Here's why Disc Chipper users are going back to Drum Chippers.


Do you need to chip everything?

If you’re like most disc owners, you’ve been chipping more of what was once sold as firewood (or left for people to take), and have watched your dumping fees go up and your productivity go down. Your crew spend more time running to the dump, clearing jammed chutes, washing down radiator screens and waiting for overheated engines to cool.

The Asplundh Whisper Chipper not only offers lower operating costs, but extremely low life cycle costs. And, how many used disc chippers have you seen for sale after ten years of service?

Are you spending more on fuel?

At 70- to 120-feet per minute, it takes a disc chipper almost three times longer than a Whisper Chipper to chip six-inch material. How much more fuel do you think it uses? And, with the engine running longer, you’re looking at shorter engine life and, again, higher operating costs.

The Asplundh Whisper Chipper saves time, fuel, and, most important, money.

Are you paying hydraulic mechanics more?

The chart below compares replacement parts for a Whisper Chipper with those of a popular disc chipper.

<table>
<thead>
<tr>
<th>Part</th>
<th>Whisper Chipper</th>
<th>Disc Chipper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chippers</td>
<td>Blades, Belts, Cutter Bar</td>
<td>Blades, Belts, Anvil</td>
</tr>
<tr>
<td>Hydraulic System</td>
<td>none</td>
<td>hydraulic tubes, fittings, hoes, motors, filters, tanks, flow dividers, O-rings, seals, (over 30 hydraulic components alone)</td>
</tr>
<tr>
<td>Feed System</td>
<td>none</td>
<td>Feed wheels, feed teeth, bearings, bushings, feed wheel springs, feed wheel yokes, etc., etc.</td>
</tr>
</tbody>
</table>

Whisper Chippers have far less downtime. That translates into more time making money and less spending it.

Are you ready to think about a drum chipper?

The Whisper – designed, built, used and backed by Asplundh – carries a one-year warranty honored by the most extensive service in the industry. Plus, with full-sized Whispers starting at $8950, you’ll keep your investment at its lowest and your yield at its highest.

Come back to the Asplundh Whisper Chipper... the chipper that keeps paying dividends for up to 20 years.

Asplundh Ability. See it in action.

1-800-331-1038

ASPLUNDH MANUFACTURING
100 Asplundh Avenue
Creedmoor, NC 27522

See us at TCI Expo
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COVER PHOTO:

Preventive maintenance finds and corrects potential problems before they become expensive and dangerous. Here, a mechanic tightens hydraulic fittings on an aerial lift.
"Are you going?"
"Going where?" the man asked. "Why, to TCI EXPO '91 in Columbus," I replied.
"Why do I want to go there? Every tree meeting I go to has seminars and a trade show. Like everyone else in the tree business, I go to lots of meetings. What makes this one so special? What can there possibly be that I haven't heard somewhere else or seen at some other show?"

Those are perfectly logical and simple questions and my answers are just as simple.
1. TCI EXPO '91 will be the largest trade show ever assembled totally dedicated to the tree care industry. There will be more of everything as well as many products that haven't been displayed at regional trade shows.
2. As the premier trade show in the industry, booths at TCI EXPO '91 will be staffed with people that have all the answers to your questions.
3. You are thinking about needs for next spring. The suppliers are anxious to get orders on the books for '92. The timing is perfect.
4. Admission to the trade show is free!
5. The seminar program has two tracks: management and field operations.
6. The speakers are new and exciting.
7. The subject matter is pertinent.
8. The whole concept was developed by arborists for arborists.

Do you know the definition of luck? Luck is when opportunity meets preparedness. This is your chance to get prepared for the opportunities that you will have in 1992. Let luck shine on your parade. Come to TCI EXPO '91.
Profitability in stump cutting? Talk to Jim Klinger, Laguna Beach, CA. With one $6,000 Vermeer Stump Cutter investment a few years ago, he netted more than $20,000 in nine months! And, in the first 21 months of operation, he cleared more than $50,000!*

“I had no idea I would get so much performance out of a little stump cutting machine,” says Klinger. “These Vermeer machines (he owns several now) have really helped me make good money without the constant frustration of breakdowns and repairs. That’s why I’m so interested in adding your brush chippers to my business.”

Thank you, Mr. Klinger. We couldn’t have said it any better.

*includes all parts, repair costs.

Vermeer Manufacturing Co.
New Sharon Road
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800-829-0051
In Iowa (515) 628-3141

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Ask us about our Full-year parts warranty.

“THE DIGGIN’ DUTCHMAN”
Vermeer
The Quality Shines Through...

Please circle 47 on the Reader Service Card
Preventive Maintenance

It's The Key To Keeping Equipment Operating Efficiently

By TCI Staff

Sometimes we take equipment for granted and expect it to function day in and day out without problems. Unfortunately, no matter how well equipment is cared for, there will always be the potential for mechanical failure.

Proper maintenance, like checking fluid levels, tightening a few loose bolts and pumping a few shots of grease, can greatly reduce the possibility of machinery failure, however. Knowing the different methods of care and the limitations of equipment will lessen the potential for breakdown and prolong the life of your equipment.

According to Larry Petrasek, equipment manager for The Davey Tree Expert Company, preventive maintenance reduces the chance for accidents and breakdowns. Without a regular maintenance program, you might have to pay later in terms of major repairs. If you expect your equipment to function properly, you must take care of it properly.

The equipment Davey provides for jobs is expected not only to perform a certain function, but to perform in a reliable and cost-effective manner. Davey concentrates on preventive maintenance rather than “reactionary” maintenance to spot potential problems before they turn into expensive or dangerous situations. A preventive maintenance program has

---

**Daily check list:**
- Lower cables for wear and tension
- Lower cylinder rod assembly for weld cracks
- Lower cylinder lock valve for holding with boom up and weight in the basket
- Upper cylinder lock valve for holding with boom up and weight in the basket
- Boom knuckles for looseness and cracks
- Booms for cleanliness, leaking hydraulic fluid

**Weekly check list:**
- Lower boom isolator and fitting for looseness
- Knuckle hoses for chafing and lubricate
- Leveling cables for rust and wear, lubricate
- Bolts in turret and boom for tightness
- Hydraulic fluid for proper level and foaming
- Outrigger bolts for tightness
- All welds
- Grease all fittings

**Monthly check list:**
- Remove trash and debris
- Look for hydraulic leaks
- Adjust controls
- Hydraulic hoses for wear
- Hydraulic cylinder rods
- Decals and placards
- Hold down strap and rubber pads
- Operation of PTO, pump, and lift functions
- Lock (holding) valves
- Fasteners
- Welds
- Fiberglass booms

**Twice yearly check list:**
- Oil filters
- Hydraulic oil
- Re-torque critical bolts
- Pressure settings
- Boom dielectric test

---
DISC CHIPPER

Daily check list:
- Condition of knives
- Chipper belts & pump belt
- Engine oil and engine water
- Air cleaner
- PTO engagement
- Debris in radiator
- Hydraulic oil level

Weekly check list:
- Installation of hydraulic motors
- Feed plate anvil
- Battery
- Tires
- Lubricate PTO as needed
- Power unit belts
- Feed spring adjustments
- Grease feed wheel bearings (only 1-shot)
- Check for loose bolts, nuts & parts
- Grease chipper bearings (purge)

Monthly check list:
- Hydraulic system pressure
- Wear on discharge & deflector
- Wear on infeed roller slide or pivot mechanism
- Wear on chipper hoods

Every three months:
- Check hydraulic pressure with pressure gauge
- Disassemble and clean hydraulic flow divider
- Change hydraulic filter every 400 hours or 3 months, whichever comes first
- Check wear on feed plate anvil & feed wheel teeth
- Check wear on chipper disc

Many benefits:

a. Properly working equipment means customers will be satisfied knowing that the equipment is doing the job they are paying for;
b. Equipment that is in good working condition and is well utilized will operate at a much lower cost per hour;
c. Equipment that functions every day will promote company morale. A crew with reliable tools can concentrate on their work without having to worry about lost time due to broken equipment;
d. Proper maintenance translates into fewer dollars spent on repairs. According to Ed Johnson, vice president of safety and equipment at The Davey Tree Expert Company, it can also mean a prolonged useful life for equipment. While the normal life for a truck in the tree industry is six to eight years, an effective preventive maintenance program can make a truck last eight to nine years.

Petrasek also says maintenance is imperative to increase the life of a piece of equipment. "We have an overall fleet age of 13-1/2 years," Petrasek says. "This shows that the overall effort (of maintenance) by the employees is very good."

Equipment maintenance means a better return on your investment, particularly at an employee-owned company like Davey. If a piece of equipment is abused, the cost will affect every employee in the company.

David Adante, chief financial officer, says the employees treat the equipment and vehicles like their own. "There's a greater sense of pride and responsibility in the fact that The Davey Tree Expert Company is employee-owned," he says. "And that piece of equipment - whether it's a car, pickup truck or some other piece of equipment - well, those things represent not only the company they work for, but it's their company and they take a great deal of pride in that."

Employees learn from day one that maintaining equipment will affect their safety and their investment. They are urged to carefully read the manufacturer's maintenance manual as a basis for guidelines and pay attention to service intervals, proper service techniques and particulars unique to each piece of equipment.

It is much better to find equipment problems before starting to work since repairs are always more costly after the equipment is on the job. A routine daily inspection of equipment only takes a few minutes. Checklists and videos on equipment maintenance detail what employees should watch for in their daily and weekly maintenance checks. For example, the daily maintenance checklist for a truck includes inspecting the fuel, oil, coolant, brakes, parking brake, lights and tires. The weekly inspection list for a truck includes checking the hoses, belts, batteries, air filter, tires and clutch pedal.

An important part of the maintenance program is employee feedback, Adante says.

