckets And Jib $39,500

(10) HIAB; IMTCO, National, Etc. Knucklebooms Unmounted Or Mounted $4,500 And Up

1985 INT'L 4x4 Diesel; w/Asplundh LR50 $29,500
(3) Other LR50's In Stock CALL FOR INFO.

1980 International; 3208 CAT Diesel; 5 Spd.-2 Spd. With Hi-Ranger 65' Bucket $42,500

1983 International; 6x6 DT466 Auto With Holan Bucket Model 29-E75; 70 Ft; 2 Buckets And Jib $39,500

(3) Other LR50's In Stock CALL FOR INFO.

1984 To 1990 One Ton Bucket Vans, Utilities, Veratruck, Telescads, Etc. $6,500 & Up

1984 Mack Diesel CAT; Autocar; 7.5 Ton Crane $12,900 Each

OPdyKE INC.
(215) 721-4444
Truck & Equipment Sales
3123 Bethlehem Pike Hatfield, PA 19440 (Phila. Area)
OSHA Compliance Checklist

Training
A. Employees must be trained in work practices and safety procedures to perform their everyday operations.
   1. Training must be documented
   2. Training must be ongoing
   3. Employers must determine through regular supervision and inspections that each employee is complying with the requirements of OSHA 1910.269
   4. The employee must receive additional training if
      a. regular inspections reveal employee non-compliance;
      b. new technology, equipment, or changes in work procedures become available; or
      c. the worker must use tools or techniques that are different from those normally used. Such retraining or additional training is required if a skill is not used within one year.
   5. Training can be classroom or on-the-job type
   6. Training must establish employee proficiency in the work practices involved and shall show employees how to comply with OSHA 1910.269

B. The employer shall certify that each employee has received the training required. Thus, the employee must demonstrate proficiency in the work practices involved and the employer must verify and document the employee’s proficiency.

Medical Services and First Aid
A. The employer must provide a well stocked, approved first aid kit and access to professional medical assistance.
B. Cardiopulmonary resuscitation (CPR)
   1. At least two persons must be trained in CPR on all crews of two or more employees.
   2. Only one trained person need be available if all new employees are trained in first aid and CPR within 3 months of hire.

Job Briefing
A. Before work begins, a crew must be briefed on
   1. job hazards;
   2. work procedures involved;
   3. special precautions;
   4. energy source controls; and
   5. personal protective equipment requirements.
B. A job briefing must be done before each shift.
C. Job briefing must be done more often if
   1. significant changes occur in work operations;
   2. there are special hazards; or
   3. the worker cannot be expected to recognize and avoid the hazards.

Personal Protective Equipment
A. Employees must inspect body belts, safety straps, lanyards, ropes, etc. daily.

Mechanical Equipment
A. Thorough visual inspection of the elevating and rotating portions of an aerial lift device daily.
B. Vehicles may not be backed off the road where another employee may be exposed unless
   1. the vehicle has a reverse signal alarm louder than the surrounding noise; or,
   2. a spotter signals the driver.
C. All tractors, dozers, etc. must have roll-over protective structures.
D. Outriggers must be used, unless the work area precludes their use. In this case the unit can only be operated within its maximum load ratings without the outriggers.
E. A spotter must watch and warn lift operator of distance from wire unless employer can show that bucket operator can accurately determine distances.
F. Chippers must be insulated or detached from the truck if there is a risk of boom contact energizing equipment connected to the truck, or point of potential contact to wire must be insulated.
   1. A risk occurs when an un-insulated boom of an aerial lift device could energize a chipper connected to the truck.
   2. If an insulated boom is exposed to electrical wires, then the chipper need not be insulated.

Line clearance tree trimming operations
A. Employee must determine the maximum nominal voltage or actual voltage in the lines before climbing a tree.
B. A second line clearance tree trimmer must be within voice communication if
   1. the worker approaches within 10 feet of conductors over 750 volts; or,
   2. branches being removed come within 10 feet of conductors over 750 volts; or,
   3. roping is necessary.
C. Minimum clearances must be maintained (refer to ANSI Z133.1-1994).
D. Wet or contaminated pole pruners cannot be used.
E. Storm work may be done after storm has passed.

storms and endangered the lives of linemen who are not always familiar with tree work. The line clearance industry took exception to this proposed rule, and voiced its concern through the National Arborist Association (NAA).

In its testimony, NAA stated: "The ... storm work prohibition is utterly unacceptable to us. This provision is ill conceived, it’s intolerable and it must go.” It went. The final rule permits tree work for the restoration of power after potentially dangerous storm conditions have subsided.

In another important breakthrough with OSHA, the tree care industry preserved the qualified arborist’s right to use a chain saw or hand saw in pruning or removing a tree limb passing within the minimum separation distance of an overhead electrical conductors, provided the limb has first been secured with ropes. (See TCI, March 1995, page 13.)

The NAA also was successful in educating and negotiating with officials at the Department of Labor in several other areas: preserving the use of wood-handled tools as being non-conductive; allowing the use of climbing ropes for aerial rescues; modifying the CPR requirement; and having the ANSI Z133.1 Standard recognized as the industry’s fundamental safety standard.
First In Safety. Exclusive In Service!

Vermeer sets the standard for safe and reliable brush chippers with longer feed tables.

Vermeer 1250 Brush Chipper

First and only brush chipper manufacturer with specialized dealers providing local service and hands-on training after the sale.

Powered by 81 or 102 HP Perkins diesel engine

First with longer feed table (72") to keep operator at a safer distance – twice the distance as some competitive units

First with curb-side feed to keep workers away from traffic

For more information see your nearest Vermeer dealer or call 1 (800) 829-0051.
Does your Profit Margin Depend on Timely Deliveries?

At American Arborist Supplies, our entire existence depends upon meeting your needs.

That is why everything we do is in preparation for that next order. We keep our inventory well stocked. And we've set up systems for the sole purpose of getting your order out to you as soon as possible.

Most of our orders are filled and shipped within twenty-four hours of the time they are placed.

At American Arborist Supplies, your profits are part of our job.

Call 1-800-441-8381
or FAX to: 610-430-8560
to get the supplies you need when you need them.
Call for a free catalog.

Solutions to a problem

Concerning the problem of the tree trunk with the cement and rebar inside (See February TCI, page 14), there are three ways that I know of to deal with it.

I had a recent experience with an oak tree that fell over during a storm. There were three cavities that had been filled with cement. In two of them, we were able to remove the cement with a 20-pound sledgehammer and a crowbar. The third one had to be opened up with an axe to allow complete access to the pocket of cement. This is the first option.

If you have enough access, your second option would be to push the trunk over with a large tractor. You can then pick up the whole trunk and load it onto a truck or into a dumpster.

The third option, again depending on access, would be to dig around the base of the tree with a backhoe or with pick-axe and shovel, if necessary. Be sure to cut the side roots around the base. Clear an area of about 2 feet (wide and deep) around the trunk. Attach a steel cable, 1/4-inch should do, with the rotten area inside the trunk.

Put the cable around the trunk, up high for better leverage, and put the other end on the rear of a large truck. The truck should be a 1-ton or larger and make sure where you attach the cable is strong enough to take the strain. With the pressure put on the tree trunk by the cable, it may break at a weak point above the ground. It is critical that care be taken here as this is the most dangerous point.

Move the truck until the cable is taut and then continue to move forward slowly. Do not try to jerk the trunk over. This usually does nothing but break the cable. Be sure you know where the trunk is going to fall and take great care in case the cable does snap. Know where all your workers are before you move the truck!

If the trunk does break, it will allow you to remove the cement with sledgehammers and crowbars.

If your access is really restricted, make sure you keep your axes sharp by stopping often to file or stone them. A sharp axe will cut better and faster. Also,
When it really pays to participate...

2.8% Dividend

This spring, the CNA Insurance Companies will be distributing a 2.8% dividend to participants in The Arborists Program safety group dividend program.

These dividends are directly related to the close relationship we have developed with industry experts. By working with these experts, we have come to understand the risks of your business. Through the combined safety efforts of CNA and plan participants, losses have been kept low, making this safety group dividend possible.

All firms participating in the TAP safety group dividend plan for the 5/1/93 - 5/1/94 policy year will be receiving a dividend.* If your current insurance carrier isn't paying you a dividend, take advantage of our comprehensive plan designed especially for you. Call 1-800-CNA-6241.

*Based on efficient control of losses. Safety dividends, available in most states, are declared by the CNA Board of Directors and cannot be guaranteed.
using a crew of three or more men will make things go faster for all the obvious reasons.

I've used all three methods myself with success. The location of the tree coming down decided which method I used. I hope I have been of some help to you with your problem. Good luck.

Will Merrill
Majestic Tree Company
Northridge, California

In memoriam

Bill Bickers passed away on January 14, at the age of 88. He was a past member of the International Society of Arboriculture, the Penn-Del ISA Chapter, the National Arborist Association and the American Society of Consulting Arborists.

Bill owned and operated J.W. Bickers Tree Experts of Bryn Mawr, Pennsylvania, for more than 50 years. He was born in Culpepper, Virginia, and came to Bryn Mawr in 1928. He started his business in 1929, the year the Great Depression began. His was a struggle to get his business established. A recollection of his was walking from his boarding house to where the big estates were with a rope, saddle and saw, looking for work.

When Bill retired, he had the finest tree business in the Philadelphia area, counting among his clients many of the area's large estates, schools, colleges, churches and other institutions.

Bill was a true Southern gentleman. Anyone who knew him could attest to his charm and dignity. He had a genuine respect for everyone. The Penn-Del Chapter considered Bill "Mr. Hospitality" for his graciousness in welcoming people to our functions.

Bill loved his farm in Culpepper where he, his father and grandfather were born. His grandfather was a surgeon in the Civil War.

Bill gave the farm, which consisted of 550 beautiful acres, to the Baptist Children's Home in Virginia. He wanted them to build a home for children there. They could not do that, but the church will sell the land and use the money for their projects with children - so his legacy will continue.

All of us who knew Bill Bickers were very fortunate. He enriched our lives with his warm, loving personality. He shared his life with his wonderful gift of storytelling - especially stories of his life in Virginia on the farm, and the people for whom he worked in the tree business.

He lived his life in a loving, dignified way. He was truly a gentleman.

John B. Ward
John B. Ward and Co., Inc.
Villanova, Pennsylvania

Letters should be addressed to:
Tree Care Industry, Editor
P.O. Box 1094
Amherst, NH 03031
It's easy to see how Stihl has become the number one selling brand of chain saws worldwide. We have light and versatile saws perfect for limbing and topping, as well as brawnier models designed for both felling and bucking. Our newest top handle model, the 020T, weighs a mere 7.7 lbs., making it one of the lightest saws available. We've also included exclusive features like a side-access chain tensioner, see-through gas tank, and a built-in tether ring. Just a few of the innovations that make it the ultimate choice for arborists. For a demonstration of any of our products, head for Stihl Territory. Call 1-800-GO-STIHL for the dealer nearest you.
How Are You Doing?

*Ratios can help you understand your year-end financial statements*

By Susan B. Haupt

It's that time again! You have to fill out tax forms and settle up with the government. It's also the time when most companies receive their audited and adjusted Year End Financial Statements from their accountants.

Don't put these statements aside thinking that you will look them over later on. You know you probably won't ever do it. Take the time now to read and understand them. It's your company and your money; you need to know what's going on. Using ratios will give meaning to the array of numbers on your statements.

Ratios show the relationship between two or more numbers on your financial statements, i.e., balance sheet and income statement (sometimes titled Profit & Loss Statement). Ratios give you averages and percentages which simplify and summarize the numbers. This will enable you to analyze and understand what your statements mean.

Ratios can show how you are doing financially and/or alert you to potential problems. Reading and analyzing your financial statements is an ongoing process. No single time analysis or isolated calculation will give you definitive or conclusive information about your company.

The ratios demonstrated here are to be used as a basis for interpreting the numbers on your company's statements: age of accounts receivable; balance sheet ratio; net profit on sales; and overhead to earned income ratio.

Financial statements used to illustrate these ratios are based on the National Arborist Association's Management Guide on Accounting.

### Calculating the various types of ratios

#### Age of Accounts Receivable

To determine Age of Accounts Receivable, divide total Accounts Receivable (A/R) by Earned Income for a period (month, quarter, year) and multiply by the number of days in that period.

\[
a/b \times c = \text{Age of A/R}
\]

\[
a = \text{Accounts Receivable (A/R)}
\]

\[
b = \text{Earned Income for a period}
\]

\[
c = \text{Number of Days in that period}
\]

Using the information from the Income Statement & Balance Sheet:

- A/R = $65,000 (Line 1020 on the Balance Sheet)
- Income for the Year = $598,950 (From Income Statement)
- Number of Days in the Period = 365 (Year 1994)

\[
a/b \times c = \text{Age of A/R} =\frac{$65,000}{\$598,950} \times 365 = 40 \text{ days}
\]

The ratio for this company, 40 days, shows that it has a good record of collecting its receivables in a timely manner. It's important to do this calculation at least once a month to alert you to keep after slow-paying customers.

