

LM REPORTS: TREE EQUIPMENT

JUNE 1993 \$3.00

LANDSCAPE MANAGEMENT

INCORPORATING **LAWN CARE INDUSTRY**



**BUILDING A
WINNING TEAM**

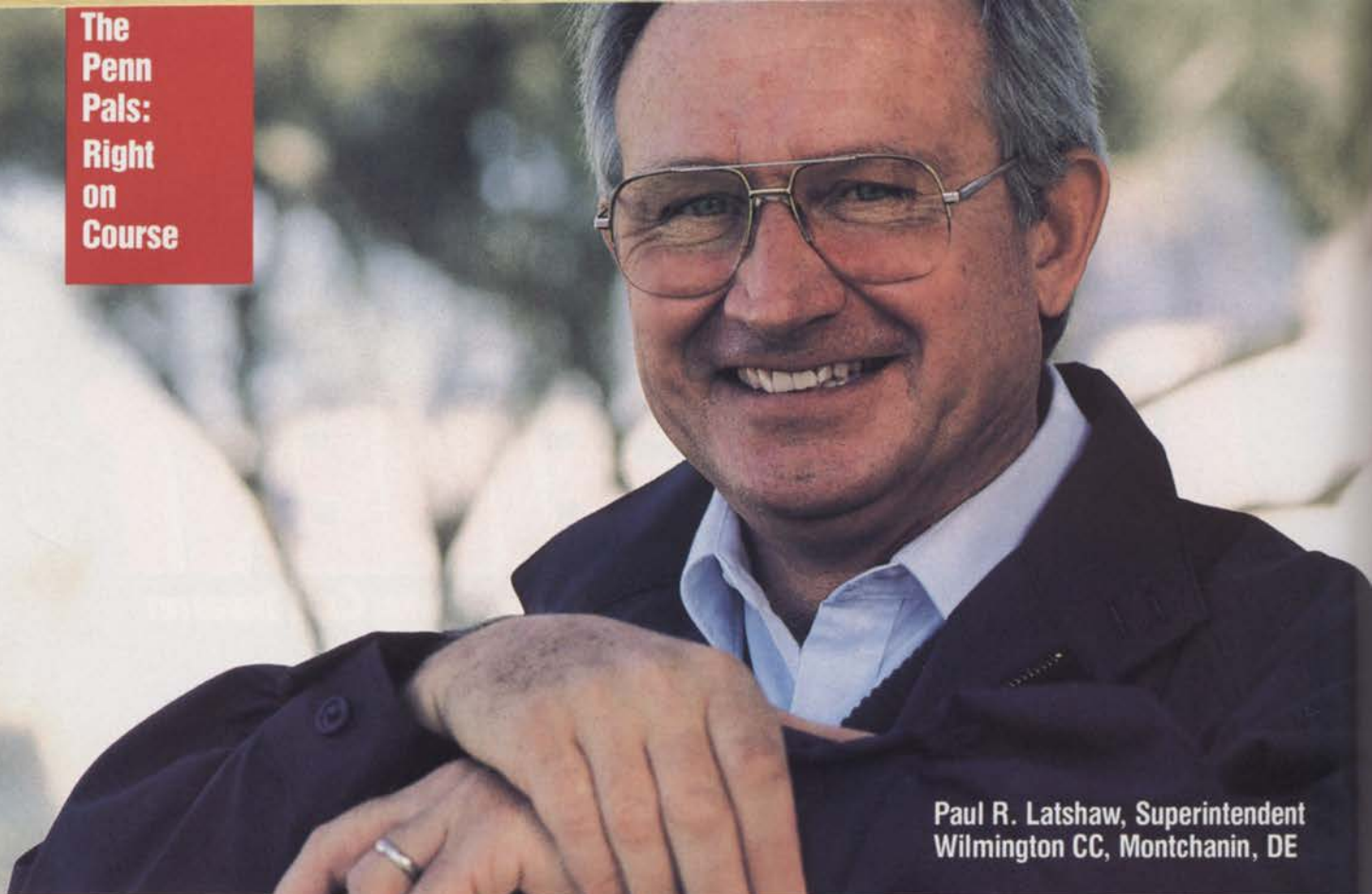
**10-PLUS-1
IRRIGATION**

**SHADE TREE
FERTILIZATION**

**MAKING
THE **GRADE**
CUSTOMERS SPEAK OUT**



The
Penn
Pals:
Right
on
Course



Paul R. Latshaw, Superintendent
Wilmington CC, Montchanin, DE

The latest 'word' in bentgrass is PennLinks.

Paul Latshaw is spreading the word.

Paul Latshaw holds the distinction of being the only superintendent of golf clubs hosting 3 major tournaments. With Paul's reputation, expertise and candor, he's a powerful promoter for PennLinks.

"I know PennLinks to be the finest creeping bentgrass available. I know it's been time-tested on the North Course greens here at Wilmington Country Club since fall of 1984.

"I know PennLinks has an extensive root system, heat tolerance, and requires very little grooming or verticutting because of its upright growth.

"The upright growth habit convinced me to overseed the fairways at Wilmington. I know time will prove I made the right choice. And I like that, too.

"PennLinks. Spread the word."

Paul Latshaw



Tee-2-Green Corp.

PO Box 250
Hubbard, OR 97032
1-503-981-9574
FAX 503-981-5626
1-800-547-0255

LANDSCAPE MANAGEMENT

is a proud member of these
green industry professional
organizations:



Associated Landscape Contractors of America,
12200 Sunrise Valley Dr., Suite 150, Reston,
VA; (703) 620-6363.

American Sod Producers Association, 1855-A
Hicks Rd., Rolling Meadows, IL 60008; (708)
705-9898.

**Golf Course Superintendents Association of
America**, 1421 Research Park Dr., Lawrence,
KS 66049-3859; (913) 841-2240.

International Society of Arboriculture, P.O.
Box 908, Urbana, IL 61801; (217) 328-2032.

International Turfgrass Society, Crop & Soil
Environmental Sciences, VPI-SU, Blacksburg,
VA 24061-0403; (703) 231-9796.



National Arborist Association, The Meeting
Place Mall, P.O. Box 1094, Amherst, NH
03031-1094; (603) 673-3311.

National Golf Foundation, 1150 South U.S.
Highway One, Jupiter, FL 33477; (407) 744-
6006.

Ohio Turfgrass Foundation, 2021 Coffey Rd.,
Columbus, OH 43210; (614) 292-2601.



Professional Grounds Management Society,
10402 Ridgland Rd., Suite 4, Hunt Valley, MD
21030; (301) 667-1833.



**Professional Lawn Care Association of
America**, 1000 Johnson Ferry Rd., NE, Suite C-
135, Marietta, GA 30068-2112; (404) 977-5222.

**Responsible Industry for a Sound
Environment**, 1155 15th St. NW, Suite 900,
Washington, D.C. 20005; (202) 872-3860.



Sports Turf Managers Association, 401 N.
Michigan Ave., Chicago, IL 60611-4267; (312)
644-6610.

**Turf and Ornamental Communicators
Association**, 8400 Normandale Lake Blvd.,
Suite 500, Bloomington, MN 55437; (612) 832-
5000.

AS WE SEE IT

JERRY ROCHE, EDITOR-IN-CHIEF



'B+' from customers: room for improvement

Are your clients happy with your performance as a lawn or landscaping service? Are the members of your golf club, or the golfers who visit your course regularly, happy with its condition? Are the people who play on your athletic fields, their coaches, their spectators and their administrators happy?

Judging by a small survey we commissioned here in Cleveland, it seems that the general public is fairly happy with its lawn and landscape services. (See page 8.)

Which means that at least one segment of the green industry, in at least one part of the world, is performing its tasks admirably. (It's too bad we didn't have enough time to also survey golfers or city softball and soccer leagues. But those could be other stories, for other months.)

Though our survey's sample was small and not geographically diverse, it pretty much affirmed what we've been hearing from our lawn/landscape readers: that they're doing their best to keep customers happy by providing the needed services in a professional and timely manner.

Given the "grade" they've earned (B+), we'd give our lawn and landscape readers a "summa cum laura" degree from the School of Hard Knocks, if we could.

Not that everyone's perfect, mind you.

The other day, on my way home from work, I happened upon a familiar scene.

The sun was shining (for one of the few times this spring in this part of the world). The birds were chirping. The truck with the requisite flat-bed trailer was parked at the curb in front of a pretty suburban home. A guy was zipping back and forth with a mid-size walk-behind mower. All was right with the world.

