

# 3 days in July...

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Don't miss the showcase of new products...free seminars...  
outdoor demonstration area...  
Reba McEntire on Monday night...  
Model Store...  
All-American Engine Repair Championship...  
Hall of Yesteryear...and much more.

Free pre-registration. (\$10 per person if you register at the door.)  
Low per-diem rates in Louisville.  
Airline discounts.

*New for '91 — seminars for commercial end-users on Saturday afternoon.*

## July 1991

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★ Louisville, KY



## EXPO 91

International Lawn, Garden & Power Equipment Expo  
July 28-30, 1991  
Ky. Fair & Exposition Center  
Louisville, Ky.

Call today for information and a registration form:  
**1-800-558-8767** or 502-473-1992  
FAX 502-473-1999

Or write: EXPO 91, 6100 Dutchmans Ln., 6th floor,  
Louisville, KY 40205

## New aerification gear hits the market

From Turf-Tec International comes a new aerification attachment that the company says allows for deep aerifying on greens without disturbing the putting surface.

The Verti-Groove machine closes six-inch deep grooves on greens after soil has been removed. Turf-Tec says



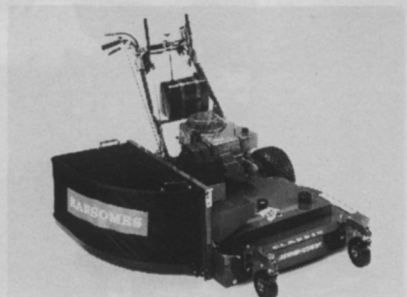
the aerifier has been fully tested and routine aerifying takes less time than standard methods now in use.

**Circle No. 191 on Reader Inquiry Card**

## Economic midsize mower is steady workhorse

Ransomes announces its Bob-Cat Mid-Size Classic walk-behind is now available to commercial landscapers and LCOs who seek a low fuel consumption model at an affordable price.

The walk-behind features a 12.5 hp engine, 11- to 15-acre eight-hour mowing capability and a good selection of grass catcher options. Ransomes says the mower is of welded steel construction and is equipped with operator presence controls.



**Circle No. 192 on Reader Inquiry Card**

## High performance blender is portable, affordable

Pioneer Peat and Dakota Blenders introduces the Model 2200 soil blender that the company says is specifically designed for golf course contractors.

The blender has a 200 tons per hour output, is priced about a third less than other competing models, and is easily towed by a pickup truck.



Equipped with a mechanical drive, the unit has a built-in stacking conveyor.

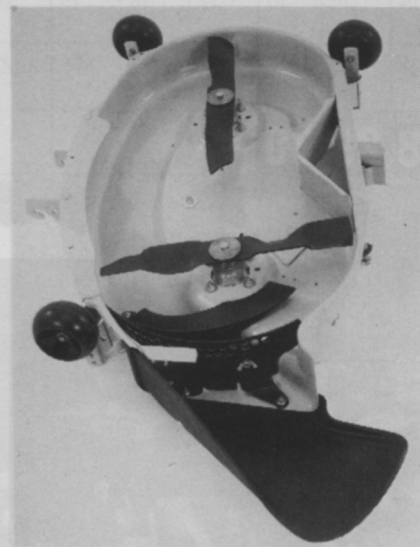
A special limited introductory price and testing kits are available.

**Circle No. 193 on Reader Inquiry Card**

## Mulching attachment adjusts to conditions

From John Deere comes the Tricycler mulching attachment that the company says can perform recycling and mulching throughout the season.

The adjustable Tricycler is equipped with special mulching blades (in 30- and 36-inch decks) and variable adjustment heights for different con-



ditions. A deflector ramp also re-directs clippings for re-cutting.

Mulching leaves under dry conditions includes pulverizing the material into tiny bits which are then blown back into the lawn. Adjustments also allow for other settings to respond to lawn conditions.