"They know what works best, which types of equipment are easiest to operate, which are most durable," he says. "What they say is valuable. Oh, sure, you get bias on occasion, but in general, the feedback from field operations on what we're doing, how to improve, and how to spec..."
Mauget® micro-injection fits today's environmentally-conscious arborist. Capsules of premeasured and scientifically designed Mauget nutrients, insecticides and fungicides keep shade trees healthy and beautiful without spraying. Mauget micro-injection is a closed system. No spraying, no drift. EPA registered and university proven materials are injected directly into the sap stream of the tree. Conductive vessels inside the tree transport products throughout the tree. There's no residue on non-target species and no waste.

Arborists in the Northeast, Southeast, Midwest, Southwest and Northwest report success after的成功 on thousands of shade trees. Mauget micro-injection works time after time. It's performance proven every day — for more than 20 years.

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Los Angeles, CA 90065
1-800-TREES-RX

Please circle 26 on the Reader Service Card
Preventive Maintenance
— Regularly inspect (at least every 25 cycles) and lubricate (at least each time the truck chassis is lubricated) the hoist and pump. Wipe dirt from all fittings before greasing. Always carefully brace the body before servicing the hoist or working in an area with body raised.

Inspection
— Check all mounting bolts and cotter pins, tighten or replace as necessary
— Inspect all welds for stress cracks
— Check pump oil level
— Check all hydraulic fittings and hoses for oil leakage
— Check drive line for tightness, U-joints for excessive wear, set screws for tightness and be sure safety wire is securely fastened

Lubrication
— Lubricate all pivot joints at regular intervals (at least each time the truck chassis is lubricated) with a premium graphite base gun grease.
— Periodically clean and oil the control cables to insure smooth and proper operation

out equipment is very good, really positive."

To develop a maintenance schedule for any piece of equipment, the owner's manual is the best place to start. Many contain forms to track inspections and maintenance; these forms can be copied for your own use.

In general, manufacturers are willing to help you learn about their equipment. For example, Aerial Lift, Inc. produced an instructional video to show owners the maintenance points on their aerial lift. Bandit Industries has instructional videos for their chippers.

DOT requirements
If you operate a commercial vehicle with a gross vehicle weight (GVW) or gross combination weight (truck plus trailer weight) of more than 10,000 pounds, that vehicle is subject to Department of Transportation (DOT) regulations on vehicle inspection. The inspection items in the following tables should be part of your scheduled inspection and maintenance.

The employer must perform a vehicle inspection each day and prepare a written report on each vehicle operated. If no deficiency or defect is noted, the report must state so. The employer must repair any deficiency before the vehicle is dis-
**DRUM CHIPPER**

**Daily check list:**
- Rotor blades and cutting bar
- Trailer hitch safety chain
- Cutter bar and blades bolt tightness
- Fuel, oil and coolant leaks
- Engine oil level
- Radiator coolant level

**Weekly check list:**
- Drive belt tension
- Air cleaner
- Crankcase breather
- Governor oil level
- Battery water level
- Tire pressure
- Clutch lubrication

**Monthly check list:**
- Drawbar for damage, cracks, wear, etc.
- Tightness of all fasteners
- Drive belts
- Torque of wheel lug bolts

**Bi-monthly check list:**
- Change oil and filter
- Grease pivot bearings
- Grease dropstand
- Grease spring shackle bushings

**Yearly check list:**
- Trailer wheel bearings
- Tighten all fasteners
- Radiator coolant/antifreeze
- Tune engine
- Replace fuel filter

**As required:**
- Blade change
- Cutting bar rotation
- Sharpen cutting edges

---

**STUMP GRINDERS**

**Daily check list:**
- Crankcase oil level
- Fuel level
- Air cleaner
- Air intake screen
- Battery
- Condition and tension of drive belt and chain
- Condition of tooth pockets
- Tooth pocket bolts must all be in place and properly torqued
- Cutter wheel teeth must be free of cracks or excessive wear
- Cutter wheel must be free of cracks
- Fluid level in reservoir
- Fittings and hoses for cracks or leaks
- Cylinders and valves for leaks and proper function
- Pump belt for wear and tension
- Condition and installation of shields and curtains
- Condition of safety decals
- Lubricate the cutter wheel lift and cross travel directional control levers

**Weekly check list:**
- Tension of the chain from jackshaft to cutter wheel for adjustment
- Pressure in the hydraulic system

**Monthly check list:**
- Tension adjustment on models with cutter wheel driven by a Poly-Chain
- Wheel bearings for lubrication and/or adjustment
- Change hydraulic oil filter and hydraulic oil

**Periodically:**
- Check for missing, loose or worn bolts, cracked hoses and loose connections
- Check cutter wheel for worn or broken teeth, loose pocket bolts and cracked pockets.
THE VO-50 SAVES ON COSTLY SET-UP TIME!

Time is money in the tree care business, and the time you save with Versalift puts money in the bank.

Fewer set-ups, more worktime are just two reasons the VERSALIFT VO-50 is the choice of tree care professionals from coast to coast. It's been field proven to be an effective, hardworking, and dependable tool.

The VO-50 gives you reach and movement others can't match, and it's done without troublesome cables or chains, meaning safer, low-maintenance operation.

To see a VO-50 on your work site, call or write today for more information and the name of your nearest VERSALIFT distributor.

VERSALIFT

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It's TIME to check out VERSALIFT!
NEW INVENTION MAKES DISC-STYLE CHIPPER!

Yes, It's a 36" Drum-Style Chipper, Completely Different Type!

- The new 36" E-Z drum chipper delivers more horsepower than a disc-style job!
- Safest chipper ever with feedworks!
- Only ONE moving part – change double-edged knives.
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- Priced $3,000 to $5,000 less with the same horsepower!
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- Simple procedure designed for towing. No trailer required.
- GOVERNMENT BIDS: Instead of spending taxpayers' money, it costs more to do the same work.
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E-Z BEEVER MODEL 20/20
E-Z 20/20 SELF-PROPELLED
E-Z 10/20 34" SELF-PROPELLED
E-Z MODEL 20/30
Chips up to 30 tons per hour with 250 HP engine.
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than Any Chipper That's Ever Been On the Market Before!

E-Z BEEVER MODEL 10/20 EQUIPPED WITH BAGGER

style chipper takes less time chipper to do the same job — No kickback, no hydraulics! Saves in minutes!

9 feet. Swivel discharge up to 90 degrees left or right.

S than a disc-style chipper and capabilities!

els to choose from. Model d width plus a narrow 10/34" gate. Goes where no

ages self-propelled drive required!

vestigate this new chipper's money on a chipper that does the job!

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“Drum-type wood chipper,
U.S. Patent No. 5,005,620, Issue Date: April 9, 1991”

We applied for 27 patent claims to the U.S. Patent Office and we were granted all 27. The patent prints above will illustrate some of the simple features of the all-new E-Z Beever chipper.
Congratulations to the entire team at TCI magazine on a successful completion of your first year in business. I can appreciate the time, energies and frustrations which occurred. Looking back, you can be proud of what you've accomplished in 12 short months.

Paul McFarland
McFarland Landscape Services, Inc.
What Makes a SATURN Worth YOUR Investment?

The overcenter SATURN has been designed for maximum maneuverability and ease of operation. COMPARE A FEW OF SATURN'S FEATURES:

ONE HAND CONTROL — safe, easy-to-work in all climates.

360° CONTINUOUS ROTATION — ball-bearing turntable for smooth travel and versatility.

OVERCENTER UPPER BOOM ACTUATION — no chains or cables for reliable, low maintenance operation.

EXCLUSIVE OVERCENTER UPPER BOOM ELBOW ASSEMBLY — cover protects entire cylinder-link assembly from debris and damage.

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STRONG, RECTANGULAR FIBERGLASS BOOMS — for more strength and less flex.

THE TECO SATURN is a field-proven tree trimming unit with working height up to 57 feet, providing the most reach and versatility.

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Clark Joins Consulting Firm

HortScience, Inc., Pleasanton, California, announces that James R. Clark has joined the consulting firm as vice president. Dr. Clark brings with him 15 years of expertise in urban forestry, horticulture, arboriculture and resource management.

Dr. Clark received his doctorate from the University of California, Davis, in 1979. After three years with the Horticulture Department at Michigan State University, he joined the faculty at the Center for Urban Horticulture, University of Washington in Seattle in 1981. His primary interest has been in the areas of physiology and management of mature trees, landscape management and environmental influences on urban plant growth.

Clark has led and participated in several consulting projects with HortScience, Inc., as well as other consulting firms, over the past few years. He has been active in the International Society of Arboriculture, serving as chairman of the 1988 conference in Vancouver, and as the Pacific Northwest Chapter director since 1989.

Nelda Matheny, president of HortScience, says, “Jim greatly enhances our ability to address horticultural challenges and seek new opportunities. We will continue to expand our consulting services in tree and landscape evaluation and management, as well as augment our training and applied research capabilities. He brings a national perspective to our firm.”

HortScience's new facilities are located at 1257 Quarry Lane, Suite 10, Pleasanton, California. Phone: 415-484-0211.

Dr. James R. Clark

BROTHERS TRUCK SALES, INC.

(5) 1980 to 82 Ford with Asplundh LR 50'S and pony motor from $23,800.

1980 Ford 4 x 4 with LR 50 rear mount only $24,800.

1980-82 Hi-Ranger 55' W.H. Fl 48 PBi's High Mounted, Pony Motors - only $23,800.

1981 Chevy & Ford Chip Dumps with Crew Boxes - from $6,800.

1982 Ford with Saturn 53' work height only $23,800.

Asplundh & Woodchucks 12' Drum reconditioned: 4 Cyl. - $3,800, 6 Cyl. - $4,800, Diesel - $4,800

1982 & 1983 Ford F600 with Goforth Dumps - only $8,800.

1982 Chevys & Fords with 50' W.H. & pony motors - only $22,800.
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The Wood/Chuck Chipper Corporation has built chippers for over 20 years and knows that different styles of chippers are needed. If you need landscape quality chips, a controlled feed rate and chip up to 12 inch material, the Disc is for you. However, if you require a fast feed rate with material up to 6 inches, economic design and low life cycle cost, then the Drum is your buy.

We make them both. Call the Wood/Chuck sales department for your nearest dealer and let us help with your next chipper purchase.