If at any time the result of this ratio shows that the average age of your receivables is more than 45 days, review A/R including those outstanding for more than 15 days. It's a good idea to check your A/R every week, if possible. Also, set aside time each month to review your aging analysis report. If you do not have such a report, check through your file of unpaid invoices.

#### Net profit on sales

Profit is often referred to as the bottom line. What is your profit goal? It should reflect both inflation and the marketplace. A profit of 10% would be a reasonable goal with inflation currently holding just under 3%. A 15% net profit goal would be even better. Corporate and/or personal taxes on profit are additional factors you need to consider when determining your profit goal.

Profit on sales is determined by dividing profit by total earned income (sales).

\[
\text{Profit} = \frac{\text{Profit on Sales}}{\text{Sales}}
\]

Using figures from the income statement:

- Profit = $55,870
- Total Income = $598,950

\[
\text{Profit} =\frac{$55,870}{\$598,950} = .09 \text{ or } 9\%
\]

This ratio shows a 9% profit on sales for the year. This is a bit low. You might want to see what you could do to increase the percentage of profit during this current year.

If your bottom line figure is negative, usually stated with the figures in parenthesis, i.e. ($55,870), you are operating at a loss. This same formula would give the percentage of loss, or how many cents you are losing on each dollar of sales.

Newer companies may show little or no profit in their first few years and may operate at a loss with the owners paying themselves little. This is often necessary to become established and/or to enable growth. Older corporations may pay higher salaries to the owners, resulting in a lower reported percentage of profit.
Bring your sky-high insurance costs down to earth.

One toll-free phone call—and five minutes—is all it takes.

This brand new program from Albiez lets you instantly compare what you’re paying today to what you could be saving tomorrow. For the same—or better—coverage. From today’s top-rated insurance company.

Pick up the phone and dial 1-800-272-6771. Bring down your high insurance costs. And give your tree-care business more room to grow.
EXPERT ARBORCARE COMPANY, INC.
INCOME AND EXPENSE STATEMENT
Year Ending December 31, 1994

**ACCT #**  
**INCOME**  
5010 TREE CARE & REMOVAL $425,050  
5020 FERTILIZING 75,000  
5030 PEST MANAGEMENT 78,900  
5040 LANDSCAPING 15,900  
5050 OTHER 5,000  
**TOTAL INCOME** $598,950  

**EXPENSES**  
**Direct Expenses**  
6010 PRODUCTION PAYROLL $168,480  
6015 PAYROLL TAXES 13,478  
6020 WORKERS COMP. INSURANCE 25,272  
6025 DEPRECIATION EQUIP. & M.V. 36,000  
6030 EQUIP. MAINTENANCE 24,000  
6035 EQUIP. & VEHICLE INSUR. 12,000  
6036 GAS & OIL 15,000  
6040 GEN. LIABILITY INSUR. 15,000  
6042 HEALTH/LIFE INSUR. 6,000  
6045 MATERIALS & SUPPLIES 22,500  
6050 OTHER OPERATING COSTS 54,000  
**TOTAL DIRECT EXPENSES** $391,730  

**Sales & Administrative Expenses**  
7010 ADMIN./SALES PAYROLL $96,000  
7015 PAYROLL TAXES/INSUR. 7,680  
7017 HEALTH/LIFE INSUR. 4,800  
7020 TELEPHONE 12,000  
7025 ADVERTISING 12,000  
7030 DUES & SUBSCRIPTIONS 900  
7035 DEPRE. BUILDING (RENT) 9,000  
7036 BLDG. & GRNDS. MAINT. 600  
7040 MEETINGS & TRAINING 3,000  
7045 OFFICE EXPENSE 720  
7046 DEPRE. OFFICE EQUIP. 1,200  
7050 PROFESSIONAL FEES 750  
7060 INTEREST 1,200  
7065 MISCELLANEOUS 1,500  
**TOTAL SALES & ADMIN. EXPENSES** $151,350  
**TOTAL EXPENSES** $543,080  
**PROFIT (LOSS)** $55,870  

**Current ratio/quick ratio**

Because few tree care companies have current assets other than cash (and equivalents) and accounts receivables, we are going to use an easy form of the current ratio called the quick ratio (QR). This ratio is easy to figure and use. It is determined by dividing all current assets (CA) by all current liabilities (CL). (If your company lists a large inventory in its current assets, exclude that amount when using the quick ratio.)

\[
\text{CA / CL = QR}
\]

If the resulting figure is 1.75 or more, you may have very old accounts receivable, or you may not be using your available cash profitably. If the figure is below 1.00, you are in poor financial condition, you owe more money than you have or than is owed you. This is a warning sign! You are probably experiencing problems paying your bills. Buy nothing but absolute essentials until you figure out where you are financially.

Using the information from the Balance Sheet:

Total Current Assets (CA) = $140,578
Total Current Liabilities (CL) = $46,150
\[
\frac{\text{CA}}{\text{CL}} = \text{QR} \quad 140578 / 46150 = 3.05\%
\]

This company appears to have a surplus of cash, $3 for every $1 it owes. However, these figures are from a year-end statement and could be the amount the company feels is necessary to carry it through the slow winter season. The company might also be building up cash in anticipation of purchasing new equipment or pre-paying a loan.

The quick ratio is simple to do and is an essential part of cash management. Use it on your monthly financial statements also. This gives you an easy way to identify potential shortages in available funds. If you discover a problem, you would increase your efforts to collect A/R, and also check through Accounts Payable (A/P) to see which vendor payments could be delayed.
What Do You Use in Your Neck of the Woods?

The SATURN unit is the ultimate tree trimmer with a working height of up to 57 feet. Greater overcenter boom actuation provides exceptional reach capacity for improved productivity. Lower boom actuates 138°.

If you are already using a SATURN aerial lift, then you are experiencing the reliability, maneuverability and easy operation that we knew you would expect when our engineers designed it. But we believe that building and designing a good product is just half the job... the rest is quality service. Whether it's helping you make a prudent purchasing decision, getting your equipment delivered to you on time, following up and putting your unit into service, or helping you maintain the machines you use day after day... TECO is always there for you.

Choosing a reliable partner for your business is the best assurance for a solid future. So if you aren't using a SATURN in your neck of the woods... branch out by giving us a call. TECO Sales and Service Centers and Dealers are located nationwide to assist you.

TECO-Birmingham, AL
(205) 987-7534

TECO-Honeybrook, PA
(215) 942-2500

TECO
9733 Indianapolis Road
Fort Wayne, Indiana 46809
(219) 747-1631

POINTS TO CONSIDER
- Lower boom actuates 138°
- Excellent side reach - 44 feet
- 57 feet of working height
- Boom actuation without chains or cables
- Smooth, easy one hand control
- Quick set-up, saves you time
- SATURNS are in service worldwide
- Economical to own and maintain.
Overhead to earned income

The income statement shows three categories: income, direct expenses, and sales & administrative expenses. Direct expenses are all your job costs, everything related to going out on a job and doing the actual work. The last category, sales & administrative (S&A) expenses, includes the non-production costs. These are the expenses for support staff for your production people: the sales and office staff and other non-job costs listed on the income statement. This is your overhead.

Overhead to earned income is determined by dividing sales & administrative (S&A) expense by total earned income (Sales).

\[
\text{S&A} / \text{Sales} = \text{Percentage of Overhead to Income}
\]

Overhead is the first place to look to cut expenses. This is essential when you are operating at a loss. It is necessary when profits are lower than what is needed for equipment, growth, inflation and taxes.

Using figures from the Income Statement:

\[
\text{S&A Expense} = 151,350
\]
\[
\text{Sales} = 598,950
\]

\[
\frac{151,350}{598,950} = 0.25 \text{ or } 25\%
\]

This 25% shows that 25 cents out of every dollar is spent on non-production costs. You have to decide if this is a reasonable amount for your company. Much depends on the type of work you do. The smaller the jobs, the more overhead it costs to support them. That is, it takes almost as much office time and expense (overhead) to produce contracts, work orders, invoices and process payment for a $50 job as it does for a $5000 job.

There are many other ratios that are used to analyze financial statements. After you have used these, you may want to find others that will help you read your statements. Using ratios gives you a basis for understanding and managing the business side of your business. After a while you may actually look forward to receiving and working with your statements every month.

Susan B. Haupt is senior vice president of the Haupt Tree Company, Inc., in Sheffield, Massachusetts. She is a business consultant and president-elect of the National Arborist Association.
INTO MORE CLEARING AND MORE TREE REMOVALS?

STEP UP TO A MODEL 1400 TREE BANDIT

- Plenty of capacity – 14" diameter
- Plenty of power – 200-HP
- Easy to move and maneuver – towable with a 1-ton truck, weighs 17,200 lbs.
- Compact enough to work street side
- Eliminate labor – feed trees with the loader
- Available with or without operator’s cab

OR STEP UP TO THE TREES WITH A MODEL 1400 TRACK BANDIT

- Eliminate the need to skid or forward the trees
- Ideal for lot clearing – right-of-way widening and clearing
- Powerful undercarriage – good clearance and flotation with the Cat E70B undercarriage

OR UP TO THE MODEL 1700 (17" DIAMETER CAPACITY) TREE BANDIT OR THE MODEL 1900 (19" DIAMETER CAPACITY) TREE (TOWABLE) OR TRACK (SELF PROPELLED) BANDITS

- Both units feature powerful, 4-feed wheel feed systems
- Both towable units have excellent ground clearance and flotation with dual axle 1000 X 20.00 suspension
- Both are easy to feed
- Both have straight infeed
- Swivel discharge adds ease for options and set up
- Both are available as self-propelled-enabling you to take the chipper to the trees

Model 1900 Towable with Side Feed Wheels (shown at right)

Call or write today for additional information and/or a demonstration.

BANDIT INDUSTRIES, INC.

6750 Millbrook Road • Remus, MI 49340 • Phone: (517) 561-2270 • Fax: (517) 561-2273
Is Regulatory Relief Ahead?

House proposal would stall federal regulations on businesses

By Brian Barnard

On February 24, the House of Representatives passed the Regulatory Transition Act of 1995 (HR 450) that would impose a temporary moratorium on the implementation of federal regulations. The measure is a spin-off of the Republican “Contract With America.”

This bill would prevent federal agencies such as the Occupational Safety and Health Administration from carrying out regulations proposed or enacted since November 20, 1994. The delay would last until December 31, or until Congress passes legislation requiring risk assessments and cost/benefit analyses for all federal rules, whichever happens first.

Of special interest to tree care firms, the House also approved an amendment to extend the moratorium until June 30, 1996 for any regulation affecting a business with 100 employees or less.

It is still unclear how the moratorium would affect OSHA’s electric power generation standard. This standard regulates tree work within 10 feet of electrical conductors.

Proponents of the bill say it offers a needed “time out” from federal regulations. A notice issued from bill supporter Rep. David McIntosh (R-IN) stated that between the proposed start date of the moratorium of November 20, 1994 to December 31, 1994, more than 500 regulations were published in the Federal Register.

Related to the moratorium, the House GOP’s “Contract With America” contains provisions of HR 9 that would ease the regulatory burden on business. These include risk-assessment, scientific and economic analyses, and a cost-benefit analysis bill to make it easier for private property owners to be compensated for government limits on the use of their land.

Those opposing a moratorium say the health and safety of workers could be compromised. President Clinton also has commented against the regulatory moratorium and risk assessment bills, expressing concern that they do not reform worker safety and environmental protection, but shut down the regulatory process. Despite such statements, the president has not said he would veto the measure.

Defending the administration’s path, Clinton has told every federal agency director to review their roles to identify “obsolete and burdensome regulations” by June 1.

With all of this action in Washington, D.C., tree companies may see a reduction in the number of federal regulations. Further, rules finalized in the future likely will be scrutinized to a greater degree before they are imposed businesses.

---

Brian Barnard is Government Affairs specialist for the National Arborist Association.

---

Peavey Tree Pruning Poles & Supplies

Peavey Manufacturing Company is pleased to offer a complete line of top quality tree pruning poles and equipment for the professional as well as the amateur who wants a quality made tool.

For years we have made a limited line of pruner poles for the large industrial users, and we feel that if we can satisfy these customers on a nationwide basis that we can satisfy anyone else.

We have a variety of poles including white ash in solid lengths, and also six foot sectional poles with lightweight aluminum couplers. There is also available a line of non conductive sectional, or full length fiberglass poles for the electrical contractors. Included you will find a complete price list and order form for all pruner poles and equipment.

Available in threaded or clip type couplers.

PH4R Pruning Heads

S1 Saw Head

Peavey Manufacturing Co.
P.O. Box 129
East Eddington, Maine 04428
(207) 843-7861 — 843-6778 — FAX (207) 843-5905

Please circle 31 on the Reader Service Card
TREE CARE INDUSTRY - APRIL 1995
**BROWN RIGHT-OF-WAY 9601**

*NEW*

**9½ Foot Brush Shredder**

The New Brown 9½ foot brush shredder is designed to quickly re-clear your right-of-way and is most effective in light to medium growth areas. This shredder is ideally suited for use behind a properly guarded farm series tractor with dual wheels for maximum flotation and traction. Designed for rugged mowing without excessive weight. Light enough to be used in rough areas yet heavy enough to mow your 3 to 4 year growth.