**Circle No. 194 on Reader Inquiry Card**

## New equipment cleaner cuts through grime

From Kalo, Inc. comes Tank Kleen, a cleaner versatile enough to remove dirt, grime, grease and pesticide and fertilizer residues.

Kalo says Tank Kleen also helps

neutralize acid-based pesticides which can lessen equipment corrosion and is effective against spray mixture contamination and plugged up pumps and nozzles. Quart and gal-



lon size containers are available.  
**Circle No. 200 on Reader Inquiry Card**

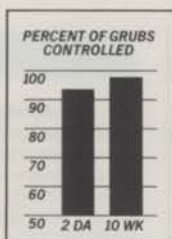
## EXPO from page 12

of the expo's gross profits, up to \$400,000 or 54% over \$450,000. ALCA's share will be 25.3% for the lesser amount, sliding down to 24.0% for the higher amount. The only organization to receive a higher percentage as gross profits increase is the Professional Grounds Management Society (PGMS), which goes from 19.7% to 22.0%.

"The discussions have been spirited," said Andrews. "The turning point was when the organizations agreed to appoint three principles to discuss the agreement, instead of working through committees. We hit it off right away, and could talk about some of the issues that had to be talked about."

With the agreement's official signing, plans can now go forward with having the 1992 show at the Indianapolis (Ind.) Convention Center. Andrews said that the 1992 equipment demo area will be held in the infield at the Indianapolis 500 racetrack. □

When it comes to grubs, it's not enough just to suppress them.



Compiled from 18 university trials, 1985-86.

You want to squash them. Pulverize them. Grind them into dust. Send the little buggers to the root zone eternal.

And who could blame you?

After all, this one creature has probably baffled more turf professionals, made a mockery of more chemical company claims, than all other turf

insects combined.

Triumph® is changing all that.

Unlike most insecticides, which are

unpredictable at best, Triumph

has been proven in over ten years of testing

to consistently rid turf of over 90 percent of grubs present. And within just 2-3 days of application.

Better yet, once

applied to the soil, Triumph keeps on working for up to 10 weeks, depending on the target

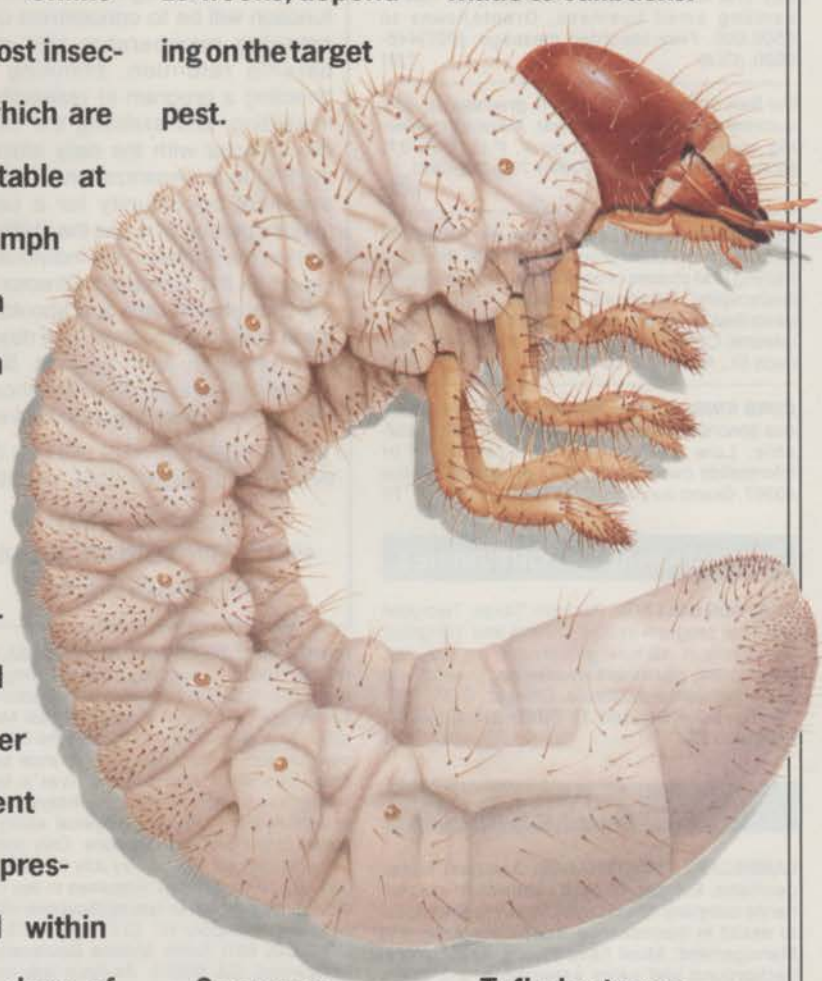
pest.