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Dennis A. Beam III
Vice President

Wood/Chuck Chipper Corporation is a subsidiary of D.A. Beam Enterprises, Ltd., and is affiliated with Aerial Devices, Inc., manufacturer of the “SkyRider” and Safety Test and Equipment Co., Inc.

P.O. Drawer 400, Shelby, North Carolina 28150

See us at TCI Expo

Please circle 10 on the Reader Service Card
It’s About Time

By Dave de Sousa

As a tree care professional you may have the right training, the right facilities and the right backing of everyone. But do you have the right time? You should, because everyone else has the same amount. Time is not a resource that we can get more of if we need it. In fact, we don’t even know what time is. Can you explain what time really is? I can’t and I don’t know anyone who can. Some say time flies, time stands still, time is on their side, time is the enemy, time is running out, time is money, time is relative, and so on. Those of us who try to manage this thing called time are laboring under a misnomer.

We can manage a resource like water because we know what it is. Knowing things about water allows us to manage (control) it. Because it is made up of oxygen and hydrogen, can be a solid, liquid or gas, is not explosive, etc., we can do things with it: dam it, spray it and drink it. The only thing most of us know about time is that we don’t seem to have enough of it. We just keep using it as fast as we get it. What we are really struggling to manage (control) is not time, but ourselves.

In using the phrase “time management” to comply with accepted terminology, what we are really talking about is a personal control problem. What do we have (or should have) complete control over? The only things we have complete control over are our own thoughts and actions. And, the only thoughts and actions we control are those happening right now.

The thoughts and actions of the past are gone and there is no controlling thoughts in the future until we get there. The best we can hope to do is to plan to control them. If we don’t plan to control our thoughts and actions in the future, we are definitely not in control of anything except the present moment. If that’s true, whose plans or goals are you striving for?

Everyone else’s, except yours.

Eliminating priorities

If you agree with me that having a plan is better than not having a plan to reach your goals, then I would like to blow a hole in a long-held time management concept: “priorities.”

Consider a one-person business, like a sidewalk hot dog vendor. What kind of business responsibilities does he have? Here are a few: safety, marketing, equipment, personnel, operations, supply. Is any one of them any more important than another? No, it isn’t. If Mr. Vendor doesn’t grease the wheel hub on his cart, it will eventually break and he will not sell as many (if any) hot dogs that day. If he doesn’t remember to order hot dog rolls, the results will be similar and so on. None of these responsibilities is any more important than the others. The only difference is that some take more time to attend to.

The bigger the business, the more time it takes to attend to each responsibility. Responsibilities don’t become more important; they become more time consuming. If you ignore a responsibility, it will become a problem and it will interrupt your normal operations, just like the wheel hub that wasn’t greased.

As long as there is enough time, you can assign priorities to your work. All your responsibilities will be taken care of. But then, you wouldn’t have time management problems, would you? When you start getting pressed for time, priorities can no longer be used to manage your time. Why? The least important responsibility (however you arrive at it) goes to the bottom of the list. If you are like most people, that least important item stays the least important until it becomes a problem and interrupts you. Now it is an A-1 priority. Now it will take more time to correct than if you gave it the required attention when you should have. The Catch-22 starts and you are caught. You start working longer, faster and harder. You start bringing work home, feeling overwhelmed/guilty/stressed, etc. What to do? If you continue to use priorities, there is no way out unless you quit, get fired or find help.

Devising a schedule

Well, maybe this will help a little. Let’s say you have $400 worth of bills to pay at the end of the month: a $200 car repair bill, a $100 legal bill and a $100 medical bill. The problem is you have only $200 to pay those bills. Solution? Pay $100 on the repair bill, $50 on the legal bill and $50 on the medical bill. Do you think the lawyer and the doctor would be happy if you spent the entire $200 on the repair bill? Not very likely. If you continue to ignore their bills, you will have a problem. They will interrupt your normal day. It will cost you more money (interest), more time (small claims court), more stress, etc., to take care of these bills
**BUY IT/ LEASE IT**

<table>
<thead>
<tr>
<th>Morbark Disc Chippers</th>
<th>Lease*</th>
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<tbody>
<tr>
<td>4 cyl. Ford gas</td>
<td>$11,500 48 months $352</td>
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<tr>
<td>4 cyl. White gas</td>
<td>$11,500 48 months $352</td>
</tr>
<tr>
<td>4 cyl. Cummins</td>
<td>$14,995 48 months $460</td>
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<tr>
<td>4 -knife option add $500</td>
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<th>Morbark Drum Chippers</th>
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<tr>
<td>20/10</td>
<td>$7500 48 months $235</td>
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<td>20/20</td>
<td>$11,500 48 months $352</td>
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<tr>
<th>Rayco Stump Grinders</th>
<th>Lease*</th>
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<tr>
<td>Model RG1620: 20 H.P.</td>
<td>$6,850 48 months $218</td>
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<tr>
<td>Model RG1635-AS: 20 H.P.</td>
<td>$11,750 48 months $360</td>
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<tr>
<td>Model RG1665-AC: 65 H.P.</td>
<td>$14,995 48 months $460</td>
</tr>
<tr>
<td>Model 1670DC: 80 H.P.</td>
<td>$21,500 48 months $654</td>
</tr>
<tr>
<td>Rayco Hydro Stumper: 240 H.P.</td>
<td>$85,000 48 months $2,344</td>
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<tr>
<th>Asplundh Drum Chippers</th>
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<tr>
<td>4 cyl. Ford or Hercules gas with 12&quot; cutter head</td>
<td>$10,900 48 months $335</td>
</tr>
<tr>
<td>Asplundh Chipmunk</td>
<td>$9,500 48 months $303</td>
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* All lease purchases require 2 payments down. $1.00 buy-out with approved credit. Other lease plans available. Used Asplundh & Morbark chippers and Rayco stump grinders available.

---

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I would like to blow a hole in a long-held time management concept: priorities.

than if you had sent them something every month.

If you think of your time like the money in your budget and try to satisfy every responsibility as you would your creditors, you will have fewer problems. When you do have a problem, it won't be as big. It takes about two hours to learn Power Scheduling, the time management system I developed. It is not complicated; in fact, once you learn and understand it, it seems so simple you will wonder why you didn't think of it. While you can't learn this system in this short article, here are some basics that may help.

First, preplan your weekly schedule. Give some thought to what you want to accomplish and write down the steps that are necessary to complete each of those projects. Break down those steps into separate actions, such as phone calls, writing letters, appointments, reading something, shopping, chores, etc., and list them under their own headings. For example, you may have to make 10 phone calls to accomplish a project. Make a heading called phone calls and list each call. Do this for each project and put all the phone calls under that one heading. Get the picture? Do the same under each heading (letters, appointments, reading, etc.). Now, under those same headings list things that you know must be done, things your boss wants done and things that result from other external sources, like correspondence. There you go. Your work load for the coming week is before you. Your planning is almost done.

Now what? Take your weekly schedule and set aside blocks of time entitled phone calls, appointments, writing, etc. You may have as many blocks of time for each heading as you wish, such as a one-hour block in the morning and a one-hour block in the afternoon or you may have a one-hour block on Monday and another on Thursday. It is up to you; design it any way you want. It's your time and only you have to read and understand your schedule.

All this takes me about 15 minutes each week and I pick a quiet time like Sunday afternoon to do it. When Monday morning starts and your first block of time is phone calls, you take your list of phone calls and start in. If you finish making all your phone calls early, go on to the next block of time, like writing. Cardinal rule: Start and stop your blocks of time on time, if feasible. (This rule takes about one hour to teach and understand so you will just have to take my word for it here.) Even if you have to run home for 20 minutes to take care of an unexpected situation, don't add that 20

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minutes to your phone call block of time. When you get back, you look at your schedule and jump into whatever block of time you are supposed to be in.

**Interruptions**

Now we are cooking. Suddenly, in the middle of your phone call block of time, your boss roars in and says, "I need this report finished in two hours." Is this a higher priority? No, it is only an interruption. Is it important? Yes, just as important as everything else, but it requires attention now. Maybe it is one of those reports you were supposed to do when you were on your previous time management system.

All interruptions are important. They contain vital information and must be dealt with when they occur. We must look upon interruptions as part of our responsibilities, not as a change in priorities. We can drive ourselves daffy if we really try to keep everything in our lives prioritized. Don't do it.

After you finish the report for the boss, you may now be in your writing block of time but there were three phone calls you promised to make today that you didn't make in your phone call block. What to do? Are they a higher priority now than writing? No, no, no. They are interruptions that occur in your writing block. Are you catching on yet?

By managing your time in this manner, you will find that interruptions become fewer and fewer because you have better control of your job and are accomplishing more with your time. When you do have an interruption, many times it won't be a surprise and you will find you may already have it covered.

I hope I have shed some light on time management. An arborist's work can be a very time-consuming profession; this new slant will help you gain control of your work load.

---

Dave de Sousa is the author of "Power Scheduling." He has a bachelor's from Utah State University and has taken numerous graduate industrial engineering courses from the Air Force Institute of Technology. He is presently a production, training and safety coordinator for Bartlett Tree Experts, owns a jewelry store with his wife Marcia, and is a professional speaker dealing with safety and time management. Previously, he was simultaneously involved as a partner in a logging and tree service company, the owner of a wholesale diamond business and was CEO for an alternative energy company that was responsible for the construction of the largest wind-powered electric-generating facility east of the Mississippi. During his nine years in the Air Force, he worked as a civil engineering and safety officer.

De Sousa will be appearing at TCI Expo, December 5-7, in Columbus, Ohio.

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Physical Exams

Disabilities Law Affects Hiring Practices

The Americans with Disabilities Act (ADA), signed into law last year, will alter future hiring practices. The Act takes effect July 26, 1992 for employers with 25 or more employees, and on July 26, 1994 for companies with 15 or more employees. The Equal Employment Opportunity Commission is responsible for enforcing ADA. Congress approved the Act to prevent employers from discriminating against qualified disabled persons with respect to job application procedures, hiring, advancement and training.