On my way to work this morning, I went through the same neighborhood, past the same house.

I was appalled at the sight my wondering eyes beheld: this same professionally-mowed lawn was littered with long, dark,

ugly clumps of grass. What could have been the prettiest lawn in the neighborhood looked like one of the trashiest.

Don't get me wrong here: I'm not saying the lawn professional was necessarily guilty of any negligence. I'm just using this case to illustrate a point.

There certainly may have been extenuating circumstances. Maybe the guy was coming back to collect the clippings. Maybe the customer requested that he leave them. Maybe.

Or maybe, since it was a wet spring here, the guy was running behind on his route. Maybe the grass had grown unexpectedly long between mowings and he hadn't made the necessary adjustments to his schedule. Maybe he was more interested in getting on to the next lawn.

But I know this: if I were his customer and went to bed knowing that my lawn was a mess, I'd be looking around for another service the next day.

That said, I issue all our conscientious readers a well-deserved congratulations. Overall, you're doing a great job—B+ as a matter of fact.

But, in all honesty, I remind you: a B+ is not perfect. There is *always* room for improvement.

LANDSCAPE MANAGEMENT

incorporating Lawn Care Industry

JUNE 1993 VOL. 32, NO. 6

COVER FEATURE

8 Making the grade

Our mini-survey of lawn and landscape customers shows that our industry appears to grade out well in terms of knowledge, customer satisfaction and value.

Jerry Roche, Terry McIver

FEATURES

14 On sales and service

Do a better job, and everyone associated with the organization will profit financially and personally, say two experts on customers.

James E. Guyette

16 Avoiding summer burnout

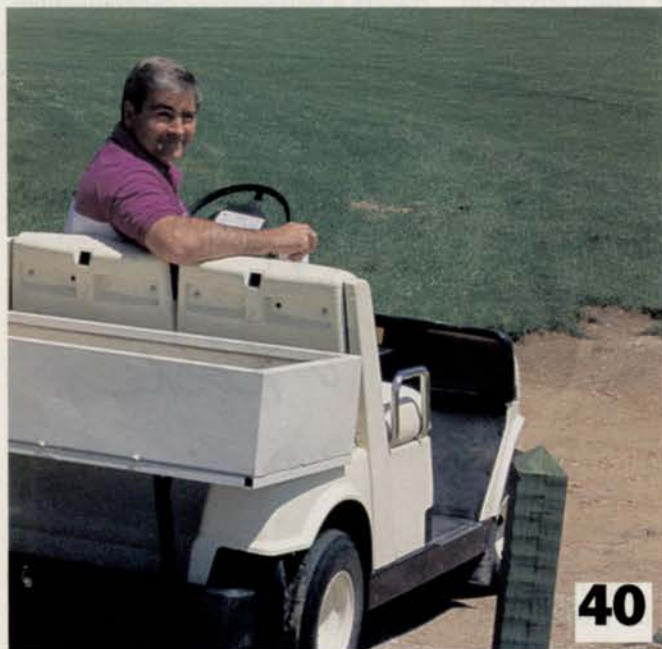
Summer heat compounds all the things that can go wrong during a day. Here's how to keep productivity high and workers happy.

E.T. Wandtke

18 LM Reports: Tree maintenance equipment

Pruners, injectors, mist blowers and aerial lifts are four categories of the more common equipment used in tree care.

Jerry Roche



40

22 Irrigation: Ten-Plus-One

Irrigation, performed consistently, plays a major role in determining the condition of athletic turf. These 11 "commandments" will help determine if your irrigation system's a winner.

Ray Flood

26 Stump cutter maintenance

Preventive maintenance helps keep the equipment productive, and employees and bystanders safer, says Brad Yochheim.

James E. Guyette

TECH CENTER

30 Fertilizing woody plants

Proper technique and fertilizer selection are parts of PHC over which arborists have more control than any other service except tree pruning and surgery.

Trevor F. Vidic

34 'Slitting' insecticides

Contractors develop a market for 'slit' mole cricket control in Dixie, but white grubs are still uncertain in North.

Ron Hall

STRICTLY GOLF

40 Moving the players

'Ready Golf' keeps golfers moving and helps more than 400 per day breeze through city courses in Overland Park, Kan.

Jerry Roche

42 Too much water unwise

Researchers in Fort Lauderdale found that despite turfgrass's ability to filter chemicals, some can still leach to groundwater.

Ron Hall

LAWN CARE INDUSTRY

44 Dragging with Dennis

Jacksonville's Nick Dennis is all go with lawn care, automobile racing, and the Florida Turfgrass Association.

Ron Hall

48 Supporting service people

Who in your service delivery organization has the most contact with customers? Are you supporting them?

Ron Hall

PRO *LAWN PLUS

THE LAWN CARE PEOPLE



HOT TOPICS

50 Drought-resistant grass

Dr. Karl Danneberger teams up with OSU's Biotechnology Center, which has isolated a gene that helps plants jump-start the production of proline, a common amino acid associated with drought tolerance in many plants.

56 Residential business growing

New residential installation, with projected growth of 11.5% in 1993, is the hot ticket in the market, according to members of the National Landscape Association.

DEPARTMENTS

1 As We See It
6 Ask the Expert
58 Info-Center
58 Events

62 Product Review
73 Market Showcase
74 Classified
76 Ad Index

On the cover: Overland Park (Kansas) Golf Course (see story on page 40). Inset photo courtesy of Echo, Inc.

LM READER ADVISORY PANEL

Ken Gerlack
Contra Costa Landscaping
Martinez, Calif.

Twyla Hansen
Nebraska Wesleyan
University
Lincoln, Neb.

Tim Hiers
Collier's Reserve
Naples, Fla.

Bill Prest
Springvale Country Club
North Olmsted, Ohio

Mark Schlossberg
Pro-Lawn Plus
Baltimore, Md.

Brian Storm
Terrascaping, Inc.
Birch Run, Mich.

LANDSCAPE MANAGEMENT

ADVANSTAR Communications, Inc.
7500 Old Oak Blvd. Cleveland, OH 44130
Phone: (216) 243-8100
Fax: (216) 891-2675

EDITORIAL STAFF

JERRY ROCHE, Editor-in-Chief
TERRY McIVER, Managing Editor
RON HALL, Senior Editor
MICHELLE THERRIEN, Graphic Designer
KEITH FAZIO, Art Director
MAUREEN HREHOCIK, Group Editor

BUSINESS STAFF

JON MIDUCKI, Publisher
ROBERT EARLEY, Group Vice President
KEVIN J. CONDON, Publishing Services Director
JUDY PAWLOWICZ, Production Manager
ROSY BRADLEY, Senior Production Manager
DEBI HARMER, Production Director
DIANE BIAS, Administrative Coordinator

ADVERTISING OFFICES

CLEVELAND (HEADQUARTERS) OFFICE

7500 Old Oak Blvd.
Cleveland, OH 44130
Phone: (216) 243-8100
Fax: (216) 891-2675

JON MIDUCKI, Publisher: (216) 826-2855

ROBERT EARLEY, Group Vice President

ANNE LANGHENRY, Promotion/Research Mgr.:
(216) 891-2739

MEG GARNER, Sales Representative:
(216) 891-2723

DIANE BIAS, Administrative Coordinator:
(216) 891-2750

ATLANTA OFFICE

3475 Lenox Road NE, Suite 665
Atlanta, GA 30326
Phone: (404) 233-1817
Fax: (404) 261-7422

DICK GORE, East Coast Sales Manager

SEATTLE OFFICE

1333 NW Norcross
Seattle, WA 98177
Phone: (206) 367-5248
Fax: (206) 367-5367

BOB MIEROW, West Coast Representative

SUBSCRIBER / CUSTOMER SERV.