- True Cutting Width: 114" (9½ ft.)
- Cutting Height: 1" to 12"
- Overall Deck Width: 120" (10 ft.)
- Frame Construction: 2x3x½" Tube; 3x3x½" Tube; 4x4x½" Angle; ¾" & ¾" Steel Plate
- Deck: ¾" Steel Plate
- A-Frame: 3x4x¼" Tube with Flex Link Cat.II
- Weight: 3,600 lbs.
- Blades: 4-⅜"x6" Heat Treated Alloy
- Blade Bar: 1" Solid Plate, 36" Diameter
- Drive Shaft: Heavy Duty 135 HP with Heat Treated Tubes, Size #8
- Tail Wheels: 2-600x9 Laminated Tire with Guarded Fork Mount
- Divider Gear Box: 270 HP with 1⅜" Spline Shafts
- Outboard Gear Box: 165 HP with 1⅜" Input Shafts & 2 ⅞" Output Shaft
- Slip Clutch: Heavy Duty 100 HP, 4 Disc Clutch, Fully Enclosed
- Horse Power Requirement: 95 to 120 PTO Horse Power
- Maximum Material Size: 3" to 4" Material (What Can Be Driven Over)

**BROWN TREE CUTTER**

**The Tree Cutter Advantages Available In Hydraulic Or Mechanical Drives**

1. Tremendous flywheel effect created by a 500 lb. blade bar, reduces tractor lugging while cutting heavy material.
2. Blade contact 54 times per second created from 810 RPM blade bar speed.
3. Cutting diameter up to 8" (depending on model) allowed by open back cutter deck design.
4. Can replace your standard grass mower as well as your chain saw (in most conditions).
5. Can cut down and grind the material in a matter of seconds saving you time and money.
6. Proven in all types of terrains (limited only by your tractor).
   - The only TRUE heavy duty mower on the market, with unit weights of 1,750 lbs. to 2,400 lbs.
   - 10's of thousands of miles of experience; unmatched in serviceability, in Right-of-ways across the country.
   - Over 3,500 units in operation in all types of industries.

CALL TODAY FOR MORE DETAILS AND FREE BROCHURE.

1-800-633-8909

Please circle 12 on the Reader Service Card

MANUFACTURING CORPORATION

ROUTE 3 - OZARK, ALABAMA - (205) 795-6603

21
In the near future, arborists will be able to use computers to show customers the economic benefits and maintenance costs of their trees. The National Arborist Foundation has received a grant to develop computer models and related promotional materials on the economic and environmental benefits that result from maintaining large trees.

The $85,000 grant was made by the National Urban and Community Forestry Advisory Council. The National Arborist Foundation is required to match that amount for the project to move forward. ACRT, Inc. of Kent, Ohio, will develop the models.

Arborists know that large, established trees provide a number of significant environmental and economic benefits. Commercial arborists relate the qualitative benefits to customers during sales presentations. However, today’s consumer wants quantitative benefits; clients want to know what their investment in tree maintenance adds to property values and how much it improves the environment. The models this study develops will provide arborists with the data they need to answer those questions.

The economic and environmental benefits of trees have been quantified, but the information is scattered among many journals and disciplines. The study will consolidate all the data and make it available to arborists in a form they can readily apply to their customers’ properties. ACRT has already identified many of these information resources.

The models will have three major components:

**Environmental and aesthetic benefits**
- From location, size and condition of a tree, an arborist will be able to determine energy savings due to heating and cooling effects; the tree’s impact on property values; air pollution filtration and absorption rate; storm water runoff reduction; carbon dioxide sequestering, storage and avoidance; oxygen production; noise reduction; and aesthetic and wildlife contributions to the quality of life.

**Economic conversion** - By processing the environmental and aesthetic benefits listed above, an economic, as well as societal, value can be determined. In some cases, the environmental benefits will be converted to everyday terms, such as relating the amount of oxygen produced by a certain size tree to the amount of oxy-
A healthy 50-year-old tree will sequester about 120 times more carbon annually than a 10-year-old tree.

**Maintenance costs** - Such maintenance categories as fertilization, mulching, pruning, pest management, cabling and bracing, watering, leaf cleanup and disposal, and the impact of tree maintenance on the overall property will form the basis for this element of the model. This will guide the arborist when formulating and costing out recommendations. Changes in the benefits and costs as a tree matures will allow the tree owner to visualize the long-term impact of tree maintenance costs in relation to the benefits produced during the same period.

Two models will be developed. Each of the two models will have regional specific options for the user. One of the models will be an individual tree model, in which arborists can input data for individual trees. The other will be for all trees on a property. This model, which will be more theoretical than the individual tree model, will demonstrate methods for obtaining maximum environmental and economic benefits from all the trees on a property. This model will allow an arborist to illustrate the need for proper tree placements, as well as maintenance, for maximum economic and environmental value.

The project is expected to take two years. When complete, arborists will have a number of options for accessing the data. Those with computers and modems will have direct access. The models will also be available on computer disk and in paper copy.

This project is being managed by Dr. Christopher Luley, who manages ACRT’s eastern office in upstate New York. Luley, who has a doctorate from Iowa State University, is a member of ACRT’s research division. He will have two full-time graduate assistants on the project and will have access to all of the firm’s resources in its Kent, Ohio, headquarters.

**Funding**

The NAF Trustees are seeking donations to this project. If you would like to donate, you may use the pledge form below. If you have any questions about a donation to this project, or would like more information about the project, call the NAA at 1-800-733-2622.

**NATIONAL ARBORIST FOUNDATION PLEDGE**

**NAME**

**FIRM**

**ADDRESS**

**CITY**

**STATE**

**ZIP**

**YES,** I want to support the modernization, growth and prosperity of commercial arboriculture for **yr./yrs.** My annual pledge is indicated below:

- [ ] $100.00  
- [ ] $250.00  
- [ ] $500.00  
- [ ] $1,000.00  
- [ ] Over $1,000.00

**Signature**

**CHECK ENCLOSED**

**BILL ME**

Please make all checks payable to:

NATIONAL ARBORIST FOUNDATION, INC., P.O. Box 1094, Amherst, NH 03031

*All contributions are tax deductible*
Communities Slash Tree Budgets

The average municipal tree management budget in the United States has decreased significantly when adjusted for inflation over the past eight years, according to a study released by the International Society of Arboriculture Research Trust (ISART). The study says expenditures fell from $4.14 per capita to $2.49 per capita since 1986.

The study makes clear that urban forest managers must search for alternatives to municipal funding sources if they are to maintain healthy, attractive trees that are an asset to their communities, says William P. Kruidenier, executive director of the ISA.

"Decreased funding is thought to be one of the greatest challenges facing urban forest managers today, and our study of municipal tree management programs seems to validate that belief," Kruidenier says. "To offset the effects of decreased municipal budgets, urban forest managers should look for other resources, partnerships and citizen involvement."

Decreased funding is one of many urban forest management trends identified in the study "Municipal Tree Management in the United States," which was conducted last year by Davey Resource Group, a division of The Davey Tree Expert Company, and Communication Research Associates, Inc. Funding for the project was provided by ISART and the USDA Forest Service. To identify trends, results of the 1994 study were compared to a 1986 study of municipal tree management conducted by J. James Kielbaso et al., published in 1988 by the International City Management Association.

The 1994 study surveyed a stratified random sample of municipal decision-makers across the United States to assess the status of their tree management programs. These individuals were asked questions about funding, urban forest management practices and costs, and partnerships with public and private groups. "Municipal Tree Management in the United States" reports averages for municipal tree management programs for the entire United States, as well as average results broken down by region and population category.

Not only have actual dollars allocated to tree care fallen over the past eight years, but the emphasis municipalities place on tree care also seems to have decreased. In 1994, municipalities allocated only 0.31% of their total budgets to tree management, a drop from 0.49% in 1986.

Trees suffer budget crunch

This could indicate that trees are losing in the competition for scarce municipal dollars, Kruidenier says.

"Tree management competes for funding with community services and infrastructure development and repair," he says. "Trees often suffer when limited municipal funding forces a choice between tree care and other municipal services."

The study indicates that many municipalities' tree management programs are becoming less reliant on municipal funds. In 1986, 94% of communities' tree management programs received funding from municipal general funds. Today, that number has fallen to 67%.

Use of general forestry grants as an additional funding source has increased dramatically, from 1% of survey respondents in 1986 to nearly 30% in 1994. Other sources of tree management funding identified in the 1994 study include Community Development Block Grants, the Job Training Partnership Act, special taxes, special assessments and public and private donations.

Kruidenier recommends that communities interested in seeking alternative funding sources contact their state forester or state urban forester for information on national and state grant programs. Donations to urban forestry programs can also be solicited from individuals and companies.

"Urban forest managers can actively seek funding sources and develop programs that both increase citizen awareness of the importance of the urban forest and generate community support for urban forestry programs," Kruidenier says. "One example might be a cooperative tree planting program, in which homeowners are offered public trees at a reduced price. In effect, a cooperative tree planting program allows the homeowner to assume some of the cost of street tree planting."

Only about one-third of survey respondents indicated that their municipal tree management program has a partnership with either a non-profit advocacy group or a private group. More municipalities should take advantage of such partnerships,
When it comes to protecting your tree care company...

does your insurance carrier draw the line?

Although many arborists are experienced at utility line clearance, they are unable to purchase the comprehensive business insurance they need.

We Don’t Draw the Line

CNA, the nation’s premier carrier for customized insurance packages, has a line on tree care companies. We know that arborists who provide dangerous utility line clearance services are experts at what they do. CNA recognizes your training and experience by offering The Arborist Program (TAP) — an insurance package developed especially for your business! Your company is eligible for this comprehensive program if it generates at least 50% of its receipts from utility line clearance and has three or more years of experience.

TAP was designed by experts in the arborist industry. It includes property and liability coverages that are important to all tree care companies as well as optional coverages that let you customize your program to fit the needs of your individual business.

Line Up Now

Find out more about TAP and the specialized coverages that are available as part of this program.

- Pesticide/herbicide applicator
- Underground storage tanks
- Auto pollution liability
- Limited pollution liability

Call your independent CNA agent today for more information...
or call 1-800-CNA-6241 and ask for a free brochure!

The CNA Insurance Companies underwriting this program will vary according to coverage. These companies include: American Casualty Company of Reading, Pennsylvania; Continental Casualty Company; National Fire Insurance Company of Hartford; Transcontinental Insurance Company; Transportation Insurance Company and Valley Forge Insurance Company.
Kruidenier says.

"Citizens can be an important part of managing the urban forest," he says. "They influence how community dollars are spent. If they view the urban forest as important and integral to community life, they are more likely to support its funding." However, Kruidenier cautions that municipal tree managers should carefully plan such volunteer programs so that they don't become more costly than beneficial.

**Average tree management costs**

Average tree management costs can be significant - and may exceed municipal funds allocated to tree care. In 1994, average tree-related expenditures per municipality for parks, streets, public grounds, cemeteries and nurseries totaled $399,387, while the average municipal tree management budget was $279,307. The most expensive tree maintenance cost in 1994 was tree removal, at an average expense of $481.79 per tree removed. Chemical application was the least expensive, at $42.41 per tree application.

In 1994, 21% of tree management expenditures were spent on contracted work.

Under their 1994 budgets, more than half of the municipalities responding to the survey prefer performing work in-house rather than contracting work. When adjusted for inflation, wages for in-house work have remained fairly constant over the past eight years.

About 66% of municipalities provide some training for employees. Training programs listed by respondents include seminar/workshops, safety training, technical training, in-house/on-site training, arborist materials, videos, tree maintenance training, beautification/landscape seminars, reference publications, parks and recreation seminars and pest control training.

Municipalities can help decrease tree management cost by developing planned, systematic maintenance programs that improve the overall urban forest health and allocate resources where they are needed most. The study reveals that, over the past eight years, more municipalities have implemented systematic management programs. In 1986, 67% of respondents reported that they did not care for trees on a systematic basis. In the 1994 study, only 37% of respondents reported caring for trees on an emergency/as-needed basis.

Study respondents see maintenance expenditures and funding as continuing challenges in the future. Top challenges municipal administrators expect to face in the next 10 years include general funding, funding for maintenance, public support and general tree maintenance.

These challenges can be met through a comprehensive, planned program, Kruidenier says. "The key to successful urban forest management is a comprehensive program that involves the community," he says. "If municipalities make greater efforts to build partnerships in urban forest management, they can increase citizens' understanding and enjoyment of the urban forest, while improving its health and the benefits it provides to the community."

"Municipal Tree Management in the United States," along with MuniTree™, a PC-compatible electronic report of the results, is available free of charge. Reports may be requested by calling 216-673-9515, ext. 375, or by writing to Kellie Ferguson, ISA Municipal Tree Management Project, Davey Resource Group, P.O. Box 5193, Kent, OH 44240-5193.