If you would like to learn more about the background of the Act as well as its general requirements, please refer to the Labor and Law column written by attorney Steven Semler in the September 1990 issue of TCI.

The Americans with Disabilities Act has drawn a lot of fire because it prohibits many forms of pre-employment medical screening. Currently, physical exams and health questions on job applications are used to screen individuals who may, because of some physical or mental impairment, pose some risk to themselves, their co-workers and/or their employers.

The law specifically bans questions about an applicant's physical or mental condition on the application or in the interview. Instead, the employer must phrase questions to determine if the applicant is able to perform the tasks required on the job. For example, asking if an applicant has the ability to lift large pieces of wood eight hours a day is permitted, but inquiring about a previous back injury is not.
Physical examinations are permitted only after a job offer is made. A condition of the job offer may be successful completion of a physical exam, but restrictions apply. Physical exams must be given to all applicants, results must remain confidential and the employer cannot discriminate against an applicant for “failing” the physical.

The job offer can be withdrawn only if the failure would have a direct impact on the person’s ability to fulfill the job description, unless the employer can make reasonable accommodations to allow the applicant to safely perform the job.

Written job descriptions and very clear criteria for safe completion of job tasks will become imperative to protect employers from hiring potential workers’ compensation liabilities. The employer may use these as criteria for hiring.

This legislation does not protect employees who use illegal drugs. Employers can test and deny employment to individuals who use illegal substances without being held liable for discrimination. Individuals who have gone through rehabilitation for drug use are considered disabled, and thus protected by this legislation.

John C. Fox, former executive assistant to the director of the Labor Department’s Office of Federal Contract Compliance Programs, is concerned with the number of disabled workers hired and subsequently injured in the workplace due to the inability of employers to screen applicants effectively. Fox told the Occupational Safety & Health Reporter that the number of potential injuries is not known, “but I think it will be quite a lot.”

Although the final regulations are still being written, the employer is required to make reasonable accommodations for disabled employees. Reasonable accommodation is not well defined, but focuses on the disabled individual’s needs relative to the “undue hardship” such accommodation would have on the employer. Undue hardship refers to significant difficulty or expense accommodation creates. The general view, whether accurate or not, is that large corporations can withstand much more “hardship” than small companies.
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Saw Chain & Bar Maintenance

By Alex Bildeaux Jr.

Whether it be pruning or total tree removal, a properly sharpened and maintained saw chain and bar can make any job you do with a chain saw much easier and more efficient. Yet few people can maintain a saw chain at peak efficiency or get maximum use from it. By following these basics of chain and bar maintenance, you can cut like a pro.

Before you can properly sharpen a chain and keep it cutting like new, you must first know some chain terminology. Please refer to Diagrams 1 and 2.

1. **Leading edge**—the highest point on the tooth, it leads the tooth into the wood.
2. **Rivets**—hold the chain together, helps the tooth pivot.
3. **Heel**—back bearing surface.
4. **Toe**—front bearing surface.
5. **Raker (drag, depth gauge)**—gauges how much wood the cutter can take, clean wood chips out of kerf.
6. **Gullet**—air space between raker and leading edge.

**How it works**

Now that you know the parts of a saw chain, how does it work? Very simply, a saw chain cuts with a wave-like action. When the cutting tooth first contacts wood, the cutter rocks back on its heel. The raker determines how far it rocks back, not the tension of the chain. The cutter then literally feeds up into the wood, leaving the guide bar in order to do so. It stays up in the wood until the gullet fills with wood. Then wood fiber covers the leading edge, causing the cutting tooth to deflect out of the wood fiber and back down to the guide bar. The speed of the chain also
You aren’t born smart. That’s why there’s such a thing as experience.

"With equipment, like a lot of things in the lawn-care business, you learn the hard way.

I put the equivalent of five years of ‘homeowner’ use on a trimmer in five days.

Same thing with chain saws and backpack blowers. I bought the discount-store brands first, before I knew better.

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Owner, Grassroots, Cincinnati, OH

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Diagram 3: Top View of Cutter

Sharp
Smooth, straight leading edge

Wood dull
Slightly uneven edge, discolored

Rock dull
Very uneven edge, grinding marks

Saw chain. Now the trick is to get every cutter on that chain to pull its fair share of chips.

There could be many reasons why your saw chain won't cut. Rocks, sand, wire, cement or even wood can dull it. A saw chain is dull any time you no longer have smooth, evenly-colored chrome on the leading edge of the cutting tooth. Sometimes the damage is minor as in “wood dull,” or major—“rock dull”—whenever you hit a rock, piece of cement, nail, etc. Refer to Diagram 3.

Sharpening a dull saw chain means filing the cutting tooth until its leading edge has smooth, evenly-colored chrome. Remember to keep all the cutting teeth filed at the same angle. When you are filing the cutting tooth, always use the proper size file for the type and style of chain you are using, and always file from the inside of the tooth to the outside of the tooth. Remember to lift the file off the tooth on the return stroke. Dragging it back across the tooth shortens the life of both chain and file.

You’re not done yet. In order to keep a saw chain cutting like new, you also have to progressively lower the raker as the tooth gets shorter. If you are having problems sharpening the chain, whether it be sharpening the cutting tooth or lowering the rakers, there are many filing tools on the market to help you do this properly. Among the simplest and easiest to use are the Carlton File-O-Plate (TM) or the Total Combo Guide (TM). These filing guides will help you get the proper tooth angle and raker depth for the wood you are cutting and keep your chain cutting like new.

You might not think that much could go wrong with the chain saw guide bar, but it requires periodic attention to keep it in working order.

Check the bar rails for burred edges. File the burrs off with a flat file by laying the file on the flat side of the bar. You have to remove the chain to do this. Also check the bar rails for uneven wear or chips along the rails or tip.

Most bars are reversible. Reversible bars should be flipped over periodically.

The bar groove width should not be significantly greater than the thickness of the drag link of chain you are using. Always keep the bar groove clean, and if the bar has a sprocket nose, grease the tip at least once a day.

Keep proper tension of the chain on the guide bar. The drag links of the chain should not show, yet the chain...
should rotate freely around the bar. If you rotate the chain by hand to test, be careful to pull it in the cutting direction only. This way the teeth will be less likely to cut you if your hand should slip.

A properly sharpened chain and a well-maintained bar will make anything you want to do with a chain saw much easier, safer and cost-efficient.

**Common problems, solutions**

Here are some common cutting problems and how to correct them.

1. **Problem:** Excessive wear on the heel and toe of the cutters and tie straps as well as the bar rails. Chain cuts slowly, stretches, and pulls undersized chips.

   **Cause and solution:** Cutters dull—file to smooth, even-colored chrome on the top. Depth gauges too high—file to proper depth. Cutters are back slopped—make sure you are using the proper size file and file guide for your chain.

2. **Problem:** Noticeable vibration when cutting. Bar rails peen over. Chain tends to catch in wood. Chain joints may tighten. Chain may break at the back rivet.

   **Cause and solution:** Rakers too low. You may have to file the cutters down to compensate.

3. **Problem:** Cutters dull very quickly, may catch in wood.

   **Cause and solution:** Cutters are hooked. Make sure you are using the proper size file and file guide for your chain.

4. **Problem:** Peened notches on tie straps and cutting links, peened or broken drive links, tightened links and possible chain failure.

   **Cause and solution:** Worn clutch sprocket—replace.

5. **Problem:** Chain pulls to one side in the wood.

   **Cause and solution:** Right-hand cutters and rakers sharpened differently from left-hand cutters and rakers. Use file guide, inspect chain. Guide bar groove worn, allowing too much lateral movement in chain or allowing chain to "stand up" in groove—replace guide bar. Drive links worn excessively—replace chain.

6. **Problem:** Chain appears sharp, rakers properly filed, but saw won't cut. May smoke in the wood from heat buildup.

   **Cause and solution:** Chain is on backwards—it happens to the best of us!

Alex Bildeaux is Safety Director for the Tilton Equipment Company, which distributes Jonsered and Olympyk power products as well as a variety of cutting accessories. He travels extensively to teach chain saw safety and maintenance. His home office is 4575 North Chatsworth Street, St. Paul, MN 55126.
New Rules From OSHA

By Steven R. Semler

The Occupational Safety and Health Administration statute, as recently revised, now sets maximum fines of $70,000 for "repeat violations." Repeat violations are incidents that an employer previously has been convicted of or accepted by paying a fine, which occur again.

OSHA also revised its enforcement policy. Previously, employers who operated in several states did not have a substantially greater exposure to repeat citations than anyone else. That was because OSHA's enforcement policy limited the use of "repeat" citations to incidents occurring in the same geographic area served by the OSHA office that issued the first citation.

OSHA now limits the former policy to "non-serious" gravity citations only.

However, the agency has dropped the geographic limits for "high gravity" cases. That is, OSHA will now issue repeat citations if the employer has been cited (and convicted or settled a case) anywhere in the nation for a "substantially similar condition" within three years of the first occurrence.

As a practical matter, this new enforcement policy means that national companies should think twice about accepting or settling "serious" OSHA citations; once the precedent is established, the next violation—even though it might occur clear across the country under a different manager—can be a repeat with a fine that will rock your bottom line.

For instance, let's say you receive a federal general duty citation in California for flagmen not wearing safety-color vests, and you pay the fine thereby acquiescing in the violation, even if you negotiated a smaller fine). If you receive a citation for the same thing in New York two years later, the New York citation is regarded as a "repeat." The fine in this example could be relatively low, but could go as high as the $70,000 maximum if a fatality is involved.

The new rule

Here is the new OSHA rule, contained in the agency's revised Field Operations Manual, Chapter IV, Sec. 8(5)(1):

High gravity serious violations—When high gravity serious violations are to be cited, the area director shall obtain a history of citations previously issued to this employer at all of his identified establishments nationwide (federal enforcement only) within the same two-digit SIC code. If this violation had been previously cited within the time limitations described in B.5.d. (three years) and is a final order a repeated citation shall be issued. Under special circumstances, the regional administrator, in consultation with the regional solicitor, may also issue citations for repeated violations without regard for the SIC code.