(218) 723-9477 FAX (218) 723-9437



ADVANSTAR
COMMUNICATIONS

Chairman & CEO: Richard B. Swank:

President: Edward D. Aster

Vice President Finance/CFO: Richard D.W. Mead

Vice Presidents: Kevin J. Condon, Robert E. Earley,
Brian Langille, Brian Nairn, Bernard J. Rogers, Phil
Stocker

Treasurer & Controller: Adele D. Hartwick

Secretary & Director of Corporate Finance: David W.
Montgomery

LANDSCAPE MANAGEMENT (ISSN 0894-1254) is published monthly by ADVANSTAR Communications, Inc. Corporate and editorial offices: 7500 Old Oak Blvd., Cleveland, OH 44130. Advertising offices: 3475 Lenox Rd. NE, Suite 665, Atlanta, GA 30326 and 7500 Old Oak Blvd., Cleveland, OH 44130. Accounting, advertising production and circulation offices: 131 West First Street, Duluth, Minn. 55802. Subscription rates: \$30 per year in the United States; \$55 per year in Canada. All other countries: \$100 per year. Current issue single copies (pre-paid only): \$3.00 in the U.S.; \$6.00 in Canada; elsewhere \$10.00; add \$3.50 per order for shipping and handling. Back issues, if available, \$10; add \$3.50 per order for shipping and handling (pre-paid orders only). Office of publication: ADVANSTAR Communications, Inc., 131 West First Street, Duluth, Minn. 55802 and additional mailing offices. Copyright © 1993 by ADVANSTAR Communications, Inc. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher. Canadian G.S.T. number: R-124213133. POSTMASTER: Send address changes to Landscape Management P.O. Box 6269 Duluth, Minn. 55806. Date effective: December 27, 1990.



Printed on Recycled Paper

BPA

ABP

Printed in USA

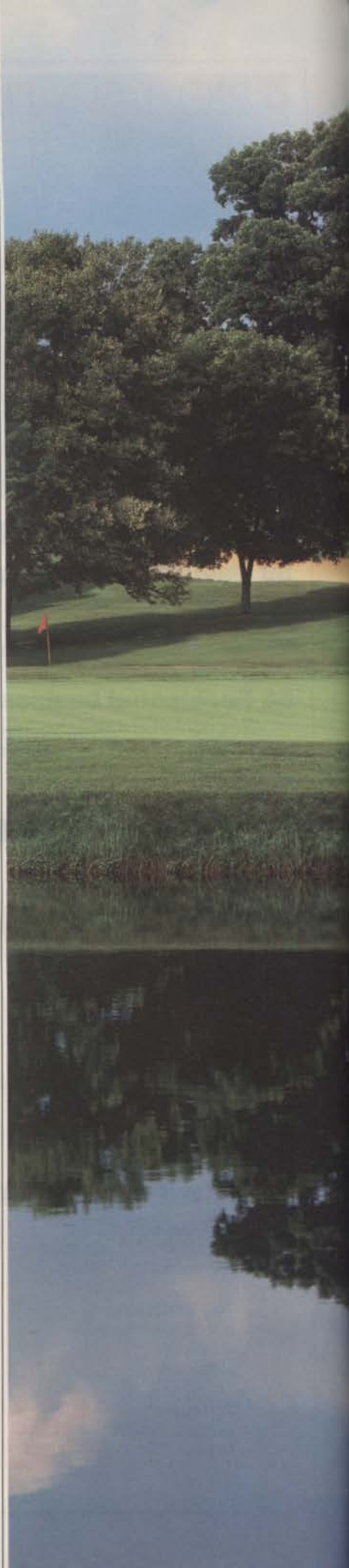
Today, nothing works faster than

19

Dylox. If you don't know why that's

93

important, we'll bring you up to speed.





DYLOX insecticide controls all species of white grubs in as little as 24 to 48 hours. It doesn't waste time. Then it doesn't hang around.

In these times, that's reason enough to use DYLOX. But there's more. It has no label restrictions on turf grass species or sites. So, you can spray your tees, greens and fairways for grubs, as well as cutworms and sod webworms. And with the DYLOX 80% formulation, you can also treat your flowers, shrubs and trees for armyworms, bagworms and stink bugs.



Add to that the fact that it's a low-odor compound available in 6.2% granular as well as 80% water soluble powder. Now you can understand why it is the fastest growing grub insecticide on the market.

For more information, contact Miles Inc., Specialty Products, Box 4913, Kansas City, MO 64120. (800) 842-8020.

The time is right for DYLOX.



©1993 Miles Inc. 935638

Circle No. 126 on Reader Inquiry Card

ASK THE EXPERT

DR. BALAKRISHNA RAO

Diagnosing fungal disease

Problem: A number of spruce plants in our area are showing extensive needle drop and branch dieback. A majority of the plants have this problem, mostly on lower branches. We thought it might be due to fungal disease caused by *Cytospora*, but there are no typical symptoms of bluish-white pitching. Most plants were treated for mite and spruce gall aphid problem. This needle problem is gradually increasing. (New York)

Solution: Based on your description of the symptoms, the problem appears to be related to fungal disease. Since you were unable to observe bluish-white pitching, the problem is probably not related to canker disease caused by *Cytospora sp.*

Another disease, rhizosphaera needlecast, produces almost identical symptoms as cytospora canker. Most likely you are dealing with the needlecast disease caused by *Rhizosphaera kalkoffii*.

This fungus also spreads from lower branches upward. As the disease establishes and spreads upward, affected needles will turn yellow and then turn purple and finally defoliate. Infected two-year-old needles drop extensively in the second summer. Current-year needles may become infected in May or June, but disease doesn't become apparent until fall or the following spring. During this period the fungus produces small black fruiting bodies on the needle surface. They appear in a row along the needle length near the stomata. These can be examined using a hand lens.

Your local extension service may be able to help. Apply fungicides such as Daconil or Bordeaux mixtures when new growth starts and repeat again in late June to help manage this disease. Severely affected branches may not re-leaf, therefore consider providing selective pruning. Provide proper fertilizing, watering, mulching and pest management as needed to help improve plant health. Read and follow label specifications for better results.

Will dormant oils work on mites?

Problem: How good is dormant oil for controlling mites? If the problem is severe, can we apply low applications to clean them up? If so, what kinds of intervals? (Michigan)

Solution: The dormant oil is now preferably called horticultural oil, and is used during the growing season as well as dormant periods. Most dormant treatments will be done in mid-November through mid-March.

Among the mites, the two-spotted spider mite overwinters as a female in litter or mulch or other protected areas and is not normally found on the plant. Treating the target plants during this period is of no value.

Spruce spider mite overwinters on evergreen hosts like arbutus, juniper, hemlock and pine in the egg stage. This makes the pest very vulnerable to oil treatments. Remember that oil treatment will remove the blue color of blue spruce temporarily.

The honey locust spider mite overwinters as mature females in bark and bud crevices. Here again, a horticultural oil application should work well.

Another mite species vulnerable to "dormant" season sprays is the southern red mite. With proper coverage, this pest can be managed with oil treatments. If the infestation is severe, a second application may be beneficial. Because conditions for evaporation are poor during winter, the potential for phytotoxicity increases. Therefore, monitor pest activity in spring and reapply 2 percent oil as needed.

Remember that brands of oils from different vendors may not be the same. The quality of the oil dictates the effectiveness and/or potential phytotoxicity problems.

Pine dieback caused by disease, insects

Problem: Some of our clients' pines are showing dieback of six to eight feet terminal growth. Some of these have tunnels and frass when broken and examined and others have no dieback. We find a lot of resin droplets on twigs and at the base of needles. (Virginia)

Solution: This problem appears to be related to an insect as well as a disease. The twigs showing small tunnelling and frass are most likely caused by pine tip moth infestation. Affected terminals may show slight bending with discolored needles. This often mimics phenoxy herbicide injury and/or a disease called diplopedia tip blight caused by *Diplodia sp.*

Pine tip moths generally have one to two generations in the Midwest and four to six in the South and Western U.S. In your area, you may find this pest on Scotch, mugho, Monterey, loblolly and most other two- and three-needle pines. Apply Orthene or Cygon in middle to late April and again in mid-June when moths are active.

The twigs showing terminal dieback without the tunneling may be affected by the diplopedia tip blight disease caused by *Diplodia sp.* With a 10x hand lens, look for small black fruiting bodies, primarily at the base of the needles. Fruiting bodies may also be found on scales of two-year-old cones. This fungus mimics pine tip moth symptoms from a distance. Selectively prune affected plant parts and cones where feasible. Preferably prune when dry, and disinfect pruning tools between cuts in Lysol, diluted Clorox or rubbing alcohol to prevent further fungus spread. Apply fungicides such as Bordeaux mixture or Cleary's 3336 to help minimize disease incidence. Fungicide treatment should be made as new growth starts and before needles emerge from the sheath. Provide two to three more applications at 7- to 10-day intervals, depending upon any rainy periods.

Dr. Balakrishna Rao is Manager of Research and Technical Development for the Davey Tree Co., Kent, Ohio.

Mail questions to "Ask the Expert," LANDSCAPE MANAGEMENT, 7500 Old Oak Blvd., Cleveland, OH 44130. Please allow two to three months for an answer to appear in the magazine.