So one preventive application in late summer or early fall is all that's needed to protect turf from costly

grub damage.

And protect you from losing what profits you have made to callbacks.

To find out more, contact your turf products distributor or Ciba-Geigy representative. **TRIUMPH**



**HOW TO  
SQUASH A GRUB.**

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# CLASSIFIEDS

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**BOX NUMBER REPLIES:** Mail box number replies to: LANDSCAPE MANAGEMENT, Classified Ad Department, 1 East First St., Duluth, MN 55802. Please include box number in address.

## BUSINESS OPPORTUNITIES

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**LET THE GOVERNMENT FINANCE** your new or existing small business. Grants/loans to \$500,000. Free recorded message: (707)448-0330. (OLB) 7/91

For Sale or lease - 17,000 sq. ft. greenhouse, fully automated with hot water heat. Automatic watering system and vent control. P.O. Box 27, McGaheysville, Virginia 22840. 703-289-9661. 6/91

**LEARN** Professional Landscaping and Gardening at home. Accredited program provides thorough training in all phases of commercial and residential landscaping. Certificate awarded. Free booklet describes program and opportunities in detail. Lifetime Career Schools, Dept. A-480, 101 Harrison St., Archbald, PA 18403. 9/91

**CURB KING:** Curbing machine that lays continuous concrete landscape borders. Financing available. Low investment, high returns. For information call 303-434-5337 or write P.O. Box 40567, Grand Junction, CO 81504. TF

## EDUCATIONAL OPPORTUNITIES

**GRAYSON COLLEGE,** Denison, Texas. Two-year technical program in Golf Course and Turfgrass Management. 18-hole golf course on campus. Dormitories, placement assistance, financial aid and scholarships available. Contact: GCC, 6101 Grayson Drive, Denison, TX 75020. 214-465-6030, Extension 253. 6/91

## HELP WANTED

**LANDSCAPE MAINTENANCE:** Assistant Manager/Sales Estimating. Well established maintenance company needs highly motivated individual to assist in maintenance Sales-Estimating and Management. Must have strong horticultural background and sales experience, 2-5 years proven experience BS or BA in horticulture, landscape management or related field. Good communications skills, professional appearance. Salary plus benefits. Send resume to: Mr. David DeBalli, Golden California Landscape Co., 102 Union Street, Vallejo, CA 94590. EOE. 6/91

Assistant Manager needed for Sod Operation located in Louisburg, NC, 40 miles N.E. of Raleigh. Turf related employment history a plus. Degree in Agronomy or Turf related field required. Excellent salary and benefits available. Send resume to United Turf, Inc., Rt. 1 Box 170, Powells Point, NC 27966. 6/91

"Consider all of your employment options in the irrigation and landscape industries. Call **Florapersonnel**, the international employee search firm for the ornamental horticulture industry. Completely confidential. Employer pays fee. **Florapersonnel, Inc.**, 2180 West S.R. 434, Suite 6152, Longwood, FL 32779-5008. Phone 407-682-5151, Fax 407-682-2318. Jeff Brower, Joe Dalton, Bob Zahra, CPC." TF