Steven R. Semler is a partner in the Washington, D.C. law firm of Semler & Pritzker, which exclusively represents management with respect to labor law matters. Mr. Semler is labor law counsel to NAA and several corporations in the tree care industry.

Readers should not rely upon this article as individual advice for specific situations; that can be provided only by the reader's own counsel.
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The International Society of Arboriculture Research Trust announces the establishment of an International Depository for Landscape Tree Cultivars, to be located at Oquawka, Illinois, under the supervision of project leader Willett N. Wandell.

The scope of the Depository project is to determine the adaptability of landscape tree cultivars, produced in annual quantities of 2000 and more, throughout the defined area of North America.

Bill Kruidenier, executive director of the International Society of Arboriculture, emphasized the need of the establishment of a Depository for information on cultivar trees. "Two facts stand out regarding today’s landscape tree cultivar situation," said Kruidenier. "First, the large number of cultivars being introduced and secondly, the lack of information on many of those being introduced."

The project has two phases. The intent of the first phase is to use the knowledge of field personnel acquainted with survival and degree of vigor of the cultivars. Contacts will be made with arborists, nurserymen, arboreta staff and other knowledgeable individuals throughout the study area.

Initially data will be collected from a broad spectrum of selected individuals on the vigor and survival rate of the cultivar(s) in their area. This information will be used to prepare a publication as an addendum to the Handbook of Landscape Tree Cultivars.

The second phase of the project will be to have each introducer of a new cultivar supply basic "structural" information and submit herbarium-quality samples to the Depository. This information will be used for analysis and obtaining information on the cultivar. In addition, samples of the trees will be distributed to five testing sites for longitudinal studies.

Arborists interested in participating or seeking additional information should contact Willet Wandell, P.O. Box 674, Oquawka, IL 61469.

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The Professional Grounds Management Society announces publication of the newly revised Grounds Maintenance Management Guidelines. This manual is a collection of maintenance standards, operating manuals, contract specifications, etc., that provides a desk reference to help grounds managers plan and evaluate their operation.

Also included is a listing of various associations, publications and other standards/specifications. A new section has been added to this edition that covers the environment: water conservation, integrated pest management, pesticides and disposal of yard wastes, and petroleum and plastic products.

The manual is free to members and is available for $12, including postage, to non-members. To order send check to PGMS Headquarters, 10402 Ridgland Road, Suite 4, Cockeysville, MD 21030.

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SPRAYERS

Whether your needs are for ornamental and shade tree spraying, lawn spraying, mosquito control and/or termite work, we have the exact sprayer you require.

We believe a sprayer design should be affordable, dependable and simple. These features, coupled with quality and 20 years experience, make "NORTHEASTERN" sprayers one of the finest sprayers on the market.

We stand behind what we sell with courteous service and our service department will repair any other brand of sprayers.

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AVAILABLE IN ANY SIZE

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Davey Awards Arboricultural Grant To Ohio Student

The Davey Tree Expert Company, Kent, Ohio, has awarded the third annual Davey Company Arboricultural Grant to David Fathauer, of Seville, Ohio. Fathauer is a first-year student enrolled at The Ohio State University Agricultural Technical Institute in Wooster, Ohio. This $800 grant was established to recognize students showing superior dedication to a career in arboriculture.

The Davey Tree Expert Company is an international firm that provides residential and commercial lawn and tree care as well as utility arborist services. The company began its ties to OSU/ATI and the landscape program some four years ago when it donated a chipper.

According to George Gaumer, area manager for Davey Tree, the grant program was established in 1989 to support premier schools offering landscape programs with a specialty in arboriculture.

“Personnel recruiting represents one of the biggest obstacles our industry faces,” Gaumer said. “There are not enough qualified, dedicated individuals interested in arboriculture and we want to support those who express an interest in pursuing this profession.”

Fathauer attended Berea High School and obtained his GED in 1990. After graduation he worked for a landscaping company in Grafton, Ohio, where his interest in the green industry began. His decision to pursue a degree in landscaping at OSU/ATI was additionally influenced by his stepfather, Jim Wilson, OSU/ATI instructor, Arboriculture/Urbam Forestry.

Fathauer has just completed his first year in Landscape Contracting and Construction Technology and hopes to complete his required industry internship working at an arboretum.

Bartlett Wins Green Star Award

The F.A. Bartlett Tree Expert Co. of Stamford, Connecticut, was one of four corporate recipients of the prestigious Green Star Award presented annually by the Environmental Action Coalition, Inc., of New York City. This year’s presentations were made at ceremonies in Central Park in June.

Robert A. Bartlett Jr., president of the company, accepted the award. In his remarks, he described some of the work that his firm is doing in the environmental field, particularly in the area of preserving urban and suburban trees. Bartlett is the third generation of the founding family of the 84-year-old tree care firm which operates coast to coast. Their research laboratories and experimental grounds are located in Charlotte, North Carolina.

The Environmental Action Coalition was established on Earth Day in 1970 and is distinguished for its research-based action programs that have served as models for solutions to urban environmental problems. It is one of the first groups nationwide to define the urban environment as a subject of study in environmental education programs.

EAC’s Green Stars have been awarded since 1982 to individuals and non-profit organizations. This year EAC included four corporations that exemplify environmental leadership.
Asplundh Tree Expert Co. introduces a portable self-propelled backyard chipper for rear lot line clearance work. The disc-style chipper is 35-1/2 inches wide when the hopper and feedtable are folded up and it has articulated steering and hydraulic four-wheel drive for easy off-road maneuvering. Extra bolt-on wheels keep it stable on up to 20 degrees of side grade and 25 degrees of vertical grade. Asplundh has applied for a patent for the backyard chipper, now manufactured for company use only. Contact your Asplundh representative for further information.

A new line of premium-grade, high-performance oil products, specially developed under the "Ultra Gold" label by Vermeer, is now being distributed worldwide. "Ultra Gold" consists of motor oil, hydraulic and transmission fluids, special gear oil and high lithium complex greases. The oil and fluid products are packaged in 2.5-gallon, 5-gallon and 55-gallon containers; the grease is available in 14-ounce tubes. For more information, contact Darrell Dieleman, Vermeer Manufacturing Company, P.O. Box 200, Pella, Iowa 50219 Phone: 515-628-3141.

Midland LMR introduces a new "MX" Series of two-way FM portable radios programmable for up to 16 channels. Output power of both the VHF and UHF models is 5 watts, switchable to 2 watts to conserve battery life. The new portables feature programmable tone-coded squelch (CTCSS) and a new circuit design that improves CTCSS performance and minimizes noise and voice blocking. For more information contact Midland LMR, Marketing Department, 1690 North Topping, Kansas City, Mo., or call 800-643-5263, ext. 1690.

FINALLY...A deep-root fertilizer that has the benefits of controlled-release nitrogen AND the ease of liquids..............

ArborFlo 16-3-3 (55% CRN) is a quality controlled-release clear liquid fertilizer ideal for surface, deep-root, and irrigation feeding of ornamental trees and shrubs. Using ArborFlo eliminates the need for handling soluble products that tend to cake and settle in your tank. You owe yourself the opportunity to try the liquid concept!

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The new Asplundh LR III-55 aerial lifts offer unsurpassed productivity with a 60-foot working height, 42-foot side reach at a working height of 31 feet, and 35 degrees additional articulation on the lower boom. A longer upper boom maximizes side reach and permits the bucket to reach the ground on both sides of center for increased safety and productivity. The LR III-55 has 270 degree upper boom articulation and 125 degree lower boom articulation. For further information contact Asplundh Manufacturing Division, 1550 Asplundh Ave., Creedmoor, N.C. 27522. Phone: 800-331-1038.

The Beevers, Inc., an affiliate of Morbark Industries of Winn, Michigan, announces its portable drum-style E-Z Chipper-Recycler. The new Chipper-Recycler features a 36-inch diameter drum with double-edged knives and recessed chip pockets. Material can be fed without using hydraulic feed systems and chips are thrown up to 50 feet without any auxiliary blower. E-Z Chipper-Recyclers are offered in several models and sizes with many options. By changing from standard chipper knives to hardened recycling knives, the E-Z converts to a recycler. For information contact Beever Sales Corp., P.O. Box 800, Winn, Mich. 48896. Phone: 800-255-7691.

A track-driven, self-propelled whole tree chipper is the latest innovation offered by Chiparvestors, Inc. For chip producers, land clearers and right-of-way companies, the Model 20 Track total Chiparvestor is designed to traverse rugged terrain and process the whole tree at the stump or on the right-of-way, dramatically reducing skidding and forwarding costs. The Model 20 was redesigned to mount on the 215 CAT undercarriage with 28-inch pads and full-length track guiding guards. For more information contact Chiparvestors, Inc., P.O. Box 1000, Winn, Mich. 48896. Phone: 800-233-6065.

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TREE CARE INDUSTRY - SEPTEMBER 1991
HELP WANTED

We are a Midwestern full-service tree care company with a commitment to growth and personal development and we have positions available in all phases of the tree care industry. If you are a self-starter with experience in tree care, then we may have the position for you. We offer an outstanding benefit package plus relocation assistance. Send resume with salary history to Josie Grosse, c/o Hendricksen, The Care of Trees, Inc., 2371 S. Foster Ave., Wheeling, IL 60090.

Fast growing quality tree care company looking for ambitious, highly motivated arborist. Must be experienced in all aspects of the tree care industry. Preferably have a degree in horticulture and be a personable type. Responsibilities will include sales and establishment of an integrated tree management program. Please send resume with work and sales history to Empire Tree Service, RRI Box 523, Pine Plains, NY 12567. Phone: 518-398-5210.

Climbers/crew leaders wanted. Must be a self-starter, have the capacity to switch from quality horticultural work to production take down, township work. Please send resume to Empire Tree Service, RRI Box 523, Pine Plains, NY 12567. Phone: 518-398-5210.

We are looking for a few good people. Qualified career-minded arborists. We are professionals throughout the western region. Call 408-453-5922 or send resume to Empire Tree Service, RRI Box 523, Pine Plains, NY 12567. Phone: 518-398-5210.