AMDRO® ENDS HER REIGN OF TERROR.

AMDRO FIRE ANT INSECTICIDE
KILLS THE QUEEN, PROTECTS YOUR COURSE.



There's only one sure way to eliminate fire ants. Eliminate the queen. And no other insecticide works harder at dethroning the queen than AMDRO, specifically formulated to kill the queen.

Here's why AMDRO is so effective. Worker ants are attracted to AMDRO, carry it back to the mound, and pass it on to other workers *including* the queen. The queen eats the bait and dies. So does her colony.

Typically, control is achieved in less than a week.

For best results, apply AMDRO insecticide as a broadcast application when ants are actively foraging. For individual colony control, spot treat with AMDRO. You'll find AMDRO is not only easy to use, but economical as well.

Don't let fire ants threaten the safety of your course. Put the proven power of AMDRO to work. And put an end to the queen's reign of terror.

Always read and follow label directions carefully.

CYANAMID
American Cyanamid Company
Agricultural Products Division
Vegetation and Pest Control Department
Wayne, NJ 07470 ©1993

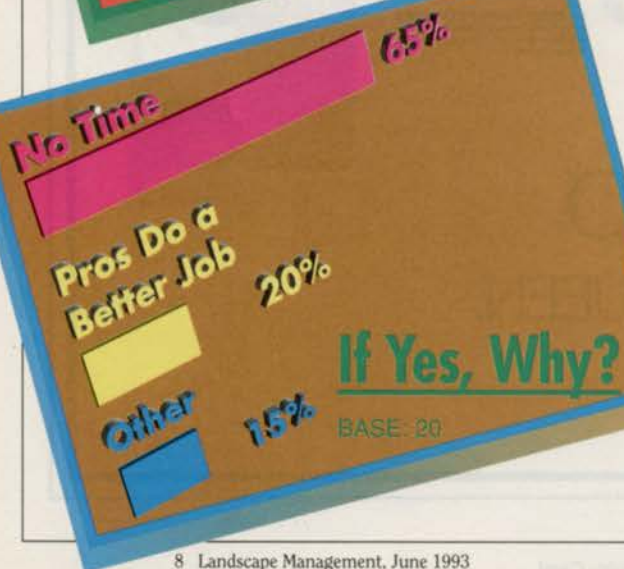


AMDRO® KILLS THE QUEEN.

19 of 20 Cleveland, Ohio, homeowners rate their lawn or landscape service as

'good' or 'excellent.'

B+



■ The nation's lawn care and landscape services are generally pleasing their customers, according to a mini-survey commissioned by LANDSCAPE MANAGEMENT magazine.

Our telephone survey questioned 62 homeowners in selected areas of Cleveland, Ohio. Neighborhoods with higher per capita earnings were chosen for the survey, on the perception that people living in those neighborhoods are more likely to contract a lawn or landscape service.

Twenty of the respondents who subscribe to either a lawn care or landscape service were the basis for most of the in-depth questions. And, though the survey base was small and not geographically diverse, overall trends become immediately apparent.

Nine of the 20 subscribers gave their services a grade of "A" for excellent. An additional 10 gave grades of "B," or good, for overall service.

Finding a service—Referrals have always been (and probably always will be) an important source of business for lawn/landscape service companies. Fifty-five percent of those getting services said the company they used was recommended by their neighbor.

Direct mail also had an effect on our respondents: 35 percent contracted a service after receiving a brochure or coupon in the mail. Only one respondent made the call

after spotting a company's truck on the street.

About two-thirds of the homeowners who subscribe to a lawn/landscape service said that it is because they do not have enough time to do it themselves. About one-fifth of the respondents said they realized that professionals can do a better job than what they could do.

Grading out—The perception among lawn care and landscape businesses is that customers are very demanding of timely service, especially with the first signs of spring. This creates a spring rush that usually entails long hours on the job. Yet, among the qualities surveyed, timeliness is the most admired by customers. A full 60 percent of those surveyed gave a grade of "A" for excellent in the "timely" category. An additional 35 percent gave a "B."

Professional lawn/landscape companies also rated fairly high in:

- expertise,
- communication with customers,
- problem-solving and
- creating a lawn that is better than before the customer started the service.

Overall, lawn/landscape companies did well in every category, although 10 percent of the respondents gave them Ds in "personnel" and "value."

Why, why not?—Six of the 20 respondents said they started the service because the yard was too difficult to take care of

A Excellent **B** Good

C Average **D** Poor

EXPERTISE
Do they seem to know what they are doing?

COMMUNICATION
Do they take the time to explain their services to you, either in person or by mail?

TIMELINESS
Do they make their visits either when they say they will, or when you want them to?

PERSONNEL
Does your technician/landscaper seem knowledgeable and proficient at the job?

PLEASE GRADE YOUR LAWN/LANDSCAPE COMPANY IN THESE AREAS:

PROBLEM-SOLVING
If or when you have a problem with either the company or your lawn, is it handled quickly and efficiently?

VALUE
Are you getting your money's worth?

SATISFACTION
Does your lawn/landscape look better than it did before you had the service?

SATISFACTION
Does your lawn/landscape meet your current expectations?

Source:
LM mini-survey

themselves, though there was a wide disparity on other reasons for starting the service.

One respondent claimed his yard had "no major problems—I just wanted to make sure there were none (in the future)." Another "wanted a professional so I would not ruin it."

Of the 67.7 percent of the homes not receiving professional lawn/landscape care, 78.6 claimed to be "do-it-yourselfers." Just 4.8 percent—two of 42—claimed that environmental concerns were what kept them from starting such a service.

The three responses in the "other"

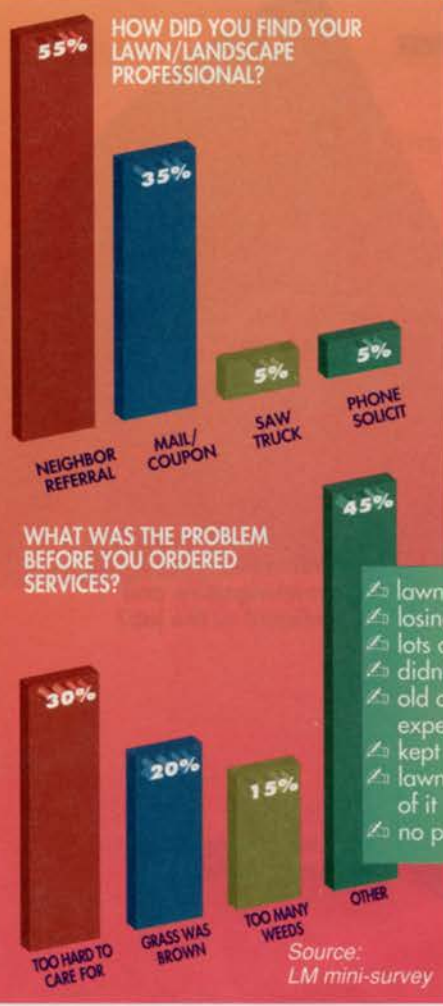
One of the respondents voiced this complaint: 'We had it one year, and spent money on something we could have done ourselves, cheaper and with fewer problems.'

category were: "My son does it like a pro;" "We live in the country and do not like a manicured lawn;" "We had it one year, and spent money on something we could have done ourselves, cheaper and with fewer problems."

—Jerry Roche, Terry McIver

NOTE: This survey was not designed to measure the market saturation of lawn/landscape services in any particular area. It is based on random phone calls within selected neighborhoods.—Ed.

more on page 12



Homeowners like recycling clippings

■ Ninety-one percent of homeowners surveyed in Greenfield, Wis. would recommend the city's "Don't-Bag-It" lawn care program to others.

According to the survey, commissioned by BFI Town & Country Waste Service, 57 percent of the respondents also said their lawns improved since starting on the plan. In addition, 42 percent reported saving a

combined total of nine hours each mowing.

"This is extremely encouraging," says Mayor James Besson, who

strongly supported the experimental program. "I've received numerous calls from other Wisconsin community leaders about this program, and now I have instructive,

and positive information to provide them."

Thirty-three respondents to the survey said they have told more than 355 others about the program. Of those 33, 32 reported passing on positive comments. The one negative comment came from a homeowner who prefers to compost.

Other key responses to the survey:

- 42% said they saved time each mowing; 47% said mowing time is the same.
- 14% mow less often; 63% reported the frequency as being the same.
- 55% who did not mulch at all before now mulch all of their lawns.
- 82% watered their lawns less often or the same.