## HELP WANTED DIRECTOR OF MARKETING

Professional Grounds Management Society is seeking an aggressive and highly motivated individual to manage our marketing program. The primary function will be to concentrate on increasing membership and membership retention, planning and directing a program of research and marketing, and assisting the Executive Director with the daily affairs of the P.G.M.S. Organization. This is an excellent opportunity for a career minded person who has the abilities to market the society. This individual will report to the Executive Director and the Executive Board and should reside in the Maryland area. Job description furnished upon request. Salary and benefits based on experience. Incentive bonuses for goal achieved.

SEND RESUME AND LETTER OF INTEREST BEFORE JUNE 15, 1991 to:

THOMAS L. SMITH  
4521 SPRING GROVE AVENUE  
CINCINNATI, OH 45232

**LANDSCAPE SUPERVISOR:** \$2,959-\$3,581 per month. (Salary subject to Cost of Living Adjustment effective July 1). Under the direction of the Landscape and Building Maintenance Manager, plans, organizes, and coordinates the City's park, median, and streetscape maintenance services. Requires valid California driver's license; willingness to work overtime, holidays and weekends if required; and the physical ability as required to perform job functions. Only completed City applications received by July 12, 1991, at 5:00 p.m. will be considered. Resumes in lieu of applications, incomplete or late applications will not be considered. Apply to: CITY OF WEST HOLLYWOOD, 8611 Santa Monica Boulevard, West Hollywood, CA 90069. 24-hour job hotline - (213)854-7309. AA/EOE. Women and minorities encouraged to apply. Employment contingent upon proof of authorization to work in this country. 6/91

**GOLF COURSE GREENSKEEPER/TECHNICIAN:** The City of Wood River is seeking a qualified individual to fill a new full-time position at Belk Park Golf Course. Belk Park is currently the #2 rated municipal golf course in the metro St. Louis area. The ideal applicant will have a B.S. degree in horticulture, turf management or related field with at least 2 years work experience in golf course management with one year of personnel supervision. All work experience in excess of two years may waive the educational requirement. Starting salary at \$17,000 with scheduled increases, excellent benefits and professional atmosphere. City residency is required; current qualified residents will receive priority. Interested applicants should submit resumes to: Jeff Stassi, Director, Wood River Parks & Recreation, 633 Wood River Avenue, Wood River, IL 62095. Position open until filled with initial screening of resumes received by June 14, 1991. 6/91

## FOR SALE

**BULK HARDWOOD:** Pine and Cypress mulches, woodchips, lumber, timbers, stone products and many other landscape and nursery supplies. Express delivery and UPS next day shipment. Call today. GARICK and LANDSCAPERS WHOLESALE, INC. 1-800-322-7700, nationwide. In Ohio, 1-800-631-1395. 6/91

**SPYDERS - New/Used/Rebuilt.** New Kohler engines, short blocks and a complete line of engines and Spyder replacement parts. New Style Nichols-Fairfield Torque Hub Kits, heavy duty Wilton Caster Kits, Remote Air Cleaner Kits, heavy duty Carriage Side Plates. We repair and rebuild hydraulic pumps and motors for your Spyder. Same day service. Call or Write: Mobile Lift Parts, Inc., 5402 Edgewood Rd., Crystal Lake, IL 60012. 815-455-7363; 1-800-397-7509. 6/91

**FOR SALE:** Two used Brouwer Harvesters - reconditioned. Used Brouwer 7 gang manual lift mowers. New and used Roseman gang mowers and Brillion seeders. Hitch hikers, new and used in stock. New and used Kubota and Ford tractors. Land Pride Equipment. - McCord Terra Tires. Huber Ranch Sod Nursery, Inc., Schneider, IN. Phone: 219-552-0552. 6/91