Large full-service tree care company based in San Diego seeking motivated sales personnel. Base salary plus commission, car, health plan, holiday and va...
Heavy duty front axle; with 5-speed O.D. manual or automatic I.D. transmission available. Call today. 1-800-255-5715.

Order your new 14,500 GVW units today from the industry’s largest chassis pool—complete with the powerful 460 V-8 or economical 7.3 liter diesel engine. Standard equipment includes dual tanks, power steering, power brakes with rear antilock; and leasing options available. We make it easier than ever to own a quality Arbortech chip body. Whether you are looking for your first new truck or an economical addition to your fleet, Arbortech chip body fits your image—quality, efficiency, performance.

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The Image Builder

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When quality work is your trademark, you need a quality image. Arbortech builds chip trucks that give your company a professional look and are equipped with all the performance features you need. Galvanneal steel body resists rust for years of service and good looks; big tool boxes organize your tools and carry them to the job site where you need them—adding to your efficiency; and convenient roof top ladder rack with heavy duty rubber coated rollers simplifies ladder storage and retrieval.

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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.

1988 L-8000 Ford tandem w/240 HP Ford Diesel 16 front, 44 rears, set back front axle, Allison automatic trans., mounted w/Big John AA90 tree spade in excellent condition. $70,000 or BO. 407-968-1045.

Established, complete tree service in Charlotte, N.C. One of the best places in the United States to relocate, according to the US Commerce Department. $100-150K gross annual sales. With equipment, $35K—without, $20K. After 9:30 p.m. call 704-596-2123.

Eeger Beever Model 200 chipper, 6-cylinder Ford gas engine, infeed system, 4 knife pocket, used 80 hours. $11,000 cash price; or down payment—$1000, 48 monthly payments of $299, buy-out $1. For additional information, please contact Scott Sargent, Bush Leasing, Inc., 800-766-2874.


1986 GMC 1-ton aluminum chip body truck by Southco - lightweight, rust proof, VGC, 28,000 miles, $12,000; 1984 Morbark chipper—gas engine, GC, $7,000. Lusk Tree Service, 919-924-5911.

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At just 8.6 pounds, our Shindaiwa 360 is one lightweight that really packs a wallop. It challenged some of the biggest names in the woods and left 'em in the dust.

**THE MOST POWER. THE LEAST WEIGHT.**

Our 360 delivers 2.5 horses of raw power right out of the box. Which makes the 360 the most powerful saw of its size on the market—powerful enough to handle 14" to 16" bars with ease. It's a perfectly balanced, lightweight, high-revving machine with an anti-vibe system so well designed that it makes wood cutting positively enjoyable. Even the sound of its exhaust tells you this baby was built to perform.

**SMALL ON SIZE. BIG ON FEATURES.**

The 360 works like a pro 'cause it's built like one. It's the only saw in its class with every one of these big pro saw features:

- A one-piece electronic ignition for fast, reliable starts; an adjustable clutch-driven automatic oil pump for better chain oil economy; a 2-ring piston for long-term performance; a 2-stage air filter for added engine protection; a captive recoil spring for long service life; a replaceable Micarta rope guide for easy maintenance; a one-piece 4-bolt muffler for added quiet and a fully adjustable carburetor that's boot mounted to absolutely eliminate vapor lock.

**SAFETY FIRST.**

Safety is enhanced by rear hand guards, safety chain brake, throttle interlock, low kick-back chain, a reversible low-kick sprocket nose bar and a rubber-coated chain catcher. All standard. The 360 also features a full 6-point anti-vibration system, so it's surprisingly comfortable to work with. It's less fatiguing. More productive.

**BUILT TO LAST.**

Our new 360 is built to log the hours. All of which will really fly by. Because unlike bulkier saws, the Shindaiwa 360 is actually fun to cut with.

**AND SPEAKING OF STRENGTH...**

Shindaiwa chain saws are backed by one of the strongest dealer networks in the country. So you'll always have the parts and service you need. When you need them.

**EVEN OUR GUARANTEE IS STRONG.**

We're so proud of our new Shindaiwa 360 that we back each one with a 7-day money back guarantee: Try our 360 for one full week. If you're not convinced it's the best small saw you've ever used, we'll buy it back. No questions asked.

That's one tough guarantee.

But then again, it's one tough saw.

shindaiwa

WE SIMPLY MAKE THEM BETTER.

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When you need strong tree crotch support, remember the 3R's...

Reinforce...
...the crotch of a tree with a prefabricated TREE-CROTCH™ Grip from Preformed Line Products. TREE-CROTCH Grips are manufactured from heavy coated galvanized steel, and have a strength capacity of 5,000 lbs. to provide consistent reinforcement for high stress areas.

The TREE-CROTCH Grip comes in three sizes: 20", 30", and 36", to accommodate short tree crotch lengths.

Reduce...
...costs by eliminating the need for common grade cable inventory and labor intensive serving methods. TREE-CROTCH Grips are easily installed and do not require any special tools, so chances of workmanship errors are reduced.

The specially designed captive loop holds the thimble securely in place, eliminating lost parts and making the overall appearance neat and uniform.

Relax...
...TREE-CROTCH Grips, like all PREFORMED™ products, are lab-tested and performance proven to maintain a standard of excellence unmatched in the industry.

Remember the 3 R's:
- Reinforce the tree crotch.
- Reduce costs, installation time, and workmanship error.
- Relax knowing you’ve chosen a quality PREFORMED product.

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Did you check out the TCI Expo '91 attendee brochure in this issue?

That's what the trade show is all about! The exhibitors are there to sell. I made some great deals on equipment in Richmond last year and plan to buy again this year in Columbus.

I sure did. You told me about the great seminar program they are going to have this year but I didn't know about all the equipment and supplies too!

You could use a new chipper and a couple of new saws.

You'll find those products plus aerial lifts, forestry bodies, stump grinders, sprayers and the best arborist supply companies. What are you waiting for? Fill out your registration form and send it in right away.

I'm going to find out what tree care is really all about. I'll see you in Columbus!

TCI Expo '91
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The Ohio Center
Columbus, Ohio

For More Information Contact Tree Care Industry Magazine:
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Amherst, NH 03031
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FAX: 603-672-2613

Sponsored by Tree Care Industry Magazine and the International Society of Arboriculture
I'd had a good weekend, a good night's sleep and I arrived at work early and ready to go; but everything was not going to go my way that Monday.

The boss was preoccupied as he gave us our assignment: "It's a simple take-down. Handle it."

My two trainees were late and looked like they hadn't slept since Friday. The battery on the chipper truck was dead so we had to jump start it. That made us late, so we didn't do a thorough job of checking our equipment.

When we got to the job, the homeowner told us we would have to finish the job that day so she wouldn't have to reschedule her appointments.

It went downhill from there. My men told me that our chain saws were dull. Then one said that the 150-foot bull rope I always carried on the truck had been used and cut in half. The final straw was finding that we barely had enough gas to fill our saws.

So, I had to send one man for gas and a new bull rope while I sharpened the chain saws. Meanwhile, the sky began to turn cloudy and dark.

By 10 a.m. we were ready to go but the sky was darker and the job wasn't so simple. The tree, a 30-inch red oak about 60 feet tall, was 10 feet from the house, overhung the garage from behind a chain link fence. The gate was on the other side of the garage. We would have to rope everything, drag the brush through the garden, around the garage and through the gate. The butt would have to be cut and wheelbarrowed to the truck. This was definitely a three-man job.

I explained to my men what I would do and what they were to do. Then I put on my magic feet and spiked my way up the tree. I couldn't start my chain saw once I got up there, but given the day's start I wasn't surprised.

By noon I had most of the top safely lowered to the ground and the guys had chipped most of the brush. When I came down for lunch, one of my men said he didn't feel well and wanted to go home. I spent my lunchtime convincing him to stay.

By 12:45 I was back up in the air ready to start butt hinging the rest of the tree. When I called for the bull rope to be sent up, one of the guys yelled back that I would have to wait a few minutes. The other helper, the one who had wanted to go home, was in the bathroom. Then it began to drizzle.

Well, I got the tree down with no damage. Then I had to buck everything up so we could move it to the truck and load it. By 4 the job was done. We were soaked from the rain and ready to go back to the shop when the homeowner came out and said, "Thanks guys. Good job!" Well, maybe it had been worth it.

When we pulled into the yard it was pouring. When the boss looked at my time sheet and saw that we had finished the removal, his poker face broke into a grin. " Didn't expect that you would do it, considering the weather and everything else," he said.

Well, that made it all worthwhile even though I was filthy, wet and exhausted.

The author has been in the tree care profession for many years, but wished to remain anonymous.

Do you have a story for From the Field? TCI will pay $50 for published articles. Submissions become the property of TCI and are subject to editing for grammar, style and length. Entries must be submitted by field workers and must bear the name of the worker and his employer 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.
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Model S-14 / S-12
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WHAT TREE CARE IS **REALLY** ALL ABOUT

The Second Annual Trade Show and Seminar Program
Sponsored by *Tree Care Industry* magazine,
a publication of the National Arborist Association,
and The International Society of Arboriculture

**DECEMBER 5 - 7, 1991**
**THE OHIO CENTER**
**COLUMBUS, OHIO**
What Tree Care Is Really All About

This is our theme for TCI Expo '91. Everything that concerns modern day arboriculture can be found here: equipment, supplies, services and informative seminars. TCI Expo '91 is the marketplace for arborists.

Last October, Tree Care Industry magazine and The International Society of Arboriculture teamed up to bring you TCI Expo '90 in Richmond, Virginia. Many called it the best trade show they ever attended. Here are but a few of the many positive comments we received:

"Congratulations on an excellent Expo at Richmond, Virginia. This was surely one of the best meetings and equipment demonstrations I have been to in the eighteen years or so I have been involved in arboriculture. I am looking forward to Columbus in 1991." - Richard H. Woods, J&S Tree & Landscaping Inc., Stow, Ohio.