In exchange for recycling their grass clippings and for meeting other guidelines, the survey participants received free use of new Toro Recycler mowers through distributor R.L. Ryerson; and a season's supply of slow-release fertilizer manufactured by Howard Johnson's Enterprises of Milwaukee.



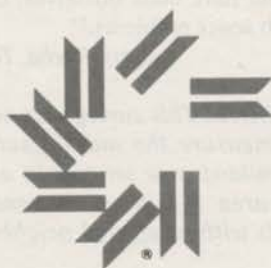
We're Rooting For Your Success!

PANTS
 July 27-29, 1993
 Valley Forge Convention Center
 King of Prussia, PA

PLANTS
 August 18-19, 1993
 Pittsburgh ExpoMart
 Monroeville, PA

Discover what so many professionals have already learned. Pennsylvania's Plant Shows are your trade secret for success. Call (717) 238-1673 for more information.

Discount for early registration!



PENNSYLVANIA'S PLANT SHOWS

sponsored by the Pennsylvania Nurserymen's Association



© 1993

Circle No. 101 on Reader Inquiry Card

Once you order our parts,
we're on your schedule.



That's because we know you can't afford to wait forever. So, in those rare cases when you can't get parts immediately from your Toro distributor, our Parts Delivery System offers three ways to meet your schedule.

Besides *Normal Direct Ship*, our new



24 Hour Fast Track guarantees delivery in a day,* or your parts

are free. And *Direct Today 48 Hour* means reliable arrival in two days.*

Toro Parts Delivery. Another way we help turf care professionals create extraordinary beauty and playability.

Right on schedule.



Helping You Put Quality Into Play.™

*For full program details, contact your local Toro distributor. 24 Hour Fast Track and Direct Today 48 Hour delivery are available in the 48 contiguous states and cover only parts supported by The Toro Company, Minneapolis, and do not include irrigation or certain engine parts. Program subject to carrier delivery restrictions. ©1993 The Toro Company, The Toro Company, 8111 Lyndale Avenue South, Minneapolis, Minnesota 55420. "Toro" is a registered trademark of The Toro Company.

Sales, service with a smile

Do a better job, and everyone associated with the organization will profit financially and personally.

by James E. Guyette

■ While some green industry professionals may be reluctant to view themselves as sales people, those who encourage employees to hone their sales and communication skills will see the benefits reflected on the bottom line.

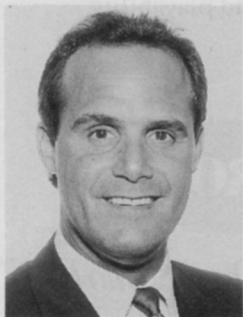
Being sales- and service-oriented creates a marked contrast to competitors who may have a surly attitude toward customers or a non-service "order-taking" mindset among the sales staff.

"Everyone in the company is in sales, in one way or another," says Phil Fogarty, president of Crowley Lawn Service in Cleveland, Ohio.

Even a line-level worker on a truck has an important role to play in the marketing effort. "If he goes up to the customer and looks shabby and doesn't know what he's talking about, it affects the sale," Fogarty explains.

Fogarty enlisted a nationally-known sales consultant, Dr. Hal Becker, to conduct a marketing seminar for Crowley's staffers. Later, Becker was tapped to conduct a similar session for the Ohio Chapter of the International Society of Arboriculture.

"The application of common-sense sales techniques can lead to sales success," says Becker. The personal relationships built up between customers and employees are the driving forces behind sales success, he adds.



Dr. Hal Becker: Play the numbers game.

"The better the relationship, the better the chance that a sale will be made. With few exceptions, people buy from someone they trust and like."

Building up a bond of trust and likability involves several factors:

● **Be honest.**

"Treating customers fairly develops credibility," says Becker.

Fogarty notes that exaggerating service quality or pitching a price that's too low can backfire. "Our industry has learned that creating an over-expectation in the customer's mind just creates a high turnover," he says.

"It isn't even a moral issue—it's stupid to be dishonest," Fogarty stresses. A disappointed customer, he believes, will take his or her business elsewhere, and then extra effort is needed just to replace that account.

At Crowley headquarters, a sign reads: "If we don't take care of our customer, somebody else will."

● **Be organized.** "Develop a system so that you know when you called a customer and what was discussed during the conversation," Becker suggests. "Be consistent about following up with both current and potential customers. Keep up with the paperwork and cooperate with the sales support staff."

A daily calendar/organizer is standard issue at Crowley. "They all have organizers on their desks and I encourage them to carry them with them," Fogarty explains. Employees have a daily diary form on which sales and production information is recorded. But "any box with index cards will do the job," Becker notes.

● **Be persistent.** "Play the numbers game," says Becker. "The more prospects you contact, the more sales you make. Be resourceful by developing leads and creating new sales opportunities."

'With few exceptions, people buy from someone they trust and like.'

—Dr. Hal Becker

Fogarty encourages his employees to initiate relationships with the neighbors of existing customers. If they like what they see in the yard next door, they're more likely to sign up.

Because estimates are made during the

day, "nine times out of ten, we don't see the customer," Fogarty observes. He insists that each estimate be clear and easy to read. And, of course, the follow-up phone call later is a crucial sales tool.

● **Ask questions.** Another sign at Crowley contains this Becker quote: "Selling is asking, not telling; listening, not talking."

"We can learn a lot about the person's needs by what they ask us," says Fogarty. Then they listen some more. "Anyone who's had inferior service in the past is happy to have someone to listen" to the reasons, Fogarty attests.

And don't interrupt. "Listeners will still be writing orders while talkers talk themselves right out of a sale," Becker warns.

● **Push the benefits.** "Too many salespeople just talk *features*, but you must describe *benefits*," says Becker. "Simply put, a feature is what it does, a benefit is what's in it for the customer."

"We're selling the *benefits* of lawn care," Fogarty says: convenience, knowledge that the job's done right, and having a green, environmentally friendly lawn.

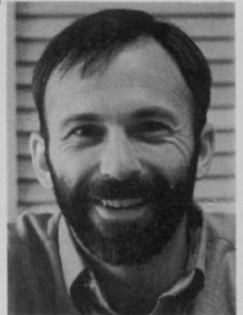
● **Be service-oriented.** Good service drives customer satisfaction and retention. "Always ask what the customer wants and listen to what he or she says," Becker advises.

"It's just being Johnny-on-the-spot," Fogarty adds. "If your price is competitive, the person has to realize that you are the best *value*."

● **Don't win arguments.** Becker says it's good to "remember not to win the battle at the risk of losing the war."

If customers have a complaint, ask what they want us to do, says Fogarty. "As long as it's within reason, we'll do what they want to resolve the problem." Most people are reasonable, he adds, and request smaller favors than might be expected.

—James E. Guyette is a freelance writer specializing in the green industry. He is based in South Euclid, Ohio.



Fogarty: Sell lawn care benefits.



If the paper boy can hit it, so can we.



Maybe you don't know that a little bit of TEMPO insecticide can cover a whole lot. We're talking trees, shrubs, bushes, flowers. Even lawns.

The reason is simple. TEMPO uses an advanced technology to give you the flexibility to effectively control both leaf-feeding and surface insects – including deer ticks, the main carrier of Lyme disease.

TEMPO also provides the fast knock-down, and the residual control, you'd expect

from a top insecticide. And TEMPO does it all with *80% less active ingredient* than the insecticide you may be using now.

And get this. *TEMPO has a low odor.* That alone should help you start breathing easier about your next job.

If you'd like to give TEMPO a shot, contact Miles Inc., Specialty Products, Box 4913, Kansas City, MO 64120. (800) 842-8020.



935641 © 1993 Miles Inc.



Circle No. 130 on Reader Inquiry Card

Avoiding summer burnout

by E.T. Wandtke



I arrived at the office on Monday at 7 o'clock. It was already 82 degrees outside, and the weatherman was predicting a high of 95.

My truck would not turn over. Frustrated, I went back into the office to call the mechanic. My plan was to have him come over with tow truck and tools. While waiting in the office, I received two phone calls from employees who said they would not be in.

And so, I knew, it would be a long week.

■ Many of us have been faced with similar situations. Typically, they result from five symptoms: high temperatures; overworked employees; long days; employee turnover; and equipment failure.

The key is to spot the symptoms before they occur, and prevent problems.

Keeping productivity up—Productivity during extremely hot days typically

falls, but it can be recovered.