**PUMPS:** Reconditioned Wanner Hydra-Cell D-10, D-25 and John Bean Pumps. New and reconditioned parts and service for your pumps. Industrial Services Company, 2727 Rome Corners Road, Galena, Ohio 43021. Call Jim Hughes (614)965-4112. 6/91

**BENT GRASS available for immediate pick-up or delivery.** For information call Jade Run Turf and Sod Farm: 800-332-1220. 12/91

**HYDRO-MULCHERS AND STRAW BLOWERS:** New and used. JAMES LINCOLN CORPORATION, 3220 S. Jupiter Rd., Garland, TX 75041. (214)840-2440, (800)527-2304. TF

**FREE PARTS CATALOG:** Commercial OEM quality mower parts guaranteed to fit 32" to 61" walk-behind mowers. Blades, belts, filters, catchers, trimmer line and engines to fit Bobcat, Bunton, Kees, Scag and Exmark. Order toll free 24 hrs. a day 1-800-343-4333. Lawn Care Parts Unlimited delivers savings coast to coast!!! 6/91

**KAUAI, HAWAII. QUAINT 2 ACRE NURSERY AND GARDEN CENTER FOR SALE. OFFICE/APARTMENT. BARN/NURSERY DISPLAY AREA. (808)822-2019. P.O. BOX 538, ANAHOLA, HI 96703. 6/91**

**AKRON LANDSCAPE SUPPLY.** Complete line of commercial walk behind mower parts, air filters, blades, monofilament line and accessories. Call 1-800-666-5344. 6/91

**PIPE LOCATOR INEXPENSIVE!** Locates, traces underground drain, water pipe lines of clay, PVC, ABS, steel, cement. Finds sprinklers, valves, clogs. Bloch Company, Box 18058, Cleveland, Ohio 44118. (216)371-0979. TF

Jacobsen - E10 - 7 units, rebuilt mowers. Excellent condition, \$6,100. 5 gang Toro, good condition. \$750. (501)664-2136 or (501)776-3802. 6/91

# On a golf course a bad score should be the only thing that stinks.

Foul odors, algae and sludge in golf course ponds are enough to ruin anyone's game. The results of poor water management can be unsightly, smelly and costly.

Now Otterbine has developed CONCEPT<sub>2</sub>, the new high-technology surface aerators that can revolutionize your approach to water quality management.

CONCEPT<sub>2</sub> High Volume aerators are built to last, made of stainless steel and tough, versatile thermoplastics, with a rugged, custom built motor and a virtually unbreakable stainless steel prop designed to handle large volumes of water.

And CONCEPT<sub>2</sub> offers almost unlimited versatility, with easily installed, totally interchangeable spray patterns.

SUNBURST<sub>2</sub> in Otterbine's CONCEPT<sub>2</sub> line answers the challenge of producing a sparkling water display with minimal effect on pumping rates.

CONCEPT<sub>2</sub> and SUNBURST<sub>2</sub>, fulfill the Otterbine tradition of scientifically designed, highly efficient, compact, self-contained aeration systems. They are simple to install and economical to operate.

They need no foundation, external pumps, or other costly plumbing fixtures. All Otterbine Aerators are safety tested and approved by the Electrical Testing Laboratory.

Call or write, today, to find out how CONCEPT<sub>2</sub> can help you keep your water quality up to par.

SUNBURST<sub>2</sub>

CONCEPT<sub>2</sub> High Volume



## Water works with Otterbine.

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# AD INDEX

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**Meyer Z-52 zoysia sod, bermuda-free, forklift delivery to the Mid-Atlantic region.** Oakwood Sod Farm, Salisbury, MD 301-742-3086. 7/91

**LAWN SEED:** Wholesale. Full line of top quality grasses. Improved bluegrass varieties, tall fescues and fine bladed ryegrasses. We specialize in custom mixing. Olinger Seed Company, 89 Hanna Parkway, Akron, OH 44319. Call collect (216)724-1266. TF