---

**Put Fertilizer Where It’s Supposed To Be!**

**In the tree’s root zone.**

The Webster TC-300-2 root zone feeder system makes tree and shrub fertilization fast and economical.

**Drills and fills in one operation.**

Drilling a 1-½" diameter hole up to 15" deep, the unit dispenses 4 ounces of granular fertilizer, reaching over 90% of the tree's feeder root system.

**Fast, easy to use**

Lightweight and portable, the Webster packs two horses of punch to drill and fill up to 8 holes per minute. Unit can also dispense drainage materials such as pea rock to improve aeration.

**Dealers: Sell the hottest unit in the Green Industry this spring.**

WEBSTER

Webster Corporation
210 17th Street SW
Jamestown, ND 58401
(701) 252-0875

©Webster Corporation, 1995

Please circle 48 on the Reader Service Card

TCl

TREE CARE INDUSTRY - APRIL 1995

26
At Wood/Chuck Chipper Corporation, we are interested in the future of our environment.

The Ecochip, Wood/Chuck's latest patented design, processes waste chips into a more desirable consumer product for mulching and/or composting.

The Ecochip chips, then grinds, creating a smaller, more uniform chip, especially with palm fronds and stringy woods such as elm.

- It Just Makes Dollars & Sense-
  Wood/Chuck—Setting the standard for 26 years
  1-800-269-5188
  Wood/Chuck Chipper Corporation

-It's ECOLOGICAL
  - The Ecochip slashes time, fuel and labor - reduces dumping fees and frequency of trips.
  - The Ecochip increases truck capacity up to 50%.
  - The Ecochip has the proven design and reliability of the drum style chipper.
  - The Ecochip has NO waste product - only PROFIT.
  - Used by leading right-of-way contractors nationwide.

-It's ECONOMICAL

Wood/Chuck—Setting the standard for 26 years
1-800-269-5188
Wood/Chuck Chipper Corporation

Please circle 50 on the Reader Service Card
TREE CARE INDUSTRY - APRIL 1995

P.O. Box 400  Shelby, NC 28150  704-481-1465
Rising Interest Rates . . .

You have to ask yourself, "Why does the Federal Reserve Board continue to increase interest rates?"

Simply put, they want to slow down the economy, thereby avoiding inflation. Businesses and consumers will pay a higher interest rate on money borrowed, and so, will spend less.

If you borrow money from the bank for a major equipment purchase, you’re going to pay a higher interest rate on the loan. It is even more insidious than that: the manufacturer, distributor, supplier, dealer will also pay higher interest rates on their borrowing, then pass the costs on to you.

Your profits can be squeezed by the added costs unless you raise rates. But if you raise rates, you lose sales. If this is the case, the Fed has accomplished its goal. They’ve slowed you – the economy – down.

Running a business often seems to be an endless series of tough decisions. Putting higher interest rates aside for a moment, you still might be better off purchasing a replacement for that worn out stump grinder, truck or chipper, or even buying the equipment needed to outfit an additional new crew.

While not always clear-cut, factor in the impact of a reduction in repair costs, the increased efficiencies, and increased production a new replacement unit can have. What effect will the increased sales volume generated by the new crew have on your fixed administrative overhead costs? It might possibly increase your profit dollars if you don’t have to add additional office staff. Also, consider the additional tax impact the interest will have. While no one wants to pay higher interest rates, their impact can be reduced with careful planning and cautious actions.

. . . and a Soft Landing?

If you follow the financial markets at all, you are used to seeing the market rise on one piece of news and fall on another. And often, neither makes sense. Keep in mind that what the market does is not always tied to the economy itself.

However, there does seem to be a consensus out there that we have officially come out of the recession with the desirable "Soft Landing." This soft landing means that we have successfully pulled out of the recession without a boom and without inflation. Now, the economy can continue to grow at a sustainable rate of a few percentage points per year, and (hopefully) the Fed can stop raising interest rates. This leaves a little more discretionary income in consumers’ pockets – income they can spend on services like yours. At the same time, your payroll, equipment, advertising, and general overhead will remain manageable, hopefully putting a little more discretionary income in your pocket!

Put Receivables to Work!

We called an investment banker in Washington and asked him what a business could do to reduce borrowing and avoid paying higher interest costs.

He responded: "Reduce unnecessary spending, cut costs to improve profits, hence cash flow, and most importantly, reduce the days outstanding on receivables. Receivables represent the best source of working capital. Production and administrative overhead costs go on daily. Dollars flow out every day to cover these expenses. Each day an outstanding receivable can be shortened, means less borrowing for working capital will be required."

He went on to say: "Experience has shown time and again, that a totally satisfied customer will pay the bill promptly. Making sure the customer is satisfied and has received value means you borrow less money because receivables are paid sooner. You will have more of your own cash, rather than the bank’s, to pay your daily expenses."
May 3 & June 4
N.J. Society of Certified Tree Experts Seminar and course for tree expert exam Contact: Gary Lovallo, 908-591-1113

May 5
Hands-On Cabling Workshop, Don Blair Theodore Wirth Park Minneapolis, Minn. Contact: Dave Nordgaard, 612-588-6770

June 10
Michigan Forestry and Park Assn. Tree Climbers Jamboree Michigan State University Campus Contact: 517-482-5530

July 8-10
NADF Discovery Workshop Nebraska City, Neb. Contact: 402-474-5655

October 3 & 4
Veg. Management for Rights-of-Way Carbondale, Ill. Contact: Jane Evers, 618-453-5683

November 16-18
TCI EXPO '95 Indianapolis Convention Center Indianapolis, Ind. Contact: 800-733-2622

THEY'RE TALKING ABOUT

ArborGold™ Software and it's friendly—Portable—Hand-Held Tool!

Translates handwriting to print instantly!

Down loads to PC! Runs in MS Windows!

Take ACTION today!

Tree Management Systems 1-800-933-1955

Please circle 46 on the Reader Service Card
I have been climbing for many years, and have run a tree company in northern Minnesota for over a decade. I routinely climb and prune large trees. For most of those years and most of those trees, I probably climbed the way you climb, using fairly conventional techniques. When a better technique came along, I would try it, incorporating it into my climbing if it worked for me. Even so, I went home tired every night.

Four years ago, something was introduced into my life that was more challenging and more fatiguing yet more rewarding than climbing trees: our first child. My wife and I now have two children who are four and two. Becoming a parent compelled me to refine my climbing techniques so that I have energy to devote to my family at the end of the day.

I participated in the International Tree Climbers' Jamboree last year in Halifax as well as other regional jamborees before that. I observed many different techniques and a lot of new and interesting equipment. Partly because of these experiences and through talking with other climbers, I have adapted several caver's vertical rope techniques into a new technique which I call Single Rope Climbing, or SRC for short. I find it to be quite an energy-saver.

There are many variations to this technique, but I will only talk about two that I find particularly useful - the traveling false crotch and the inchworm technique.

The foundation of the system is the rope. The climbing rope will be anchored at the tree base. I use a choker and rescue Figure-8 for this, but you can also tie the rope off with a running bowline. I use a shot pouch and throw line to place my climbing line in a suitable tree crotch.
One of the nice characteristics of this system is that you can climb on either end of the line, and it doesn't matter if it runs through several crotches. I want the excess climbing line trailing out of the Figure-8 so that if an aerial rescue were needed, my ground man could "unlock" the rope and lower me.

Select a rope anchor point so that the rope runs at an angle away from your tree trunk and is visible to the climber. I like using an orange rope for better visibility. Although regular rope will work fine, I use a 7/16-inch, 7800-pound static line, stiffer, stronger and with less stretch than normal climbing line. The other end of my rope, the climbing end, is weighted with either a rope bag or a chain saw. Also, a ground
person can hold it for the first 10 to 15 feet of my ascent.

The primary component of the ascending part of the system is a device known as a Mar-Bar. The Mar-Bar is a mechanical ascending device that the climber uses with his feet. The immediate advantage of the device is that, like footlocking, it allows you to use the largest and strongest muscle group in your body, your quadriceps (legs).

The Mar-Bar does not secure the climber in case of a fall, but only assists in ascent like your feet do in footlocking. My Mar-Bar can be disassembled so that I can remove it from the line and place it in a small pouch once I am crotched in, but it could also be left on the rope and lowered later along with other hardware. The Mar-Bar should be tethered to the saddle front D-rings so that it trails the climber, should he decide not to use it. I prefer a tether made of shock cord because it doesn’t tangle around my legs when I raise them.

A second component forms the basis of the ascending system I call the traveling false crotch. It consists of a handled ascender with a pear-shaped screw link (see November 1994 TCI, “Making the Right Connections” by Don Blair). From this link, I attach a small rescue pulley through which I run a second climbing line secured by a conventional taut line hitch or Blake’s hitch to my saddle. I attach a short section of climbing line to the top of my ascender and tie a taut line or Blake’s above the ascender with the other end for a second means of support. The distance between ascender and D-rings can easily be adjusted to suit individual arm lengths for ascending.

The beauty of this system is that any time during the ascent, the climber can easily remove his feet from the Mar-Bar, unclip the tether from his D-rings and attach it to the handle of the ascender. Then he can limb walk or even descend. I place my ascenders in a pouch, but they can also be left on the access line and retrieved later when the line is removed. For that matter, chain saws and other equipment can be hung on the access and retrieved later from the ground. 
Usually to go from ascent to descent on a rope walking system with a single rope or secured footlock technique with a double rope, one must make some major alteration to the system. With this system, one can immediately work the tree, return to the Mar-Bar and ascender, reattach and resume climbing. I feel that the second point of protection is imperative, and I recommend the Blake’s for its holding characteristics.

I use the traveling false crotch method when I know that I will be working the tree before reaching the highest crotch and I want the immediate advantage of the crotch that the single rope runs through. Also, I don’t have to spend as much time on the perfect line toss, so long as I get the height I want and hit a suitable crotch for climbing. Also, there is no rope-on-tree friction damage to my ropes.

The inchworm is a caver’s term for a method of climbing a single rope using a Mar-Bar and chest ascender. To use a chest ascender, you must wear a chest harness. The chest ascender is an automatic, hands-off self-belaying device. Once the climber reaches the canopy, he may wish to free climb, using hands and feet. Remember, the Mar-Bar will travel with the climber because, as with the previous technique, it is tethered. The chest ascender advances automatically. If the limbs get farther away, the climber simply slides his feet into the Mar-Bar and resumes inchworming.

I recommend a second point of attachment with the inchworm setup - I use a quick link attached to my D-rings and secured around my line under the chest ascender. That way, if the chest ascender fails, the link jams into the Mar-Bar and arrests my fall.

I use the inchworm method when I have a long ascent up to the final tie-in point. I am able to work limbs that are near my path of ascent. I find this the ideal climbing method for tall excurrent trees like white pine, Norway spruce, etc., where all limbs originate from the main stem, provided the rope is anchored so that it is in full view.

When I must go higher with either system, I secure myself with a lanyard, retrieve and advance my climbing line, reattach, and continue ascending. With the inchworm, if you anticipate the need to go higher, you must bring a second rope with you.

The two methods can be combined to provide even more effortless climbing and accessibility. To work, one removes his feet from the Mar-Bar, and takes the rope out of the chest ascender.

I’ve presented the SRC system to several seasoned climbers, and it’s received nothing but positive responses. For more information on the Mar-Bar and vertical technique, see the book, On Rope by Padgett & Smith, or contact Mike Gardner at Rope Step Company.

Jeff Jepson operates Beaver Tree Service in Longville, Minnesota.

Share your innovation with TCI and we will pay you $100. Submissions become the property of TCI and are subject to editing for grammar, style and length. Color or black-and-white photos are welcome. Entries must include the name of a company and a contact person or they will not be considered for publication.

---

**Never has so little done so much for so many**

Fungisol® debacarb fungicide controls or suppresses 30 economically important cankers, wilts, blights, and declines that have devastated shade trees for thousands of years.

When applied with the Mauget® micro injection system, Fungisol enters the tree through the smallest opening in the industry. It translocates via the xylem and phloem to suppress/control pathogens and help restore tree health.

Fungisol is the only fungicide specifically developed for micro injection and the suppression or control of many tree diseases. Call your Mauget distributor today.