Two tips to remember when you are faced with hot, unpleasant temperatures:

1) Provide your employees enough water to replenish lost fluids. A large cooler like those used by football teams is ideal. Water on site will reduce the need for your mobile workers to stop for a drink, and thus increase their efficiency.

2) Provide fruit for your employees to snack on. One banana can supply many of the essential nutrients needed for peak performance. Fruit while in transit will replenish sugar the body needs faster than cookies, candy and doughnuts.

Overtime and turnover—Turnover starts when employees work excessive overtime many weeks in a row.

However, workers in this industry typically know that overtime is unavoidable. So they pace themselves for a 10-hour day instead of an 8-hour shift. This can actually lead to a decrease in efficiency during the 8-hour shift. To prevent this, you may need to plan in advance to hire additional help.

Planning what needs to be done in a given week helps you organize your crews efficiently and productively. After the plan has been drawn up, delegate weekly responsibilities to crew chiefs. This will motivate them to work harder, since they have a goal. In return, managers will have more time to concentrate on office work.

Should you hire more help? A few more employees might help smooth out your work week. Part-timers can revitalize the crew and reduce overtime.

Let key employees have a week off during the summer. It's an excellent reward that will allow you to evaluate crew efficiency.

Reasonable expectations—Employee turnover results from being "overworked and underpaid," and from a lack of desire to work (the unavoidable quitters).

To help minimize turnover, establish realistic expectations each week, and reward the crew when the job is done.

Incentives should be simple and quick, like daily attendance, weekly production efficiency, and safety/maintenance contests. Keep employees' minds off the weather and focused on the work.

Don't be a stranger—Keep the channels of communication open.

A simple greeting can go along way. Respect and positive feedback can keep morale high and keep employees excited.

Reducing equipment failure—Equipment breakdown is the stress factor that's easiest to avoid.

Cleaning and maintaining equipment will not only save you the hassle of breakdown, but will also increase the life of your equipment.

Much of this maintenance may take as little as 5 or 10 minutes a day. Simply checking to make sure everything is clean and all fluid levels are correct can save money in the long run.

—Ed Wandtke is a principle in Wandtke & Associates, 2586 Oakstone Dr., Columbus, OH 43231; (800) 966-3546.

dynamite

...or TNT. A powerful explosive or a dramatic new line of Turf N' Trees sprayers from SDI! TNT sprayers cover 100% of your turf spraying needs - 5 gallons per 1000 sq. ft. on greens to over 100 gallons per acre on fairways. Plus trees over 50 feet tall.

Featuring a triple diaphragm pump, quick start OVH engine, mechanical agitation and stainless steel plumbing. Call today for a free brochure and the location of your nearest SDI Turf N' Trees dealer.



Check into our
dynamite TNT
sprayers today

SDI

Spraying Devices Inc

P.O. Box 3107, Visalia, CA 93278

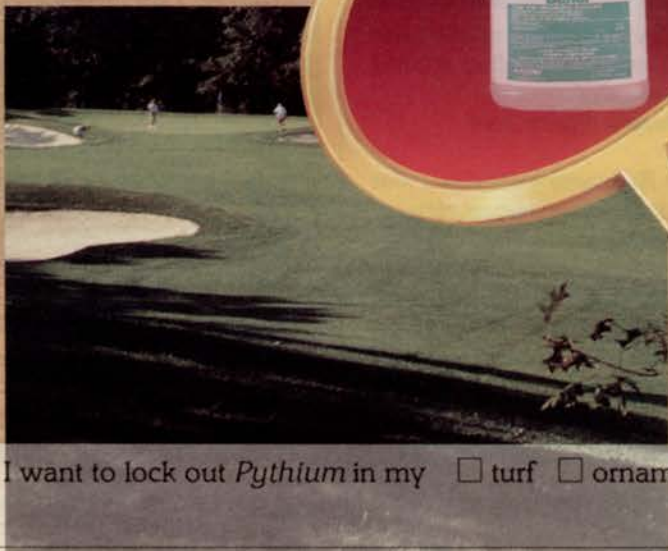
(209) SDI-5555

Circle No. 102 on Reader Inquiry Card

BANOL®

Your key to locking out *Pythium*

When you've got problems with *Pythium* in turf, you can bank on BANOL®. This completely water-miscible turf and ornamental fungicide concentrate protects established turf as well as overseeded areas. And in a broad range of ornamentals, BANOL locks out *Pythium* and *Phytophthora* in all stages of propagation. For both turf and ornamentals, it can also be tank mixed with other fungicides for control of additional soil-diseases such as *Rhizoctonia* sp. and *Fusarium* sp. For more information on the many benefits of BANOL, please fill out the coupon below and return it to:
NOR-AM Chemical Company
6 Mount Vernon Street
Suite 249, Winchester, MA
01890



Yes! I want to lock out *Pythium* in my turf ornamentals.

NAME _____

TITLE _____ GOLF COURSE _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

 **NOR-AM**

NOR-AM CHEMICAL COMPANY

Specialty Products Division
A Schering Berlin Company

IMPORTANT: Please remember always to read and follow carefully all label directions when applying any chemical.

3509 Silverside Road, P.O. Box 7495, Wilmington, DE 19803

Tree maintenance is an integral part of landscape work

Pruners, injectors, mist blowers and aerial lifts—vital in the tool arsenal of those entrusted with tree care.

■ For most landscape operations, tree care plays a vital role in the appearance of the final product.

Though some golf course superintendents prefer to contract tree care, most have their crews "do it themselves." The same holds true for park and school landscape maintenance departments. And LM research shows that more and more lawn/landscape businessmen recognize tree care as being a viable add-on service.

Last month, LM sent a questionnaire to suppliers of tree maintenance equipment—specifically, manufacturers of tree pruners, tree injectors, mist blowers and aerial lifts.

LITERATURE

Fanno Saw Works is a leading manufacturer of pruning saws and accessories. Its 8-page brochure details folding pruning saws, pole saws, special purpose saws and accessories.

Circle No. 300 on Reader Inquiry Card

A 52-page product catalog from **Husqvarna** highlights a wide range of forestry equipment, including saws and power cutters.

Circle No. 301 on Reader Inquiry Card

Forestry Suppliers Inc. has a 532-page Agricultural Catalog that includes mist blowers, tree injectors, pruning equipment and tree climbing equipment, and other tree maintenance tools.

Circle No. 302 in Reader Inquiry Card

PRUNERS

No need to worry about climbing ladders to remove branches and limbs. **Echo Incorporated's** new SRS-2100 Aggressor makes quick work of removing 4½-inch diameter limbs up to 14 feet in the air.

Powered by a 21.2 cc engine, it removes limbs quickly, easily and safely, all through the reciprocating action of an exclusively-designed blade. The Aggressor has a 71-inch heavy duty shaft that houses a four-strand cable drive.

The 11.3-lb. Aggressor is evenly balanced for easy operation.

Circle No. 305 on Reader Inquiry Card

The Model D Power Pruner is the only portable, tele-



Technic Power Pruner

scoping pruner available, says manufacturer **Technic Tool**. The insulated unit is designed for pruning near high-voltage sources. It is certified to withstand 100,000 volts per foot of length for five minutes.

The Power Pruner is lightweight and equipped with a unique driveshaft that extends from 7 to 11 feet. It also has an auto oiling system.

Circle No. 306 on Reader Inquiry Card

Stanley's PR 40 gives you heavy duty cutting power right from your tree trimming vehicle or bucket truck. Its lightweight head design

AERIAL LIFTS

Ameriquip says its Eagle 44 lift is "unique, convenient and easy to operate."

Integrally mounted, heavy duty, quick-adjust outriggers stabilize the entire lift, not just the trailer. The unit provides improved stability, Ameriquip says, even on uneven terrain.

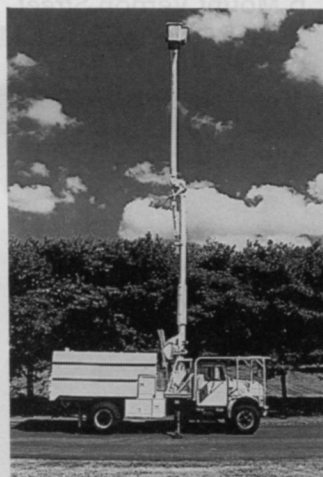
The trailer-mounted Eagle 44 keeps your truck available for other jobs. And the positive, internal bucket leveling enhances its operation. The easy-entry bucket levels automatically through the entire range of motion.

Another entry in the Eagle line, the T-40, has a 40-foot working height and 23-foot side reach. It has 360-degree continuous rotation and full feathering controls.