**PROPERTY MAINTENANCE COMPANY - DENVER, COLORADO:** Over eight years strong growth. Sales \$733,000. Extremely profitable. \$75,000 down. Seller will finance. Omni Business Brokers (303)753-1233. 6/91

**REINCO HYDROGRASSERS** and power mulchers in stock. Opdyke Inc. (Philadelphia Area) 215-721-4444. TF

**PAUL FLORENCE Turfgrass:** Quality seed for the Turf Professional. Elite Bluegrasses, Fine-Leaf Ryegrasses, and Turf-Type Tall Fescues. Custom mixing our specialty. Silva-Fiber mulch and supplies for hydro-seeders. Quality Elite Bluegrass Sod. Call us! (513)642-7487. 13600 Watkins Rd., Marysville, OH 43040. TF

**QUALITY TURF GRASSES:** Sod or sprigs. Meyer Z-52, Tifgreen II, Tifdwarf, Tifway. Sprig planting available. Quail Valley Farm, Inc. 1-800-666-0007. 6/91

**FOR SALE:** Landscaping, Maintenance, tree service, and supply business Southwest Pennsylvania. All trucks, equipment and accounts included. 3 Dumps, 14X4 P.U. Snow plows, Cinder Spreader. 1 Hi-Lift. Bucket truck and Chipper, mowers, lawn tractors and miscellaneous equipment. Asking \$50,000. Serious inquiries only. Owner relocating for health reasons. P.O. Box 794, Indiana, PA 15701. 6/91

**Sod, sprigs, row planting, strip sodding, solid sodding, fairway renovations, complete turn-key jobs. 16 yrs. golf course experience.** 1-800-458-4756, DOUBLE SPRINGS GRASS FARM, Searcy, Arkansas. TF

**FOR SALE - HYDROSEEDER - FINN TITAN 3000:** Very good condition. John Deere diesel engine with 800 hours. Mounted on a 1978 Mack 685. \$32,000. 216-539-4450. 6/91

**'86 ROTOMIST BLOWER** for sale: 500 psi bean pump powered by a 4 cyl. Ford gas engine. 250 gal. tank. Contact Mike Young at Edmonds Landscaping, Halifax, Nova Scotia, Canada, 1-902-423-8174, Fax 1-902-455-9956. 6/91

**NEW AND USED BROWER EQUIPMENT:** Mowers - VACS - Fork Lifts - Harvesters - and full line of replacement parts. Contact Glenn or Ed Markham at 1-800-458-3644. TF

**PENNSYLVANIA GROWN SOD:** PENNCROSS Bentgrass-Fourway Blend of BLUEGRASS-BLUEGRASS/RYEGRASS Blend-Shipped via our trucks - forklift unloaded. VICNOR FARMS, INC., Connoquenessing, PA 16027. 800-842-0461 6/91

**Finn Hydroseeders, Mulch Spreaders, Krimpers, Pit Burners, Fiber Mulch & Tackifiers.** New & Used. Wolbert & Master, Inc., P.O. Box 292, White Marsh, MD 21162, 301-335-9300, 1-800-234-7645. TF

Jacobsen HF5, Lightweight Fairway Mower, diesel, sharpened, \$7,900. Toro Greensmower, sharpened, \$3,300. Jacobsen Greensmower, sharpened, \$3,300. '86 Ransomes 213-D, Kubota Diesel, sharpened, \$8,400. '85 Jacobsen 5-ganged Hydraulic Fairway Mower with Power Pac, sharpened, \$5,250. Photos available. Call for information 313-653-5695. 6/91

## SERVICES

**TRAINING PROGRAMS:** Effectively train your new and experienced employees in the least amount of time with minimal management involvement. Complete weekly lesson packages including handouts, quizzes and documentation forms. Train at your location, at your convenience. Topics include pesticide safety and handling, agronomic and horticultural issues, customer service and sales, driver safety and more. Both lawn and tree and shrub care programs available. Recertification credits often available. Pesticide Control Technology Services. Call Paul Skorupa at 401-294-1384. 6/91