**Pathogens Suppressed or Controlled By Fungisol**

- **Anthracnose**
- **Anthracnose Canker**
- **Botryodiplodia**
- **Cephalosporium (Oak Decline)**
- **Botryosphaeria Branch Canker**
- **(Cedar Branch Canker)**
- **Cephalosporium Ulmi (Elm Wilt)**
- **Ceratocystis Canker**
- **Ceratocystis Dieback**
- **Ceratocystis Ulmi (Dutch Elm Disease)**
- **Coryneum Blight**
- **Coryneum Canker**
- **Cytospora Canker**
- **Diplodia Tip Blight**
- **Dothiella**
- **Fusarium Moniliforme**
- **F. Subglutinans (Pine Pitch Canker)**
- **Fusarium Penciosorum (Mimosa Wilt)**
- **Fusarium Wilt**
- **Kabatina Branch Canker**
- **Leptographium Canker**
- **Melanconium Dieback**
- **Nectria (Tubercularie) Canker**

J. J. Mauget Company
2810 N. Figueroa Street
Los Angeles, CA 90065
1-800-TREES-RX

Please circle 25 on the Reader Service Card

TREE CARE INDUSTRY - APRIL 1995
Paul S. Asplundh Is Elected Chairman Of The Board

The Board of Directors of the Asplundh Tree Expert Co., the international utility line clearance company based in Willow Grove, Pennsylvania, has elected Executive Vice President Paul S. Asplundh as Chairman of the Board. He succeeds Robert H. Asplundh, who retired as an officer of the company but continues to serve on the Board of Directors.

Paul S. Asplundh is a 38-year veteran of the company and son of the late Griffith Asplundh, one of the three brothers who founded the company in 1928. Paul began working for the company full time in 1956 following two years of service in the U.S. Air Force and earning his bachelor’s in business from Penn State University. He spent his first four years managing the development of Asplundh’s growing aerial lift department in Jenkintown, Pennsylvania, and later working on and overseeing tree crews in Maryland.

In 1960, he was appointed manager of Asplundh operations throughout the state of Virginia and was elected vice president two years later. He returned to headquarters in Pennsylvania in 1965 and has worked as an executive and sponsor of several field divisions and office departments ever since. Paul has served on the company’s Board of Directors since 1967. He is also a past board member for Abington Memorial Hospital in Abington, Pennsylvania.

Conference To Address Trees, Legal Issues

Government agencies, utilities, private contractors and landowners are often involved in litigation from incidents relating to trees. Consequently, the rights, duties and liabilities of these entities with regard to trees is an area of increasing interest and is the topic of “Trees, People, and the Law,” a conference to be presented by The National Arbor Day Foundation May 21-23, at Arbor Day Farm’s Lied Conference Center in Nebraska City, Nebraska.

A group of nationally recognized experts will speak on a variety of tree-related legal issues. The featured presenter is Victor Merullo, senior partner in the law firm of Merullo, Reister & Swinford Co., I.P.A., of Columbus, Ohio. He studied horticulture at Ohio State University and wrote the first publication devoted to the law of trees and trends in this area of the law.

For more information, call The National Arbor Day Foundation at 402-474-5655 or write to P.O. Box 81415, Lincoln, NE 68501-1415.
Shindaiwa, Inc., has expanded its line of gasoline-powered chain saws with the lightweight yet powerful Model 357. This durable, compact saw is designed primarily for arborists; it will also be attractive to landscapers and many homeowners. The compact unit is equipped with a top handle for easy trimming in trees of all heights and limb sizes. It has exceptional balance for maximum cutting efficiency and comfort, and hangs bar-down to keep free of entangling limbs or branches. Weighing just over 8 pounds, the 357’s 35.5 cc/2.1-cubic inch engine develops 2.0 horsepower. Shindaiwa, Inc., 11975 SW Herman Road, Tualatin, OR 97062. Phone: 503-692-3070.

Alamo systemic fungicide, which fights oak wilt and Dutch elm disease, is now available in 10-milliliter micro-injection units that are easily inserted into a tree’s flare roots. The new application system drastically reduces application time. Alamo is most effective when used preventively and also may be used to prolong the life of trees with as much as 20% crown loss. It is also available in quarts for macro-injection. Ciba Turf & Ornamental Products, P.O. Box 18300, Greensboro, NC 27419. Phone: 910-547-1160.

Brushking offers four rugged, powerful brushcutter models for professional groundskeepers and landscape contractors. All models can use line trimmer heads for grass and weed cutting and edging. The larger models can be fitted with 10-inch or 12-inch circular saw blades for heavy-duty brush cutting and clearing. All models use reliable Tecumseh 2-cycle engines with solid state ignition. Parts and repairs can be obtained from more than 16,000 service centers throughout the nation. The company also carries a full line of fertilizer injectors as well as a wide variety of pruning tools. Brushking, 4173 Domestic Ave., Naples, FL 33942. Phone: 813-643-6368.

You KAN-DU large or uprooted stumps
- Designed by tree men for tree men.
- Self propelled - Fast walk travel speed.
- Except for cutting wheel, all work done with hydraulics - including steering.
- Cuts over 30° above ground & 24" below ground.
- Excellent stability for going over curbs, steps, & sidehills.
- Powerful 24 H.P. engine.
- Will out perform all grinders on the market today in all around grinding.

Don't say you can't, say you KAN-DU!
ARBORIST/SALES REPRESENTATIVE
BARTLETT TREE EXPERTS is seeking
career minded individuals to join America’s
leader in scientific tree care. We currently
have SALES REPRESENTATIVE openings
in DE, MD, DC, PA, VA, NC, GA, MA, NH,
VT & CT.

We offer:
* On-going training by scientists of the
  Bartlett Tree Research Laboratories
* Superior compensation package, including:
  Medical Benefits, Company Car, etc.

If you have tree care sales experience or have an
aptitude for sales, combined with a degree in
ornamental horticulture / arboriculture / urban
forestry, or a related field, please send or fax a
detailed resume to:

Alan H. Jones
1185 Five Springs Road
Charlottesville, VA 22902
Fax: (804) 971-1331
(For DE, MD, DC, PA, VA,
NC & GA)
or
Jim Ingram
P.O. Box 177
Osterville, MA 02655
Fax: (508) 428-2398
(For MA, NH, VT & CT)

BARTLETT TREE EXPERTS
Caring for America’s Trees Since 1907

HELP WANTED

Salespeople, shade tree climbers and plant
health care technicians. If you have the knowl-
dge, ability and desire to earn your living in one
of these positions, you owe it to yourself to call
us now. We are a professional, suburban Bos-
ton firm with top-notch employment
opportunities. Lueders Tree & Landscape, Inc./
Environmental, Inc. Phone: 508-359-9905.

Arborist/sales representative - Greentrees,
Inc., is a reputable, full service tree and lawn
care company. We practice the highest quality
arboriculture through education, knowledge and
innovation. We are looking to hire an individual
with a background in arboriculture or related field
to join our team of professionals. Honest, moti-
vated, positive people with a sincere
appreciation for arboriculture and drive for suc-
cess may apply to Greentrees, Inc., 966
Livernois Road, Troy, MI, or call 810-589-7919.

To aid in soil aeration Northeastern Associates
manufactures the D200ARF Injector Unit to
depth root feed plants and ensure that your
trees receive the three basic elements for
good tree health: Water, Oxygen, Nutrients,
etc. in one simple process. Just use the D200ARF
Injector or add the ARF-KIT to your present
depth root feeding unit to:
A. Inject Water directly into the root zone.
B. Inject Air (oxygen) directly into the root
zone to aid in soil aeration.
C. Inject Nutrients directly into the root zone.

INVESTMENT FIRM SEEKING TO INVEST IN
EXISTING ARBORIST COMPANIES

COMPANY PROFILE:
* Strong Management Team;
* Proven Track Record;
* Profitable Operations;
* Established Local Presence;
* No Regional Preference

THOSE INTERESTED, PLEASE CONTACT:
MATT SODL
TAMKIN CAPITAL PARTNERS, INC.
11755 WILSHIRE BOULEVARD, SUITE 2350
LOS ANGELES, CA 90025
TELEPHONE: (310) 575-9447
FAX: (310)473-9250

Please circle 28 on the Reader Service Card
Are you Ready for Tree Care in the 21st Century?

To really be prepared to do business in the 21st Century -- just a few years from now -- perhaps you should hire a cutting edge team of marketing, legal, and financial consultants. Or, join the National Arborist Association. We've done the hiring for you. NAA experts have already developed free or low cost programs that offer:

- Safety and Technical Training
- Liability and Health Insurance
- Management Programs
- National Publicity
- Compliance with Federal Regulations
- Marketing and Advertising
- Employer Certification

NAA members are ready for the future with inside information on everything from plant health care to navigating ever-increasing government regulations to planning for the future.

Plus, members can network with other, non-competing tree care companies -- large and small -- to get their peers' point of view on everything from pruning ornamentals to cutting overhead; from haggling sales to negotiating contracts. We're even developing an on-line bulletin board to facilitate computer networking among members and our staff.

When you're in business, you can count on only one thing: nothing stays the same. To stay competitive, tree care companies must plan for next year and the next century. And the NAA should be a big part of your plans. Join today for just $150 for the first year. Put the NAA to work for you today, and you'll be ready for the 21st century.

CALL 1-800-733-2622

The National Arborist Association
P.O. Box 1094
Amherst, NH 03031-1094

Leading Commercial Arboriculture into the 21st Century.
 Experienced tree care professionals. Fast growing, quality-oriented company in the Chicago North Shore looking for top-notch foremen to manage crews, equipment and shop. Ideal candidates will have a minimum of 3 years experience, CDL and strong desire to achieve. Excellent compensation & benefits package. Please send resume and contact the Kinnucan Company, 28877 Nagel Ct., Lake Bluff, IL 60044. Phone: 708-234-5327.

Arborist/salespeople - Established, aggressive and fast growing full service tree care company in northern Virginia looking for highly motivated individuals to expand our current client base. Top pay and benefits to qualified individuals. Send resume to Fairfax Tree Service, P.O. Box 1365, Fairfax, VA 22030 or FAX: 703-591-2241.

Semi-retired arborist/sales representative - Greentrees, Inc., is a reputable, full service tree and lawn care company looking for an experienced individual with sincere appreciation for arboriculture and interested in complementing and supporting a highly qualified professional team of arborists through sales consultation and education. If you are interested and qualified, apply to Greentrees, Inc., 966 Livernois Road, Troy, MI or call 810-589-7919.

The Care of Trees is a full service tree care firm with offices throughout the metropolitan areas of Chicago, New York City and Washington, D.C. We are one of the most progressive, well-equipped companies in this industry and offer excellent benefits. Our ever expansive mode seems to constantly require personnel to fit into new positions which include production, plant health care and sales. We consider safety, quality, productivity and communication to be important attributes of proper tree care. If you believe the same, then send your resume to Jackie Mateja, c/o The Care of Trees, 2371 S. Foster Ave., Wheeling, IL 60090. Phone: 708-394-4220.

Attn. professional tree persons: Tired of the cold? Palm Beach County's tree health professionals are looking for motivated, knowledgeable people. If you are thinking of moving to SE Florida, give us a call. CDL a plus. Drug-free workplace. 407-968-1045.


Climbers needed - Full service Denver-area company has immediate openings for quality, safety-conscious trimmers; year-round employment, good pay, full benefits package. Call or write to Mountain High Tree Service, 5717 W. 11th Ave., Lakewood, CO 80214. Phone: 303-232-0666.

Sales rep/climbers - Central New Jersey. Smaller tree service seeking experienced, motivated sales rep. This is an opportunity for someone who is productive and values customer satisfaction. Min 2 years experience in sales with some experience doing tree work. Climber positions also available. Excellent pay. Phone: 908-658-8909.

The Haupt Tree Company, a leader in tree care since 1957, is seeking an arborist for a sales position. A degree in arboriculture (or related field) and/or tree care sales experience is necessary. We would prefer an individual who has had several years field experience as a climber and plant health care technician. Our compensation plan rewards motivated, hard-working people. If you are interested in becoming a member of a highly respected company that emphasizes team work and professionalism, please send your resume, with references, to The Haupt Tree Co., Box 156, Sheffield, MA 01257.

Carlton Model 7200 combines power and cutting dimensions that no other grinder can match. Model 7200 utilizes a two stage V belt and PolyChain GT drive system which offers many advantages over other types of drive systems:

- Highly Efficient - Puts the Power to the Stump, not up in heat.
- Proven - These systems have been in the field for years, not tried and abandoned.
- Simple - No expensive pumps, motors, radiators, fans or hoses to cause downtime and added expense.
- Low Maintenance - No costly schedule of fluid and filter replacement.
- Engine Compatible - No extra heat, causing engine overheating and premature failure.
- Hard Working - Doesn't lose power after cutting a few stumps or refuse to work on a cold morning.
- 1 Year Warranty - At Carlton we believe in what we sell and so will you.
Arboristic climber/foreman - Shearon Environmental Design Co. is looking for a career-minded, self-motivated individual to set up, run and expand a tree care division at our Princeton location. We are a large design/build/maintenance firm with an extensive client base. Qualifications: minimum 5 years experience, drug-free, CDL B class, basic knowledge of tree physiology and strong sales skills. Excellent salary and benefits package commensurate with experience and qualifications. Send resume to Shearon Environmental Design Co., 337 Route 31, Hopewell, NJ 08525. Attn: Dennis Metz.

Chief executive officer. Private investment firm is searching for an executive level professional to lead/manage a full service national arborist company. Qualified candidates, with a minimum of 15 years experience (5 years in senior leadership position) in the arborist industry, should have achieved significant results in acquisitions, financings, strategic planning, budgeting, as well as with business management and development. Outstanding opportunity to lead a "growth through acquisition" business venture. Excellent salary and benefits package with significant equity participation. For confidential consideration, please send resume with salary history to Tamkin Capital Partners, Inc., 11755 Wilshire Boulevard, Suite 2350, Los Angeles, CA 90025. Phone: 310-575-9447; FAX: 310-473-9250.