Circle No. 303 on Reader Inquiry Card



Ameriquip Eagle 44



Aerial Lift of Connecticut

The AL-60 from **Aerial Lift of Connecticut** will reach a working height of 60 feet. It has a 43-foot-plus side reach at a working height of 31 feet and a 50-foot horizontal side reach.

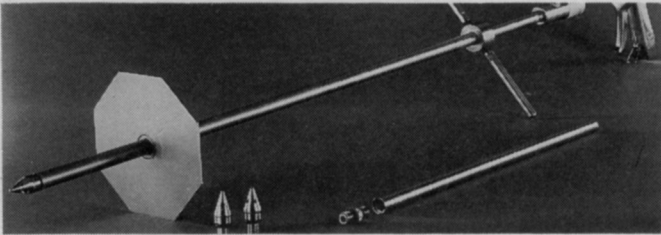
Other Aerial Lifts are the AL-50 and AL-52 which, the company says, have continuous rotation and lower boom over-center feature so maneuvering around wires is done with ease.

Aerial Lift products have positive bucket leveling, an insulated work platform, 135-degree articulated lower boom and 215-degree upper boom.

Aerial Lift products meet the most current 1990 ANSI A92.2 standards.

Circle No. 304 on Reader Inquiry Card

TREE INJECTION EQUIPMENT



Rootfeeder #201-RF

The **Green Garde** Rootfeeder #201-RF, for use with the JD-9C high pressure spray gun, is a ruggedly-build soil injector.

It has a chrome-plated adjustable handle and foot plate. The basic unit is designed for pressure root feeding from 2 to 10 inches deep. Though a two-hole tip is included, other tips are available.

You may also purchase 18- and 36-inch extensions for ground probing and other placement applications.

Circle No. 307 on Reader Inquiry Card

The **Lesco** Fertijector is for injecting fertilizer granules and soil conditioners into the rootzones of trees and shrubs.

The unit features simple push/pull operation. Its hopper's capacity is 10 lbs. It can inject from one teaspoon to ¼ lb. of granular product up to 10 inches into the soil.

The Fertijector provides dustless application, and is clog-proof because the material flows from the hopper, not through the rod.

Circle No. 308 on Reader Inquiry Card

Arborchem's tree injector is for use with injectable tree growth regulators, pesticides, and some fertilizers and nutrients. Its independent cylinder operation allows single or multiple precision operations.

The Arborchem injector is a completely self-contained portable unit with no moving parts.

It is powered by CO₂ cartridges, and easily adaptable for trunk or soil injection. It can be custom fabricated to meet the needs of the user.



Arborchem injector

Circle No. 309 on Reader Inquiry Card

PRUNERS (cont.)

makes it easy to handle, and full power on both the closing and opening of the jaw make it fast and safe to operate. A unique safety feature is the built-in hand guard which, if removed, de-activates the tool.

The PR 40, which can cut limbs up to 2¼ inches, extends 84 inches.

Circle No. 310 on Reader Inquiry Card



Stanley PR40

Tree Technology Systems has a full line of nationally-labelled insecticides, fungicides and fertilizers in new leakproof Arbor-X microinjectors.

The feeder tip of the ArborX injector and the feeder section are welded to the barrel. A special O-ring seals the plunger in both the shipping and pressurized position. The used injectors are returned to the factory for secure disposal.

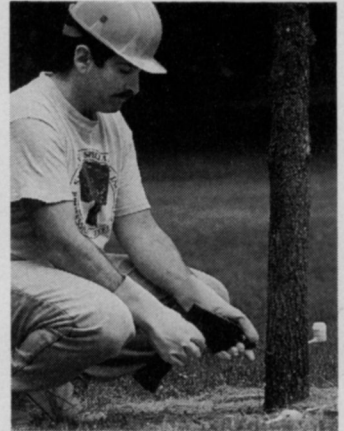
Circle No. 311 on Reader Inquiry Card

The **Mauget** micro-injection process is the oldest and most widely-used system in tree care.

With the Mauget method, trees can be injected with either fertilizers, insecticides, fungicides or antibiotics. It can be used on trees growing in urban or metropolitan settings where the trees frequently have limited or restricted root systems.

Mauget also provides professional product training at various sites across the country.

Circle No. 312 on Reader Inquiry Card



Mauget system in use

MIST BLOWERS

The gasoline powered backpack mist blower was developed by **Solo** more than 30 years ago. Its Mistblower Port 423 remains on the cutting edge of technology with a height range of up to 26 feet or a horizontal range of up to 32 feet.

The Port 423 is powered by a 5 hp two-cycle Solo engine. The liquid formula is fed through a four-position adjustable dosage sleeve at the nozzle. By using different nozzles, the spray system can be adjusted wider or narrower or be deflected for treatment from underneath.

Accessories include a twin nozzle, a dusting kit, a booster pump and a ULV-dosage selector.

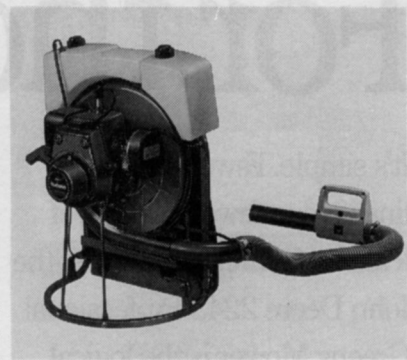
Circle No. 313 on Reader Inquiry Card

The Porta-Pak from **H.D. Hudson** is a motorized back-carried sprayer that applies concentrated pesticides in minute droplets at ultra-low dosage rates.

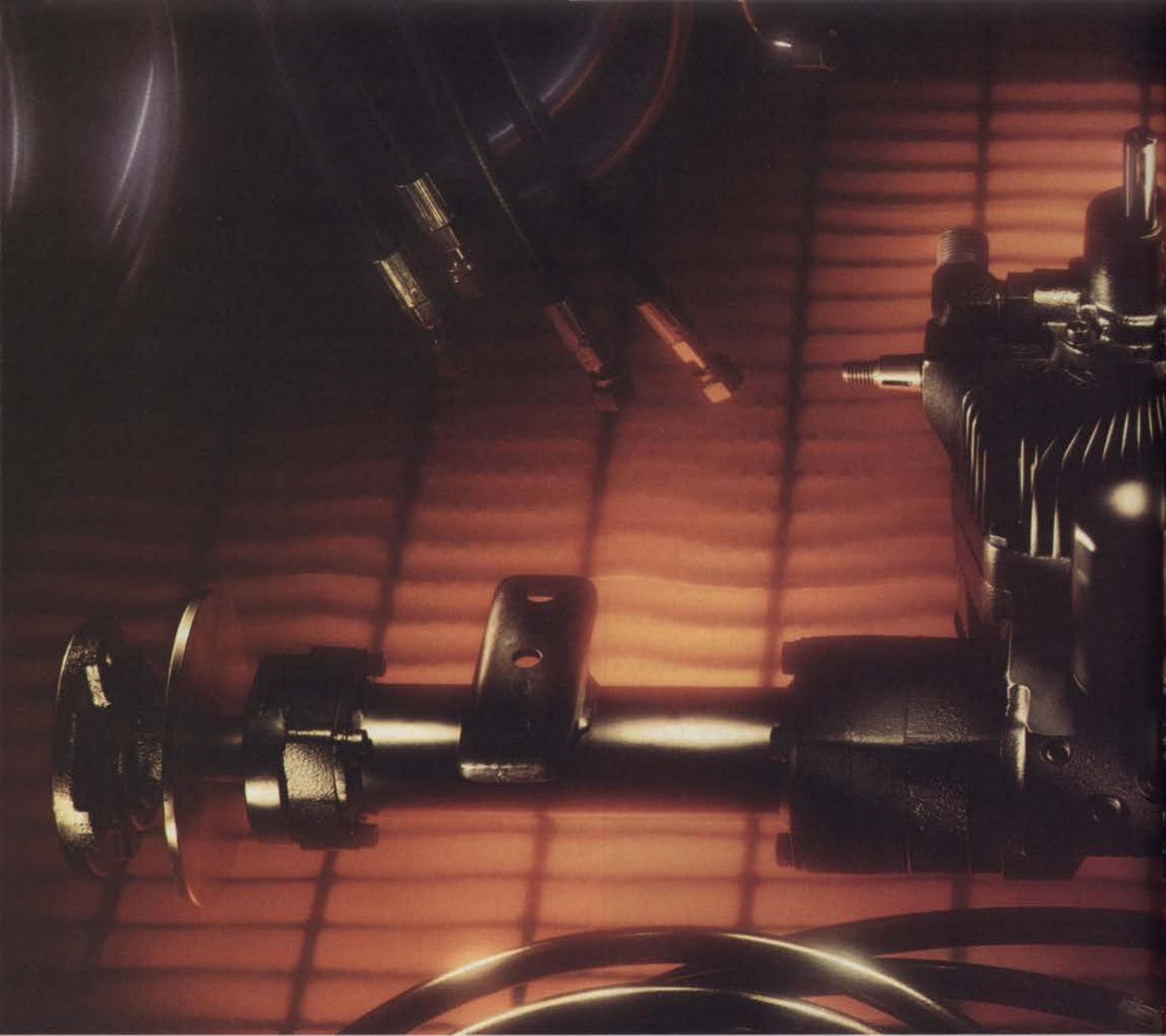
Its effective range is more than 50 feet horizontally and more than 40 feet vertically. It treats up to 7.5 acres with one pesticide tank load.