"TCI Expo seminars in Richmond were informative, well organized and directed to the tree care industry. All our personnel in attendance walked away with more knowledge and enthusiasm than they had before attending the seminars." - Mike Jasso, Jasso Tree Service, Inc., Orion, Michigan.

"We made a good deal on equipment at TCI Expo. The show was great and the seminars were very worthwhile. We are planning to attend Expo in Columbus." - Dan & Pat Moran, Moran's Tree Service, Accokeek, Maryland.

"TCI Expo is a learning experience you cannot afford to miss. I plan to bring key personnel this year." - Kent Petersen, Petersen Tree Service, Minocqua, Wisconsin.

"TCI Expo had all types of equipment at the show. The vendors were very helpful, informing tree workers of the availability of new equipment. The seminars were very informative and worthwhile attending." - Jim Ward, John B. Ward & Company, Inc., Villanova, Pennsylvania.

"Good show! Networking is a great benefit. People have the same problems and successes. TCI Expo was well put together with lots of exhibitors. We are planning to attend Expo in Columbus." - Tracey Hartmier, Complete Tree Service Company, Carlisle, Ontario.

Yours peers have spoken! TCI Expo '91 will contain the same magic as last year's show. Begin by looking over our excellent seminar program and get ready to discover what tree care is really all about in Columbus!

SEMINAR PROGRAM

We've designed a seminar program that brings forth the most advanced tree care technology and management information available. We focused on topics relevant to today's marketplace and gathered the foremost authorities on these subjects. The result is an outstanding program featuring speakers who will deliver informative, interesting and above all, much needed sessions on all aspects of professional tree care.

Look over the list of excellent management and technical seminar offerings on the opposite page and select those that best meet your needs. We suggest that you bring along one or more associates from your firm to take advantage of as many seminars as possible and benefit from our multiple registration discount. Keep in mind that three of the seminars will offer pesticide applicator recertification credits and two of them are FREE!
Seminar #1  MAKE YOUR TREE SERVICE FIRM GROW

Walter Money is president of Guardian Tree Experts, a medium-size tree service firm in Rockville, Maryland. Walt has operated Guardian Tree Experts for over 25 years. His distinctive management style and keen business sense have made him very successful. He is one of the most dynamic public speakers in the tree care industry today. Let Walt help you Make Your Tree Service Firm Grow.

Seminar #2  HOW TO BE A CREW LEADER

Mark Tobin, president of Hartney/Greymont Tree Specialists, Needham, Massachusetts will describe How To Be A Crew Leader. Discover how Mark climbed the company ladder all the way to the top at Hartney/Greymont.

Seminar #3  PREVENTING CONSTRUCTION DAMAGE TO TREES

Steve Clark is president of Steve Clark & Associates, an urban forestry firm. Steve specializes in working with clients and their professional team to build projects while Preventing Construction Damage To Trees. Learn how you can help your clients protect their valuable property during construction.

Seminar #4  THE TOP DISEASES OF SHADE TREES

Dr. Chuck Powell is a professor of Plant Pathology at Ohio State University. Dr. Powell has done an extensive amount of research and teaching on The Top Diseases of Shade Trees. This seminar is FREE and offers recertification credit.

Seminar #5  EQUIPMENT FOR WASTE WOOD RECYCLING

Jack Haney, owner of B. Haney & Sons, Franklin Park, Illinois, has been recycling wood waste since 1971. He will tell you about purchasing and operating Equipment For Waste Wood Recycling.

Seminar #6  RECRUITING, RETAINING AND DEVELOPING FIELD PERSONNEL

Jim Perrone, a partner in the management and training consulting firm of Perrone-Ambrose Associates, will conduct a 2-hour workshop that you will not want to miss. Finding qualified help is tough enough so Recruiting, Retaining And Developing Field Personnel is vital to business growth. Jim has lectured to field personnel and corporate officers He knows the score.

Seminar #7  END USES FOR RECYCLED WOOD WASTE

Dr. Donald Rakow is an Assistant Professor of Landscape Horticulture at Cornell University. He has done extensive research on recycled wood waste. Dr. Rakow will tell you what the future holds in store for End Uses For Recycled Wood Waste.

Seminar #8  MANAGING TIME WITH POWER SCHEDULING

Dave de Sousa is a Production, Training and Safety Coordinator for F.A. Bartlett Tree Expert Company and he realizes that time is a limited resource. Let Dave explain how Managing Time With Power Scheduling can help you become more productive.

Seminar #9  EVERYTHING YOU EVER WANTED TO KNOW ABOUT PRUNING

H. Dennis P. Ryan III, Assistant Professor of Arboriculture and Urban Forestry, University of Massachusetts, will present a lively and enjoyable discussion on Everything You Ever Wanted To Know About Pruning.

Seminar #10  THE TOP INSECT PESTS OF SHADE TREES

Dr. David J. Shetlar, a Landscape Entomologist at Ohio State University, will discuss his latest findings for controlling The Top Insect Pests Of Shade Trees. This seminar is FREE and offers recertification credits.

Seminar #11  COST ANALYSIS MADE EASY

George Koziarz is president of George Koziarz and Associates, Inc., a financial consulting firm based in Bannockburn, Illinois. George will demonstrate Cost Analysis Made Easy and help you manage your financial resources more effectively.

Seminar #12  30 WAYS TO WORK SAFER AND SMARTER

Don Blair, President of Sierra Moreno Mercantile Company, is one of the most innovative people in the tree care industry. Whether you have listened to him before or not, you owe it to yourself to meet Don and discover 30 Ways To Work Safer And Smarter.

Seminar #13  THE LATEST IN IPM

Dr. Michael Raupp is a Research Entomologist at the University of Maryland and specializes in innovative methods used in IPM. Find out The Latest In IPM and receive recertification credits.
TRADE SHOW INFORMATION

ADMISSION to the industry’s largest trade show is FREE for everyone. Simply fill out a Registration Form. You will not be admitted without a TCI Expo ‘91 Badge.

Once inside, you can visit the more than 23,000 square feet of exhibits that will be on display at TCI Expo ‘91. Make informed buying decisions that will increase the productivity, performance and profitability of your firm. Whether you are looking for aerial lifts, chippers, stump grinders, chain saws or other arborist equipment and supplies, you will find it here.

Some of the companies who will be on hand are:

AERIAL LIFT OF CONNECTICUT
ALBIEZ INSURANCE AGENCY
ALLIANCE EQUIPMENT
ALTEC INDUSTRIES
AMERICAN ARBORIST SUPPLIES
AMERICAN INTERTOOL
AMERICAN SAFETY UTILITY CORP.
ARBORTECH
ARTISTIC ARBORIST
ASPLUNDH MANUFACTURING
BAKER EQUIPMENT
BANDIT INDUSTRIES
BARTLETT MANUFACTURING
D.A. BEAM ENTERPRISES
BEEVER SALES CORPORATION
BISHOP COMPANY
BRYAN EQUIPMENT
J.P. CARLTON COMPANY
CIBA-GEIGY CORP.
CREATIVE SALES
DOGGETT CORPORATION
ECHO, INC.
ENCAP PRODUCTS
ENGINE CENTER, INC.
FANNO SAW WORKS
FORESTRY SUPPLIERS
GROW GUN
HODGES MANUFACTURING
HOMELITE/TEXTRON
INDEPENDENT PROTECTION CO.
J.J. MAUGET
KARL KUEMMERLING INC.
LABONVILLE INC.
LANIER SUPPLY
LANPHEAR SUPPLY
LEVCO
NORTHEASTERN ASSOCIATES
PRACTICAL SOLUTIONS
RAYCO
ROOTS, INC.
SACHS-DOLMAR
SCHODORF TRUCK BODY
SHINDAIWA
SIERRA MORENO MERCANTILE
SOUTHCROSS INDUSTRIES
TECHNOLOGY MANAGEMENT
THE SHARP TOOL CO.
TIME MANUFACTURING
VERMEER
WESTERN TREE & LANDSCAPE SUP.

THE CITY OF COLUMBUS

Columbus is the state capital and one of the fastest growing cities in the United States. Home of Ohio State University, Columbus is a leader in education and information, which makes it an ideal site for a trade show.

The Ohio Center is located fifteen minutes from Port Columbus International Airport and is readily accessible by interstate highway. The city offers visitors reasonable hotel rates, fine restaurants and a friendly atmosphere.

AIR TRAVEL

United Airlines has been designated as the official carrier for the attendees of TCI Expo ‘91. United Airlines has agreed to offer a special discount fare to attendees of this year’s show. Save 45% on all unrestricted full coach tickets and 5% on promotional/restricted fares. This 5% discount is valid providing all rules and restrictions are met and is applicable for travel within the continental United States.

To obtain this discount, you or your travel agent must call United Airlines at 1-800-521-4041 and REFER TO FILE # 512 OW.

HOTEL INFORMATION

Rooms have been set aside at the Hyatt Regency Columbus which adjoins the Ohio Center. FILL OUT THE ENCLOSED HOTEL FORM AND MAIL IT TO THE HYATT REGENCY IMMEDIATELY. SPACE IS LIMITED.

There are six other hotels located in the downtown area. For more information about lodging, call The Greater Columbus Convention and Visitors Bureau at 1-800-234-COLS.

OTHER TCI EXPO 91 HIGHLIGHTS

TCI EXPO ’91 PASSPORT

Discover what tree care is really all about! Each registered attendee will receive a TCI Expo ’91 Passport which can be used to receive prizes at the conclusion of each day. Simply stop by every booth and have a sticker placed over that booth number on your passport and hand it in.

CELEBRATION ’91

Come help us celebrate after the first day of the meeting. Socialize with exhibitors and fellow arborists at the Hyatt Regency. As our guest, you can enjoy beer, wine, soft drinks and a variety of snacks. The celebrating begins on Thursday evening, December 5th at 6:00 pm. Admission by ticket only.

COFFEE BREAKS

Coffee service will be provided during the Thursday morning registration and between seminar sessions on Friday and Saturday mornings.