Climbers/arborist trainees. Arbor Care is looking for career-minded, motivated individuals with an eye for quality, interested in relocating to Atlanta. We offer career advancement, a benefits package & more. Please send resume to Arbor Care, 1965 Davis Lane, Marietta, GA 30062. Phone: 404-916-1680; FAX: 404-916-1724. EOE & a drug-free workplace.

We would like to thank everyone who helped make our winter recruitment program a smashing success. We added 6 people to our sales team and 3 plant health care specialists. Presently, we are still seeking additional PHC specialists and, although all sales positions are currently filled, we do anticipate additional opportunities this season due to our growth in existing markets and our opening of new markets. If you enjoy working in an entrepreneurial environment - where excellence is cultivated through employee development and outstanding performance is amply rewarded - and you are interested in working in Connecticut, lower New York, central or northern New Jersey or eastern Massachusetts, please send your resume to: HR Dept., 360 Adams Street, Bedford Hills, NY 10507. EOE by choice.

POSITION WANTED

Searching for the right purchasing mgr?

Time for a new regional representative?

26 years extensive experience in lt. med. h.d. trucks - 11 years experience purchasing trucks and equip for 4 corp. tree cos. Loyal team player. J.R. McNulty, Box 125 Big Canoe, Jasper, GA 30143. Phone: 706-268-3078.

FOR SALE

Hardware and software, by an arborist for the arborist. For more information about the industry's best selling package, call or write Arbor Computer Systems, 117 Weston Road, Westport, CT 06880. Phone: 203-226-4335.


DOGGETT'S NATURAL RESOURCE

DOGGETT'S NATURAL RESOURCE is formulated for professional application into the root area of trees & shrubs. 90% of tree feeder roots are in the top 2 ft. of soil, and the majority of them within 6 inches. This is the area to be treated with the recommended method of subsoil hydro-injection.

FOR TREES

An organic based compound to improve the soil and stimulate root growth through enhanced nutrient uptake.

Detailed explanations of rates and methods are available.


ANDY'S TRUCK CENTER INC.
WEST PALM BEACH, FLORIDA

REACHING NEW HEIGHTS FOR 1995

ASPLUNDH LIFTS
- 1987 Ford F-700 w/125 Chip Dump
- 1985 Chevy C-70 w/1985 LP-50 Chip Dump
- 1980 Int'l S-1800 DSL w/LR-45 Chip Dump
- 1981 Int'l S-1800 DSL w/LR-50 Chip Dump
- 1984 Ford F-800 w/1984 LP-50 Chip Dump
- 1981 Int'l S-1800 w/LR-50 Chip Dump
- 1990 Ford F-700 DSL w/LR-50 Chip Dump

HI-RANGER LIFTS
- 1986 Chevy C-70 w/52 Hi-Ranger Chip Dump
- 1983 Chevy C-70 w/48 Hi-Ranger Cab Shell, Chip Dump

75' AERIAL UNITS
- 1978 Mack 6x4 w/2000-75 Holman (11,000 miles) Diesel, Flat Bed

REACH-ALL HD 50-55 / HD 50-60
- 1988 Ford F-800 DSL w/APS2 Reach All Single Bucket, Flat Bed

AERIAL LIFT OF CONN.
- 1985 GMC 7000 w/AL-50 Chip Dumps, Pony Motors (New Cables)

ALTEC
- 1988 International S-1200 w/AA600 (1988), DT 466, 5x2 FS, AB, SC, Reach Single Bucket, Cab Shield

LOG GRAPPLE UNITS
- 1983 Mack M465ST w/Basco 8000 (Diesel)

TECO
- 65 Teco (1) 87 Ford LN-8000, Flat Bed
- (Several) Teco Saturn 50's on 85-87 Ford F-7000 8000 Chip Dumps, 56 Overcenter Also 1986-88 GMC Diesels

Call or Fax For Spec's & Prices: (407) 965-6666 / FAX (407) 965-6844

So ya say ya split a lotta firewood Pilgrim!
Well if ya don't uza Super Split, ya betta find yassel anotha line a work!

GFX CORPORATION
200 Recreation Park Drive
Hingham, MA 02043-4220
(617) 740-0350 Fax (617) 740-0355

Please circle 6 on the Reader Service Card
What is common sense is also the law. OSHA Standard 1910.331 states that employers must provide appropriate, documented training to any tree care employee working within 10 feet of an energized electrical conductor. And that is just the first of several regulations with which you may have to comply. ANSI Z133.1-1994 dictates very specific training and operations regulations. Plus, there’s a new OSHA standard, 1910.269 which takes effect January 31, 1995. It makes sense - both business sense and common sense - to meet these requirements. But how?

NAA Training Makes Sense.

The National Arborist Association has done much of the work for you! Our Electrical Hazards Awareness Program offers you a simple, economical and practical way to give your employees the training they need. This program enables you to comply with OSHA 1910.331 and ANSI Z133.1-1994, and starts you on your way to compliance with OSHA 1910.269.

Like all NAA Training Materials, Electrical Hazards Awareness is easy to use and easy to apply. The program is self paced, to put your employees in control of meeting their own goals, and presented by you, to keep you in control of your business.

For more information about EHAP, or any NAA program, or to order, call our toll-free hotline, or send/fax the coupon below.

National Arborist Association
P.O. Box 1094, Amherst, NH 03031-1094
Fax: (603) 672-2613
1-800-733-2622

☐ YES I’m ready to provide my personnel with training in Electrical Hazards Awareness.

☐ I’M interested in the EHAP program. Please send additional information.

Send Me EHAP Programs for ______ enrollees, at $ ______ each*. Enclosed is $ ______

Bill my □ Mastercard □ Visa Number: __________________________ Exp. Date: ______

Contact/Credit Card Holder Name: __________________________________________

Company Name: __________________________________________________________

Address: _________________________________________________________________

City: __________________________ State: ______ Zip: ______

☐ Please send me membership information.

*RETAIL: $135.00 per enrollee; MEMBER DISCOUNT PRICE: $85.00 per enrollee. Please add $5.50 shipping and handling.

Please circle 27 on the Reader Service Card
Looking for a used chipper or stump grinder? Call the Midwest’s chipper/stumper supermarket. Nearly all makes & models in stock. All units are fully reconditioned and ready to work. Financing is available. Call Alexander Equipment Co. at 708-268-0100 for a complete listing.

Chlorosis tree medicine. 100% effective in oaks, many deciduous trees. 10-minute application. Guaranteed for iron chlorosis. $29/qt treats 16 trees. Postpaid. Pin Oak Specialist, 7310 North 39th Terrace, Omaha, NE 68112. Phone: 402-455-9384.


Bucket trucks, chip trucks, trailer chippers, cranes, skidders, track machines and custom-built units to meet your individual needs. For sale or rent. Mirk, Inc. Phone: 216-669-2000.


Skyworker - Largest new parts inventory, used equipment inventory, major service facility in U.S. Phone: 706-376-3192. FAX: 706-376-6701.

ArborWare is the industrial strength business software that lets you control virtually an unlimited number of customer transactions, estimates & proposals, invoices, A/R, statements, A/P, IPM, work tickets, routing, appointment scheduling & call-backs, inventories and more. Includes tree/shrub, chemical disease & pest libraries. Mouse support, LookUp & Help Windows. You demand quality, performance, safety and reliability in your field equipment. So why settle for less in your office automation system? Step up to increased productivity with ArborWare today. Call 1-800-49-ARBOR.

Work smarter, not harder and make '95 a banner year. Get valuable information on federal regulations, business management, training and more. Call 800-733-2622 for more information.

Windows software designed for arborists. Comprehensive, supported for over 10 years. Call or write for free demo. 610-970-7955, Quad Tech, Inc., P.O. Box 643, 191 S. Keim St., Pottstown, PA 19464.


Used equipment - (1) Morbark Eeger Beever w/Ford BSD444, 87-hp diesel engine; (1) Morbark Eeger Beever w/Hercules gas engine; (1) Morbark Model 20/36 EZ Chipper w/Ford 6-cylinder gas engine; (1) Morbark Model 175 w/Hercules G-1500 gas engine; (1) 16' Asplundh JEY drum chipper w/Ford 6-cylinder gas engine; (1) 1977 Asplundh JEY drum chipper w/Ford 8-cyl gas engine; (1) 1982 Chipmore 12" drum chipper w/Ford 6-cylinder gas engine; (1) 1986 Chipmore 12" drum chipper w/Ford 6-cylinder gas engine; (1) Vermeer 620 chipper w/Kohler 20-hp gas engine; (2) Mighty Bandits (6" diameter) w/Wisconsin 30-hp gas engine; (1) Model 90 Brush Bandit w/Perkins 42-hp diesel engine; (1) 1984 Model 100 Brush Bandit w/353 Detroit diesel engine; (1) 1988 Vermeer 1250 w/Perkins 80-hp diesel engine; (1) 1993 Model 150 Brush Bandit w/Hercules diesel engine; (1) 1993 Model 1700 Tree Bandit whole tree chipper w/250-hp Cummins diesel engine. For further information, contact Bandit Industries, Inc., 6750 Millbrook Road, Remus, MI 49340. Phone: 517-561-2270; FAX: 517-561-2273.
TREE CLIMBING IS FOR TRAINED PROFESSIONALS

If you can't get to it safely you can't prune it or otherwise work in a tree. NAA's video orientation to ROPES, KNOTS & TREE CLIMBING provides:

• Essential information on the ropes, snaps, carabiners and saddles used.
• Basic instruction in the knots required for tree climbing.
• Various climbing techniques used for ascending into and working in trees.

All of the appropriate elements of the ANSI Z133-1994 are included.

NAA's video training programs make actual on the job training much easier. After viewing an NAA video, a trainee can go into the field with basic background information. Repetitive viewing of NAA's video training program reinforces the training provided in actual work situations.

Attendance sheets provided with this program allow an employer to easily document employee training which meets OSHA requirements. Tests are also provided to measure employee comprehension.

TO ORDER ROPES, KNOTS & TREE CLIMBING
simply photocopy this coupon and fill in the requested information or call the National Arborist Association Hotline at 1-800-733-2622.

NAA member: @ $60 ea. = Enclosed: $
Non-member: @ $90 ea. =

Company Name
Name of Individual Ordering:
Title: Phone:
Address: State Zip:
City: Exp. Date:

[ ] MasterCard [ ] Visa Card Number: 

The National Arborist Association
PO Box 1094, Amherst, NH 03031-1094
Phone 1-800-733-2622 Fax (603) 672-2613

Please circle 27 on the Reader Service Card

TREE CARE INDUSTRY - APRIL 1995
CARBIDE TIPPED STUMP CUTTERS

HODGES STUMP CUTTER

NEW SMART POCKETS

ECONO

R.H. STUMP CLAW

L.H. STUMP CLAW

THREADER STUMP CUTTER

#756122

LONG BOLTS

2 1/8"

SHORT BOLTS

1 3/4"

REGULAR (STD.)

B-11-C

B-1-C

STUMP CLAW POCKETS

ROUNDB REVERSIBLE POCKETS

Buy from the Original Manufacturer

Border City Tool & Manufacturing Co.
23325 Blackstone Warren, MI 48089-2675
810/758-5574 800/421-5985 810/758-7829

Now Manufacturing and Distributing "STUMP CLAW TEETH"

Please circle 11 on the Reader Service Card

FOX MFG.,  P.O. Box 6
Lowell, IN 46356

(219) 696-1440

The Affordable Portables

Models with 18, 20, 22 & 25 HP Kohler engines

30" stump removed
12" deep 9 minutes

SAFETY FEATURES

- Guards on belts.
- Full control, positive balance, visual contact of work.
- Both wheels automatically lock when working machine.
- When disengaging cutter, cutter stops and does not free wheel.
Package deal - C-60 chip box dump w/corner crane, Bandit 250, 1620 Super Jr., Chev 1-ton, 454, 4x4, dump. In Phone: 812-867-6045.

Video program offers information on ropes, knots and tree climbing to make on-the-job training easier. Call 800-733-2622 for more information.

Big John 80-inch tree spade on Ford LTS tandem. 230 Cummins, 7-speed Fuller, 70% rubber, $9000 in major repairs just completed, current DOT inspection, $35,000. Unit is ready to work and make you money. Phone: 203-429-9972.

Tree service for sale. One of the Northwest's finest. Come to Clark County and experience being 60 days backlogged. Est. 1980, ladder truck, chipper, chip trucks, stump grinder, lots of tools, shop and office, municipal government contract. Established, strong customer base. For a portfolio, please contact Box H, P.O. Box 1094, Amherst, NH 03031.