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## MISCELLANEOUS

**FREE CATALOG** of training videotapes including Irrigation, Pesticide Use & Safety, Arboriculture, Equipment Maintenance, Pruning, Plant Selection, Fertilizers, Planting Techniques, Turf Management, Xeriscape, Landscape Design. **\$5.00 Sample Video** includes \$10 Discount Coupon. Satisfaction Guaranteed! Check, Visa, MasterCard. VEP, California Polytechnic State University, San Luis Obispo, CA 93407. 1-800-235-4146. 8/91

## SOFTWARE

**BOTANICUS-Tropical Plant Encyclopedia** for IBM & Compatibles. Requires 256K, color graphics, printer, hard disk (Opt). Hundreds of trees, palms, shrubs, groundcovers, grasses & weeds. For pros or hobbyists. Send \$49.95 + \$2.50 S/H to: **BOTANICUS SOFTWARE**, PO Box 39619, Fort Lauderdale, FL 33339. Includes next two releases. 7/91

## USED EQUIPMENT

**NEW and USED EQUIPMENT--Asplundh, Hi Ranger and Lift-all forestry bucket trucks, Chipmores wood chippers. Mirk, Inc., (216)669-3567, (216)669-3562, 7629 Chippewa Road, Orrville, Ohio 44667. TF**

**BUCKET TRUCKS, Straight Stick, Corner Mount and Knuckle Boom Cranes. Brush Chippers - New Asplundh (Morbark Disc Type), New Asplundh Drum Type. Best prices anywhere. Used Chippers - Asplundh, Woodchuck, etc. 2 to 8 usually in stock. Sprayers, Dumps, Stakes, Log Loaders, Crew Cab Chip Box Dumps, Railroad Trucks, 50 in stock. Sold as is or reconditioned. Opdyke's, Hatfield (Philadelphia Area) 215-721-4444. TF**

**BUCKET TRUCK:** Hi Ranger 65', 57', 50'. Skyworkers with chip boxes. Asplundh bucket trucks with chip boxes. Asplundh brush chippers. Bean 55 gal. sprayers. Pete Mainka Enterprises, 633 Cecilia Drive, Pewaukee, WI 53072. 414-691-4306. TF

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# Deutz Light. Less Weight. Works Great.

The new small engines from Deutz take off the pounds and pour on the power. These modern, air-cooled diesels come in 1- and 2-cylinder sizes rated from 4 - 28 hp.

The MD and RD Series deliver quiet, hard-working performance in a sleek, compact package, and they offer big-engine features like direct injection, pressure lubrication, and hardened steel crankshafts.

Because of their compact size and light weight, they fit right in where gasoline engines typically have been used. They're ideal for use in small, hard-working equipment, providing diesel engine durability and economical operation in every application.

And they're backed by Deutz, with parts, and service support available through more than 600 dealers and distributors in North America.

The new MD and RD Series air-cooled diesel engines from Deutz. Light in weight, heavy on performance.



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Norcross, Georgia 30093  
(404) 564-7100  
Fax: (404) 564-7222

KHD Canada, Inc.  
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Ville St. Laurent  
Quebec, Canada H4R 2A3  
(514) 335-3150 Fax: (514) 332-4173

# PROBLEM MANAGEMENT

## Ag chemicals and trees

**Problem:** Our hard and red maple resources are in decline. People blame acid rain, drought, exhaust fumes and other sources. How much effect does the use of agricultural chemicals have on the overall health of trees? Most of the trees in question are on fence lines where their crowns and root systems extend into the fields. Since the fine root hairs and feeder roots lay within 18 inches of the service, and the root systems extend well into the field, could herbicides, insecticides or other chemicals not be taken up by the tree and cause a change to its cell structure? (Ontario, Canada)

**Solution:** I am not familiar with the adverse effect, if any, of agricultural pesticides (herbicides, insecticides and fungicides) on nearby adjacent trees. Proper application of the above products according to label specifications should not present any problem. Based on my limited experience in working with corn, soybean, alfalfa and some fruit tree culture in clay soils, I haven't seen any phytotoxicity or adverse problems on non-target nearby fence line trees. The effect may be different in sandy soils because of the potential for leaching. Still, I do not anticipate a serious problem.