FOOD SERVICE FACILITIES

Concession stand service will be available in the Exhibit Area during Trade Show hours for lunch and snacks. There are also many fine restaurants located nearby.
<table>
<thead>
<tr>
<th>Time</th>
<th>Thursday, December 5th</th>
<th>Friday, December 6th</th>
<th>Saturday, December 7th</th>
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</thead>
<tbody>
<tr>
<td>8:00 am</td>
<td>Registration Opens</td>
<td>Registration Opens</td>
<td>Registration Opens</td>
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<td></td>
<td>Coffee in the Lobby</td>
<td>Seminar #4: The Top Diseases Of Shade Trees</td>
<td>Seminar #10: The Top Insect Pests Of Shade Trees</td>
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<td></td>
<td></td>
<td>Dr. Chuck Powell</td>
<td>Dr. David Shetlar</td>
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<td>FREE (Recertification Credits Available)</td>
<td>FREE (Recertification Credits Available)</td>
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<tr>
<td>9:00 am</td>
<td>Seminar #1: Make Your Tree Service Firm Grow</td>
<td>Seminar #5: Equipment For Waste Wood Recycling</td>
<td>Seminar #11: Cost Analysis Made Easy</td>
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<td></td>
<td>Walter Money</td>
<td>Jack Haney</td>
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<td></td>
<td>Special Value Seminar</td>
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<td>Seminar #12: Mini-Workshop</td>
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<td>(2 Hours)</td>
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<td>11:00 am</td>
<td>Coffee Break</td>
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<td>11:30 am</td>
<td>Exposition Opens</td>
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<tr>
<td>4:00 pm</td>
<td>Seminar #2: How To Be A Crew Leader</td>
<td>Seminar #6: Mini-Workshop (2 Hours)</td>
<td>Seminar #13: The Latest In IPM</td>
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<td></td>
<td>Mark Tobin</td>
<td>Recruiting, Retaining And Developing Field Personnel</td>
<td>Dr. Michael Raupp</td>
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<td></td>
<td>Special Value Seminar</td>
<td>Jim Perrone</td>
<td>FREE (Recertification Credits Available)</td>
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<tr>
<td>6:00 pm</td>
<td>Celebration '91 at the Hyatt Regency</td>
<td>Coffee Break</td>
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<td>Sponsored by TCI</td>
<td>Exposition Opens</td>
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<tr>
<td>10:00 am</td>
<td>Exposition Closes</td>
<td>Coffee Break</td>
<td></td>
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<tr>
<td>10:15 am</td>
<td>Seminar #7: End Uses For Recycled Wood Waste</td>
<td>Seminar #8: Managing Time With Power Scheduling</td>
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<tr>
<td></td>
<td>Dr. Donald Rakow</td>
<td>Dave de Sousa</td>
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<tr>
<td>1:30 pm</td>
<td>Seminar #9: Everything You Ever Wanted To Know About Pruning</td>
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<td>H. Dennis P. Ryan III</td>
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<tr>
<td>4:00 pm</td>
<td></td>
<td></td>
<td>Exposition Closes</td>
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</table>
REGISTRATION INFORMATION

All attendees must be registered and given a TCI Expo 91 Badge before entering the Trade Show. If you are not pre-registered, please sign in at the Registration Desk upon your arrival. Admission to the Trade Show is FREE!

Seminar attendees must register in advance or at the door to receive tickets for the seminars they wish to attend.

DISCOUNT PACKAGES

For TCI Expo 91 we put together a dynamite seminar program and devised a series of seminar package discounts that enable you to save up to 50% off the total seminar package cost!

The discounts are arranged by number of seminar hours you are attending, excluding the FREE seminars. The registration form on the following page will enable you to figure your discount but first, let's go through the discounts that are available.

THE 7 HOUR SEMINAR DEAL

If your total registered seminar hours equals 7, excluding FREE seminars, then you are entitled to a $75 discount on your total seminar value package.

THE 6 HOUR SEMINAR DEAL

If your total registered seminar hours equals 6, excluding FREE seminars, then you are entitled to a $65 discount on your total seminar value package.

THE 5 HOUR SEMINAR DEAL

If your total registered seminar hours equals 5, excluding FREE seminars, then you are entitled to a $50 discount on your total seminar value package.

BRING THE COMPANY

Discounts are available if you bring one or more associates from your firm. Simply photocopy your registration form and fill it out for your employees and mail them all in together.

If you registered for 7 seminar hours, excluding FREE seminars, and you are bringing another member of your company, you can take an additional $15 discount on your total seminar package value.

Your company associates are entitled to an associate discount on their seminar packages, depending on how many seminar hours they sign up for.

You must keep in mind that if you registered for 7 seminar hours and your associate registered for 5 seminar hours, your associate is not entitled to your $15 discount for 7 hours but would enjoy a $10 discount under the 5 Hour Seminar Deal.

You can receive a Company Associate discount regardless of how many seminar hours you register for.

REGISTER EARLY!

Send in your registration form before November 1, 1991 and receive a discount on your total seminar package value, excluding FREE seminars. Again, this discount applies to all seminar packages but the amount you may deduct depends upon your total seminar hours.

ATTEND SPECIAL VALUE SEMINAR!

Be sure to sign up for Seminar #1, Make Your Tree Service Firm Grow, with Mr. Walter Money. You will receive 2 hours of Walt's wisdom for the price of a 1 hour seminar. It's our way of saying, "Welcome to TCI Expo!"

REGISTRATION

It is very important that you read and understand the registration form before you begin calculating your seminar package. Begin by circling the number of each seminar you wish to attend being careful not to choose two seminars which occur at the same time. Then add the total seminar hours of your choices and begin your cost calculations.

Also, make sure you:

Photocopy your completed registration form for your records;

Photocopy the blank registration form and use copies to register additional members of your firm;

Go back and check the boxes on page 3 next to the seminar programs you have registered for;

Mail all registration forms together and get them to us before November 1st to earn the early registration discount and avoid long registration lines.

Get lots of rest before you arrive in Columbus and get ready to discover what tree care is really all about!

If you have any questions regarding registration, feel free to call Tree Care Industry @ 1-800-733-2622 and we'll gladly help you any way we can.
REGISTRATION FORM

NAME ____________________________________________

COMPANY ____________________________________________

ADDRESS ____________________________________________

CITY ______ STATE ______ ZIP ______

TELEPHONE NUMBER __________________________ DATE ________

Circle the number of each seminar you wish to attend. Be careful not to pick two seminars which occur at the same
time. Total the seminar hours at the bottom of Column 1, excluding FREE seminars. Make a copy of the registration
form for your records. Mail the original, with your check or credit card information to:

TCI EXPO ’91, P.O. BOX 1094, AMHERST, NH 03031-1094 (800) 733-2622

*Denotes seminars where Pesticide Applicator Recertification Credits are offered.

December 5th

#1 - 9:00 am Make Your Tree Service Firm Grow (Special Value)

#2 - 4:00 pm How To Be A Crew Leader Preventing Construction Damage To Trees

#3 - 4:00 pm Trees*

December 6th

#4 - 8:00 am The Top Diseases of Shade Trees*

#5 - 9:00 am Equipment For Waste Wood Recycling

#6 - 9:00 am Recruiting, Retaining And Developing Field Personnel

#7 - 10:15 am End Uses For Recycled Wood Waste

#8 - 4:00 pm Managing Time With Power Scheduling

#9 - 4:00 pm Everything You Ever Wanted To Know About Pruning

December 7th

#10 - 8:00 am The Top Insect Pests of Shade Trees*

#11 - 9:00 am Cost Analysis Made Easy

#12 - 9:00 am 30 Ways To Work Safer And Smarter

#13 - 10:15 am The Latest In IPM*

CALCULATIONS:

Enter Total Seminar Hours (TSH) from the bottom of Column 1. If TSH equals 7, go to Box A. If TSH equals 6, go to Box B. If TSH equals 5, go to Box C. If TSH is less than 5, go to Box D.

A. Your 7 Hour Seminar Package Value is worth: (1) $210

Discounts:

$75 for 7 Hour Registration
$15 for Company Associate
$15 for Early Registration (Before 11/1)
Total Discounts (Subtract from Line 1)

Total Registration Amount Due:

FREE

B. Your 6 Hour Seminar Package Value is worth: (2) $180

Discounts:

$65 for 6 Hour Registration
$10 for Company Associate
$10 for Early Registration (Before 11/1)
Total Discounts (Subtract from Line 2)

Total Registration Amount Due:

FREE

C. Your 5 Hour Seminar Package Value is worth: (3) $150

Discounts:

$50 for 5 Hour Registration
$10 for Company Associate
$10 for Early Registration (Before 11/1)
Total Discounts (Subtract from Line 3)

Total Registration Amount Due:

D. Multiply TSH by $30 and enter here: (4) x .10

If paying by Visa or Mastercard:
Credit Card Number: __________________________ Expiration Date: __________

Total Registration Amount Due:

Be sure to see checklist on back side of this page.

Check Enclosed For: __________________________

Signature: __________________________
**CHECKLIST FOR REGISTRATION FORM:**

<table>
<thead>
<tr>
<th>Check Item</th>
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<tbody>
<tr>
<td>Made a photo copy of the original form.</td>
<td></td>
</tr>
<tr>
<td>Filled out registration form completely.</td>
<td></td>
</tr>
<tr>
<td>Did not sign up for more than 7 seminar hours (excluding FREE seminars).</td>
<td></td>
</tr>
<tr>
<td>Took advantage of all entitled discounts.</td>
<td></td>
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<tr>
<td>Double checked all cost calculations.</td>
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<tr>
<td>If bringing another company member, enclosed a copy of their form.</td>
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<tr>
<td>Mailed registration form before November 1, 1991</td>
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<tr>
<td>Enclosed check or credit card information.</td>
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<tr>
<td>Checked off the seminars on page 3 I am attending for my reference.</td>
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</tbody>
</table>

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**SEE YOU IN COLUMBUS!**

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Write or call for more information:
TCI Expo '91
P.O. Box 1094
Amherst, NH 03031
800-733-2622
FAX: 603-672-2613