'83 Ford w/Hi Ranger 57' W.H. dump chip V-8, $25,000; '83 GMC w/TECO 55' W.H. dump chip V-8, $25,000; '77 Ford w/Hi Ranger 53' W.H. dump chip 6-cyl engine and new paint, $18,950; '74 Ford w/Holan crane/bucket, utility bed, great for log loading; $7995. Several diesel IH with lift all 56' W.H. dump chips, $27-30,000. S.J. Rose Co., 317-634-4499, Indianapolis.

Tired of Chipper Knives eating up your profits?

Try Sharp Chipper Knives
Low cost, high quality knives for all models.

EAGER BEAVER BRUSH BANDIT 100/200

7 1/4" x 4" x 3/8" $23.40 ea.

ASPLUNDH, CHIPMORE, VERMEER
12" x 3" x 3/8" $19.95 ea.
16" x 3" x 3/8" $24.00 ea.

1-800-221-5452
MA (508) 568-9292

Please circle 36 on the Reader Service Card

Forestry Body Builders Since 1944

Capacity From 12 2/3 to 35 Cubic Yards!

STANDARD FEATURES:
60" in Height
Double Panel Tailgate
3 Die Formed Corrugations in Front & Side Panels
All Galvanneal Construction
40% More Welding for Added Strength

High Security Lock Rods on Tool Box Doors
Chassis Available . . . And More!

OPTIONS:
Removable Aluminum Roof • Dump-Thru Lift Gate
Customized Heights • Extra Tool Boxes

SCHODORF
TRUCK BODY & EQUIPMENT CO.
885 Harmon Avenue, Columbus, OH 43223
Call Tom Siefert at: 1-800-288-0992

1988 Vermeer 1250 diesel brush chipper, well maintained, in excellent shape, $9650. Phone: 216-543-8787.


FOR RENT


Classified ad rates: $50 per inch ($45 NAA members; 1-inch minimum), payable in advance, due the 20th of the month two months prior to publication. Send ad and payment to:
Tree Care Industry
P.O. Box 1094
Amherst, NH 03031

TCI Classified Ads Get Results!

Call 800-733-2622 today!
HYDRAULIC STUMP ROUTERS

Powered by KOHLER

FINANCING AND LEASING AVAILABLE

HIGH-SPEED LOG SPLITTERS

ALL STUMP ROUTERS
Self Propelled

WALK BEHIND

25 HP
Wheels Extend to 52" for Towing.
Wheels Move in to 34" for Going Through Gates.
Will Work Hooked or Unhooked from Towing Vehicle.

18 HP - 20 HP - 22 HP - 25 HP

Designed to Perform - Built to Last - AND WE CAN PROVE IT!

Please circle 22 on the Reader Service Card

LIST OF ADVERTISERS

Reader Service No.* Reader Service No.*
1. ACRT, Inc. ........................................ 27. NAA Programs ................. 41, 43
6. Andy's Truck Center, Inc. ........... 40 32. Plastic Composites Corporation ........ 29
7. Arbortech .................................... 33. Preformed Line Products ........ 34
8. Bandit Industries, Inc. .............. 19 34. Rapco Industries, Inc. ........ 32
14. CEI ........................................ 36 40. Stihl, Incorporated ........... 13
15. CNA Insurance Companies .......... 11 41. Stamarack Clearing Inc. ........ 45
16. CNA Insurance Companies .......... 25 42. TECO, Inc. ...................... 17
17. The Doggett Corporation ............ 39 43. Tamkin Capital Partners, Inc. ........ 36
18. DowElanco .................. Center Insert 44. Tamkin Capital Partners, Inc. ........ 36
22. Hodges Manufacturing Co., Inc. .... 47 48. Webster Corporation ........... 26
23. Jameson Corporation .................. 45 49. Western Tree & Landscape Supply .......... 29
25. J.J. Mauget Company ............... 33 51. Yale Cordage, Inc. ........... 48
26. National Arborist Association ....... 37

* Circle this number on the Reader Service Card for more information on this advertiser.

TREES CARE INDUSTRY - APRIL 1995
A Small Price To Pay

Timely maintenance could have prevented a near tragedy

By Raymond C. Matz Jr.

It was just another day on the job. We had a couple of easy take-downs and everything went smoothly. The weather was great for an August day: low humidity and a temperature of about 75, with very little wind. As I got into the office that evening and settled in, I noticed we had an emergency call about a fallen tree. I thought back on the week’s weather of no wind and no rain. It was the first fallen tree that I’ve heard about that had nothing to do with the weather.

The customer who had called about the fallen tree has been on our grounds maintenance program for about five years and was made aware of the dangerous condition of the tree on several occasions by our company. I received the same response every time. “Take it down next year.”

Well, there was no next year this time! It was a 70-foot cherry tree, towering over a neighbor’s back yard and a children’s swing set. The tree was located on a small hill in the back where annuals were planted every year. The constant watering of the annuals each year eventually took its toll on the tree. Fifty percent of the tree was dead. Between the dead limbs in the upper canopy and the decaying roots and lower trunk, its days were numbered!

That evening I made arrangements to take care of the tree first thing the following morning. When we arrived at the job and went to the back, I could not believe what I saw. The tree had fallen directly on top of the neighbor’s swing set and crushed it! The first thing that came to mind was, “I’m glad the kids were not in the yard!”

As we started the removal, I noticed the stump...well, not quite...I noticed where the stump was supposed to be: it was completely rotted out. No stump removal needed here!

Later that day, after completing the job, I ran into the next door neighbor, where the tree hit the swing set. She told us that she and the kids were out in the yard at the time the tree fell. It was like something you see in the movies, she said. The tree fell very slowly. It took about 20 seconds until it hit the ground.

“That gave me time to get my youngest child off the swing set,” she explained.

As we continue tree service in the Philadelphia area, we make it a point to bring this incident up to all customers who have any damaged trees on their property and yet tell us to “take care of it next year.”


Do you have a story for From the Field? TCI will pay $100 for published articles. Submissions become the property of TCI and are subject to editing for grammar, style and length. Entries must include the name of a company and a contact person or they will not be considered for publication. Articles and photos must be received by the first day of the month for the following month’s issue.
WHEN THIS TREE IS TALL ENOUGH TO NEED TRIMMING, THIS EQUIPMENT WILL STILL BE AROUND TO DO THE JOB.

You demand a lot from your equipment: the highest productivity, the least maintenance and the longest life possible to keep costs down. That's why Altec's complete line of tree care equipment is designed to operate under every condition. We make them tough, we make them to last and we make them to fit your needs.

Like our LRIII-55, with working heights up to 60 feet, giving you superior reach and performance plus easy access for greater productivity from work crews.

The simple design of our LB650A aerial device offers low life cycle costs and a new hydraulic system for maximum versatility in bucket positioning and tool usage.

And our Whisper Chipper, with its proven record for durability, makes short work of the competition.

If you'd like more information on Altec equipment, call 1-800-232-7373, or ask anybody who uses one. You'll find our reputation for reliability and longevity grows with every customer.
The rear mount is so compact, this vehicle can maneuver with ease through tight spaces and give additional working height.

50 foot side reach work can be performed without leaving the roadway.

Aerial Lift Inc. is an authorized dealer and distributor of Greenlee Fairmont Textron®—Fairmont "Limb-Lopper"™ Tools. For tools, parts or service call us on our 800 numbers.

AERIAL LIFT, INC.
P.O. Box 66 • 571 Plains Road • Milford, Connecticut 06460-0066
PHONE USA: 1-800-446-5438, In CT: 1-800-245-5438 • FAX: (203) 878-2549
Please circle 2 on the Reader Service Card
REGULATING TREE GROWTH TO ENHANCE YOUR SYSTEM MANAGEMENT

Rights-of-way managers and municipal foresters arrive at work each day driven by one goal: ensure customer satisfaction by keeping the electricity flowing. One tree limb falling into a power-line triggers telephone calls from angry consumers, complaints from large industrial customers and thousands — sometimes millions — of dollars in lost revenue and repair costs.

To prevent this, electric utilities spend more than an estimated $1.5-billion annually trimming trees. This makes tree trimming one of the largest line items on a utility's vegetation management budget.

With Deregulation prompting sweeping changes at utilities, those that prosper will be ones that use proven cost-cutting measures to shave expenses and become more efficient. The challenge: gain efficiency while lowering costs.

Now a revolutionary technology can help decrease long-term line-clearance costs, while allowing you to manage more trees on your system annually. Tree-growth regulators (TGRs), used in conjunction with proper trimming practices, can help improve line-clearance management making it easier, more reliable and more cost effective.

With New-Generation TGRs, the technology is easier than ever to apply, with little or no negative long-term effects on trees. Economic computer models, extensive field trials and scientific research prove that TGRs work.

Read on to learn how TGRs can benefit your line-clearance program, your budget, your company and most of all, your customers.

TREE-GROWTH REGULATOR (TGR)

A specially designed compound applied to a tree to control crown (branch) growth by gently suppressing the tree's gibberellin production—the hormone that causes cell elongation. This reduces a tree's growth and its biomass without significantly altering its appearance.
TG Rs can be used with many different tree species in various situations. However, certain target trees show the greatest return on a utility's or municipality's TGR investment.

One primary TGR candidate is the cycle-buster tree. Cycle-busters require trimming prior to scheduled maintenance. Last year at Ohio Edison, crews treated 2,500 cycle-busters, those trees that can't be effectively trimmed to provide four years of clearance.

"We are convinced that TGRs are another tool we can use to control cycle-busters and reduce biomass," says David Bienemann, Ohio Edison forest technician. Ohio Edison isn't the only utility with cycle-buster challenges, though. Just ask Paul Johnston, senior forester at one of the country's largest investor-owned utilities - PECO Energy Company.

"Thirty-five percent of the 1.25-million trees we manage on our system are fast-growing sycamore, silver maple and Norway maple - cycle-busters we must manage," Johnston says, analyzing the utility's 1,200 miles of transmission lines and 25,000 miles of distribution lines.

Managing cycle-busters solves an immediate problem. It also provides visual evidence to skeptics who need to "see the technology work to believe it." Utilities and municipalities that have used TGRs on cycle-busters find that the word spreads fast. As PECO Energy Company found, use also spreads rapidly. "Currently, we are using TGRs in 80 townships in our service area," Johnston explains.

Besides controlling cycle-busters, TGRs are used on other tree species in a variety of circumstances:

**Priority circuits.** Hospitals, major industries and municipal customers can't be without power. Uninterrupted power is too vital to these organizations to risk tree-related interruptions and outages.

**Property owner concerns or local laws.** And, TGRs can help with trees that receive less than one full cycle of clearance because of property owner concerns or local laws. That's why forester Paul Hurysz started using TGRs at Houston Lighting and Power Company (HL&P), which services the fourth largest city in the United States.

"While a chain may only be as strong as its weakest link, a circuit's reliability is only as good as the closest tree to the line," Hurysz explains.

"Unfortunately, five percent of our customers don't allow us the 10-foot clearance we need. This

**Expensive trims.** A rear-lot tree or any large-crowned tree that requires 45-plus minutes to trim translates into hefty labor, equipment and biomass disposal costs - an obvious budget strain. Using TGRs on these trees saves time and money.

**Remote areas.** Mike Watson, forestry supervisor at The Potomac Edison Company, uses TGRs in many areas. He finds one use particularly helpful: "A single cycle-buster found under a powerline in a farmer's front yard can be a great expense. TGRs allow for a predictable trim cycle - even extended trim cycle - letting us defer trimming and save in travel costs to remote agricultural areas." Watson says.

---

**Treated (right) vs. untreated maples.** Predominant cycle-buster species like maples, oaks and sycamores are ideal TGR candidates.

---

**APPLICATION: CUTLESS TREE IMPLANTS**

- For maximum translocation, implants are placed squarely into buttress root flares.
- Squirting water into the hole helps implant dissolve and aids uptake.
- Compartmentalization begins within a few hours.
- Callus growth seals the wound in one to two growing seasons for most species.

---

**APPLICATION: PROFILE 25C**

- Soil injection or soil drench applied around the tree's base depend on uptake through the roots and tissues of the root collar.
- Even distribution around the tree's base provides optimal control.
- Roots absorb TGR during active growth and then it's translocated.
F

forced to pare its tree trimming expenses closer to the bone, Penene's forestry department focused its efforts on extending — or at least maintaining — trim cycles of fast-growing cycle-buster trees. Olenik knew longer cycles on problem circuits would free up line-clearance dollars for other projects. And it has.

"Not only does the TGR pay for itself, but the savings from TGRs allow us to do some of the projects eliminated during earlier budget cuts," Olenik notes.

Mike Watson, forestry supervisor at The Potomac Edison Company, agrees. "Because of TGR use, we're closer to meeting our desired maintenance goals with the same dollar level," he says.

Though a few utilities still use bare-root trees for power lines, most use young, fast-growing trees that can help reduce outages. And with the potential to help us keep down outages."

Reducing tree growth in the crown helps prevent branches from growing into lines, which prevents the outage, saves in repair and lost business costs and ensures a high level of customer service.

By reducing the need for hot-spotting, TGRs help prevent outages. Paul Johnston, senior forester at PECO Energy Company, explains, "TGRs definitely reduce the potential of fast-growing trees interfering with powerlines."