Examine the leaves, twig growth and root system. Most of these will show specific symptoms and patterns of injury. Based on this, tissue diagnosis can be done.

Herbicides will show specific leaf symptoms if they come in contact with agricultural crops or any other sensitive plants. Depending upon the products used, the leaves may show twisting, curling, cupping with veins pulled together; the leaves may be bleached or plants may show degrees of decline.

Acid rain, drought and exhaust fumes might be a partial or total cause. It is difficult to speculate without studying the problem on-site.

We have seen various degrees of drought symptoms different plants produced over the past two to three years. Drought, combined with rainy springs, have caused a less than ideal growing environment. Whatever happens to the root will adversely affect the crown. If the crown is injured it will produce less sugar for the future years; the absorbing root development and establishment will lessen, and decline follows.

Deicing salt used on roads may partially affect plant roots. Salts suppress water absorption. Many plants show various degrees of decline because of the exposure to extremes in moisture and/or temperature, deicing salt and other abiotic stress factors.

## Fireblight to return?

**Problem:** Will we see fireblight in 1991? What is the best way to manage this problem? (Pennsylvania)

**Solution:** Fireblight affects rosaceous plants: pear, apple, cotoneaster, crabapple, quince, firethorn hawthorn and mountain ash. The bacterium overwinters on infected twig cankers and becomes active

by producing bacteria in ooze on twigs during spring rains. Rain splash and insects spread the disease to blossoms. Bacteria produce blossom blight and then spread to the leaves, resulting in leaf blight. The bacteria then spread to twigs and produce cankers. In late spring, sudden wilt occurs. Blighted twigs show typical shepherd's crook (inverted "U" shape) symptoms. Leaves appear as if they are scorched by fire.

If conditions for the disease prevail, it could return. The plant and inoculum of the pathogen are present, waiting for favorable climate.

Prune when dry, and prune selectively, at least 10-12 inches into the clear wood; disinfect tools between cuts with Lysol, rubbing alcohol or Clorox (1:4). Do not overfertilize with soluble nitrogen fertilizer. Provide insect vector management as needed. Avoid destroying pollinating beneficial insects. Many extension publications recommend the use of Bordeaux mixture or streptomycin (Agri-strep). Make sure these products are labeled for use on specific plants. Hopkins Streptomycin C-17 has Rosacre on the label, and can be used on many rose family plants. Check with your local cooperative extension personnel for updated recommendations.

## Bugs on pepper trees

**Problem:** What can be done to psyllid bug that has been affecting California pepper trees in the Southern California area? (California)

**Solution:** The pepper tree psyllid was first found in North America in Long Beach, California, in 1984. Since then it has been in many other areas of California. The California pepper tree is affected by the pest while its relative, the Brazilian pepper tree, is resistant. The adults are greenish and about 1/16-inch long. The nymphs are immobile and their feeding causes formation of pit galls. These insects usually occur on the lower leaf surface, but the upper leaf surface and small green twigs may be affected also.

The infected pepper tree usually appears grayish green and is sparsely foliated. Severe infestations cause major discoloration and distortion of affected plant parts, slowing of growth, and loss of foliage.

Acephate (Orthene) can be applied to control pepper tree psyllid. The insect appears to reproduce year-round along the coast so repeated spray applications about 60 days apart may be necessary. Read and follow label specifications for better results.

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Questions should be mailed to Problem Management, LANDSCAPE MANAGEMENT, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.



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