John Ellis, vegetation management manager at Texas Utilities Electric, agrees, "TGRs have the potential to help us keep down outages." It's no secret that reducing outages and ensuring customer satisfaction are important in the utility industry. As Bill Rees, supervisor of vegetation management at Baltimore Gas & Electric, notes, "Although we are vegetation managers at one level, ultimately we prefer to consider ourselves outage reducers."

Reducing outages will always be a primary goal for utilities. Steve Hallmark, corporate forester at Puget Sound Power and Light Company, explains: "Most companies have a long-term goal of trying to reduce outages. To achieve that, they must continue developing new programs and finding alternatives to trimming such as TGRs."

TGR use does not guarantee an outage-free system. However, it does complement trimming operations to help ensure the fewest possible interruptions from fast-growing and overgrown trees contacting valuable lines.

The bottom line is that TGRs provide confidence to establish and maintain a reliable trim cycle with the added benefit of a more consistent budget analysis.

"On first thought, you might think that TGRs are going to help us trim costs. Although that can happen in some instances, the bigger benefit comes from the ability of TGRs to either establish or help you maintain a cycle that fits your utility," explains DowElanco TGR Specialist Bill Massey.

With more efficient system management thanks to TGRs, utilities can spread limited budget dollars effectively. According to Chuck Olenik, system forester at Pennsylvania Electric Company (Penene), TGRs free additional dollars for more projects.

The greatest trim-

merging-related expenses involve time, equipment and labor. The next biggest cost is chipping and disposing of the biomass. TGRs can help lower both these expenses by controlling branch and leaf growth in treated trees.

In 1990, ACRI, Inc. — environmental specialists from Kent, Ohio — joined DowElanco in a three-year biomass study to look at prominent U.S. tree species such as Norway and silver maples, and willow and water oaks. Evaluating treated vs. untreated trees, researchers recorded trim and chip times; measured the longest shoots; weighed and compared removed biomass. The results — published in the Journal of Arboriculture — showed up to a 75-percent biomass reduction in treated species. On average, height and growth were cut in half, while trim and chip times were cut by more than half.

"The real cost savings from a decrease in biomass comes from the amount of money you save in labor costs."

Continued on page 3
The first users of TGRe - utility foresters who helped pioneer the technology - knew that applying TGRe led to better-managed systems. They had firsthand experience managing more trees annually.

Problems came in selling TGRe to management. These foresters simply didn't have quantifiable "numbers" upper management required to make cost/benefit analysis. The utilities also lacked a rigorous methodology for determining the impact of TGRe on their systems. Because economic analysis and comparison varied within the industry, there was no reliable way to compare the economic benefits of TGRe from utility to utility.

DowElanco took these problems seriously and found a solution.

With biomass study results in hand, DowElanco and ACR, Inc. went to work developing a powerful computer program that projects yearly costs associated with normal line-clearance activities. Economist Dr. James Brickley from the Simon Graduate School of Business Administration at the University of Rochester also assisted with the project.

The goal: determine how TGRe affect a utility's bottom line over a 15-year period. TGRe decisions could then be based on both short- and long-term information.

The result: the TGRe Economic Model.

This flexible computer model allows foresters to experiment with different trimming and TGRe programs. For example, Carolina Power & Light Company (CP&L) used the model to generate five-year plans for each of the utility's six divisions and to justify TGRe use to management.

"Costs could be adjusted for every division at CP&L," explains Kitty Nappen, division forester. "This made it really easy to use, and impressed management."

While the economic model helped CP&L expand its TGRe program to other divisions, it was instrumental in Santee Cooper initiating a TGRe program.

"Thanks to the economic model, I could show management the cost savings of using TGRe over the next 15 years. It would have been more difficult to get approval without the economic model," reports Bob Richens, supervisor of right-of-way management at the South Carolina utility.

Even though TGRe add up-front costs to a utility program, Paul Johnston - senior forester at PECO Energy Company - knows that long-term benefits can reduce future tree trimming costs. "For relatively low costs today, we can have significant savings from TGRe in the future," Johnston notes.

The TGRe Economic Model computes short-term costs and long-term savings. It estimates costs and savings specific to each utility by plugging in known variables.

"The economic model is very user-friendly," notes Web Brasher, DowElanco TGRe specialist. "Vegetation managers appreciate the program's flexibility and convenience. But they especially like the ability to run different scenarios to determine exactly how TGRe can benefit them based on their specific tree species, trim cycles and budgets."

Using the TGRe Economic Model is an ongoing process for many utilities that want to track their TGRe costs, while keeping a close watch on the results. Forestry Specialist James Watkins from Carolina Power & Light Company explains: "We plan to use the model once a year to evaluate that year's lot (TGRe project). And to estimate what we can expect in the next few years," Watkins says. Thanks to the TGRe Economic Model, utilities and municipalities can now determine the financial impact of TGRe on their systems - a feat appreciated by foresters and management.
Continued from page 2

Technology has assisted utilities and municipalities.

"TGRs have helped utilities control tree growth with much less labor," Sterrett confirms.

And that labor savings starts with the amount of trimming needed.

"Where you may have had 10 bushels of chips, you now have one," says James Watkins, Carolina Power & Light Company, explaining how TGR use has benefited his company.

Increasing expenses and a growing concern for landfill space has brought biomass reduction to the forefront of utility vegetation management. Utilities dispose of an estimated 50,000 tons of chipped biomass each day, or 13-million tons each year. While some utilities can give away their chips to customers or local businesses, other utilities pay up to $50-plus per ton to dispose of tree trimmings at landfills. The scientific biomass study proves TGRs can help significantly reduce the volume of a community's solid waste and the costs associated with hauling and disposing these chips.

"TGRs will save utility foresters money in reduced trimming and dumping costs," reports Richard Abbott, president of ACRE Inc.

Money saved from decreased trimming time and disposal costs frees up funds for other vegetation management projects like tree-replacement programs, additional trimming or more TGR applications.

Chuck Olenik from Penelec took a look at the specifics. To trim an average urban tree costs Penelec about $55 to $60, including labor and machinery expenses. Applying Cutless* tree implants adds $15 to $20 during the initial year, putting total costs for a treated, trimmed tree at $70 to $80. Cost savings comes a few years later when trimming, biomass disposal, man-hours and associated costs are much less for treated trees than untreated trees, he says.

Mike Watson, forestry supervisor, The Potomac Edison Company, puts it in perspective.

"The greatest benefit of TGRs is cost savings in one form or another."

"Where you may have had 10 bushels of chips, you now have one."

“Look how the untreated tree has grown into the powerlines. The residents won't be happy when we need to trim their tree but not their neighbor’s TGR-treated tree.”

And that's good news, because competitive pressures continually remind utilities and municipal foresters that customer satisfaction is the name of the game.

“We're pleased with the uniqueness we’ve gained from using TGRs,” notes Duke Power right-of-way supervisor Ronnie Wall, who started using TGRs in the Winston-Salem area in October 1993. Even though Wall knew they wouldn't see TGR results for 12 to 18 months, he has treated 4,513 trees across nine circuits. “We’re improving our right-of-way practices by incorporating TGRs into the program and continuing to ensure safe and reliable service to our customers.”

New-Generation TGRs provide subtle, uniform regulation. To the untrained eye, differences between treated and untreated trees are barely noticeable. But people who know a tree has been treated with TGRs may notice denser, darker green leaves. Less trimming may also cause the tree to look thicker and healthier, which research indicates may be true.

In extensive trials, visual evidence shows TGRs help trees hold up better under water and disease stress conditions than untreated trees. Forestry Specialist James Watkins at Carolina Power & Light Company supports this.

“We’re on a year-and-a-half trim cycle in our program,” Watkins says. “It becomes even more significant,” Wells explains.

Researchers also have something to say about TGRs. According to Dr. Tim Davis at Texas A&M University Research and Extension Center, it’s important to remember that trees under powerlines are in an unhealthy situation to begin with because of trimming. TGRs have the potential to reduce trimming, says Davis, explaining that drastic alternatives to TGRs include tree removal or dramatic topping.

Dr. John Sterrett, USDA-researcher, also praises TGRs in comparison to topping. “TGRs have allowed trees to retain their general shape. By slowing the growth of the tree, especially young trees, less trimming is needed thus giving the trees a healthier, more natural appearance.”

Besides the advantages TGRs offer above ground, research shows there’s also an advantage underground. TGR-treated trees have an increased root-to-shoot ratio which explains some of the visual benefits of TGR-treated trees found in stressed conditions. According to Dr. Gary Watson of the Morton Arboretum in Lisle, IL, balance between the crown and root system is important to a tree. “The root system must be able to fully support the crown in order for a tree to remain healthy,” Watson says.

During a presentation at the 70th International Society of Arboriculture Conference, Watson told the group of gathered arborists, “Our research has shown that Profile 2SC tree-growth regulator is something that can improve root development and tree health.”

Tree health isn’t the only benefit from New-Generation TGRs according to Dr. Tim Davis who sees Cutless as a new and useful TGR formulation. “This technology is easy to introduce on a system, and it appears promising for utilities,” he adds.

Dr. William Chanev from Purdue University agrees: “I’ve seen tremendous progress in application methods, formulations, dose rates, and the understanding of tree response to treatment with TGRs since I began research on these compounds in the early 1980s. TGRs have a bright future as a tool for the electric utility industry in its tree maintenance program.”

TGR technology has attracted the attention of top researchers across the country. While it’s already known that tree-growth regulators help trees stay out of powerlines, continuing research can shed light on the other benefits of TGRs.

In this era of deregulation, you must be competitive. TGRs can help. Although TGRs don’t replace trimming, they can reduce the costs associated with labor, trimming time and biomass disposal.

The bottom line is TGRs help manage a system better. Just ask foresters who use them. They'll tell you this easy-to-use technology works. Researchers and users continue to confirm it.

That's why DowElanco is committed to its tree-growth regulator products: Profile 2SC tree-growth regulator and Cutless tree implants. By providing TGR specialists, technical representatives, extensive TGR support materials and continued research, DowElanco is showing that it's serious about the business of helping utilities efficiently and effectively manage their line-clearance activities.

Learn how TGRs can improve your system by completing the attached reply card, calling the 1-800 number listed on the last page of this article, or by contacting your local DowElanco representative. You'll get the answers you need to help you make the TGR decision.
TGRs: TECHNOLOGY AT WORK

YEAR 1
- Trim/treat with a TGR
- Reliable cycle is established

YEAR 3
- Less biomass than untreated tree
  - less trim/chip time
  - lower disposal costs
  - longer machinery life
  - higher crew production
- Long-term cost savings
- Improved tree vigor from less trimming
- Worker safety advantages

YEAR 5
- Cycle in maintenance mode
- Cycle busters remain controlled
- Fewer tree-related outages
- Customer satisfaction up from no/fewer crew visits
- Effects of regulation subtle

Focus-group research conducted by DowElanco confirms Ross’ findings: Homeowners like the fact that TGRs reduce the amount of trimming needed in the future. Research also supports landowner interest in fewer property visits by crews as a result of TGR use. But Duke Power didn’t need research to know its customers were happy with TGRs. Last summer Duke Power received TGR media exposure in 17 area newspapers, including a paragraph in USA Today and a mention on local television news. Angela Ballard, company spokesperson, relates customer response in the utility’s 20,000-square mile media coverage area, “We’ve
THE NEW GENERATION TGRs

PROFILE 2SC

Profile 2SC tree-growth regulator is DowElanco's soil-applied TGR that is easy to use and results in little concern for physical tree injury.

Profile 2SC contains the active ingredient paclobutrazol. The water-based carrier in Profile helps ensure subtle, uniform regulation.

Applicators find Profile easy to mix and quick to apply. The soil injection and basal drench methods also offer year-round application opportunities, something the industry appreciates.

“Soil application is what we've been looking for from day one. Everybody wanted the technology, and now we have it,” notes Dick Wells, TGR consultant, retired system forester with PECO Energy Co.

SUMMARY

- Soil-applied TGR allows for two options
- Easy-to-mix and apply
- Quick applications
- Little concern for physical tree injury
- Allows for year-round application
- Subtle and uniform regulation

CUTLESS TREE IMPLANTS

The Cutless tree implant is DowElanco's easiest-to-use TGR that provides negligible impact on the tree.

The advantage: Cutless requires very limited equipment. A drill, water bottle and implant is all you need.

Another benefit of this TGR is nearly year-round productivity for crews. With its active ingredient - flurprimidol, Cutless can provide subtle and uniform regulation with minimum impact on the tree.

“Cutless is our product of choice. It's very clean, very quick and appears to be, so far, cost effective,” says George Geissler, system forester at Public Service of Oklahoma.

SUMMARY

- Trunk-applied TGR (closed system)
- Easiest to use
- Negligible impact on the tree
- Requires limited equipment
- Allows for nearly year-round application
- Subtle and uniform regulation

For more information, complete the attached reply card, call 1-800-352-6776 or contact your local DowElanco representative.