The Porta-Pak features a strong tubular metal frame that weighs 45.5 lbs. loaded. Adjustable straps have wide shoulder pads and the contoured backrest is padded with foam.

Circle No. 314 on Reader Inquiry Card



Hudson Porta-Pak



For those who've tired

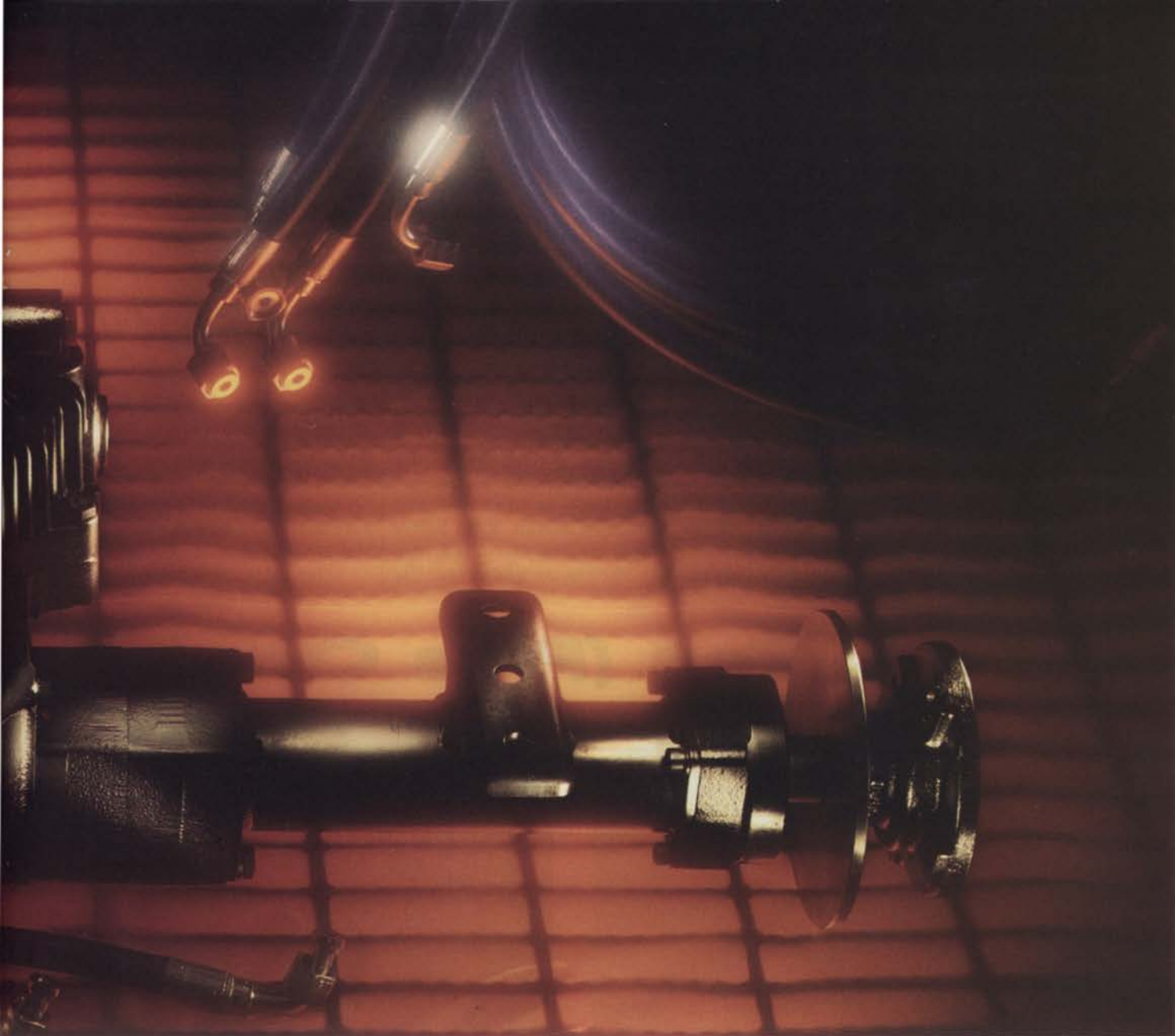
It's simple. Fewer hydraulic lines mean fewer chances of leaks or failures. That's why the John Deere 2243 Professional Greens Mower is the logical choice for work on your most precious ground—your greens.

The 2243 uses a single hydrostatic transaxle instead of multiple wheel motors. It replaces traditional hydraulic motors, hoses and fittings with a single, sealed component.

In addition to reducing

hydraulic lines, the transaxle delivers quick machine response and built-in dynamic braking on slopes.

Add the advantage of the 2243's patented offset cutting units that reduce perimeter



of the same old lines

compaction and you begin to see how the John Deere 2243 separates itself from the rest. For the name of your nearest distributor, or free literature, call 1-800-544-2122.

Or write John Deere, Dept. 956, Moline, IL 61265.



**NOTHING RUNS
LIKE A DEERE®**





IRRIGATION: *an athletic field necessity*

by Ray Flood

■ Turf that provides athletes with a safe, playable surface must also look good. That can be difficult, especially

with unfavorable weather, heavy play and tight budgets.

Irrigation should be an integral part of the basic field design. Even before the turf options are discussed, two questions should be answered: "Is

water available?" and "How will watering be handled?"

Each athletic field has specific factors that must be considered in determining irrigation needs:

✓ typical weather patterns,

The Ten (Plus One)

+ I :

Flow and psi. Determine these figures for the water source.

I

Sprinkler head layout. Based on water availability, what type of head pattern and spacing best supplies water?

III

Labels. Label the sprinkler head arc and gpm (gallons of water which pass through the sprinkler head per minute). The arc describes the spray pattern and will indicate the height to which water is thrown and the distance of flow.

III

Zoning. Group heads into zones. The main water source supplies a set amount of gpm, for example 50 gpm. Each sprinkler head uses a set amount of gpm, for example 10 gpm. In this example, the maximum number of heads that could operate on a zone would be five ($50 \text{ gpm} \div 10 \text{ gpm} = 5$).

IV

Main line. Locate the system's main line. It always contains water under pressure and should be positioned to feed water most efficiently through lateral lines to the sprinkler head locations.

V

Valves. Spot them. Each zone off the main line has a valve between the main line piping and the piping that leads to the heads within that zone. A controller with a clock is used to trigger the valves. The controller could be mechanical, with dials and physical switches to trigger as the clock physically rotates, or electric, using electrical impulses to trigger activity.

VI

Lateral piping. Locate the lines that extend outward from the valves to the sprinkler heads. These lines usually use smaller pipe than the main line, becoming progressively smaller as they extend from the main line. Because water is released from the system at each sprinkler head, less pipe diameter is needed to transport the remaining water to the next head. Using progressively smaller pipe reduces system costs.

VII

Friction loss. Calculate the amount of pressure that is lost to friction as the water works its way through the piping to the last head in the zone. Water pressure affects sprinkler head performance.

VIII

More labels. Label all the components on the design and prepare a legend to identify them.

IX

Water schedule. Determine how quickly the field's soil absorbs water. Water should be delivered at, or slightly below, the soil's capacity to absorb it. Too much water at one time will either puddle or run off.

Turf water use is reflected by evapotranspiration (ET) rates. ET is the amount of evaporation caused by weather factors, combined with the transpiration rate of the specific grasses. Irrigation makes water available to the turf to make up for this water loss.

X

Material. Determine how much material to purchase in order to install the system. It's most efficient to install in-ground sprinkler systems before field construction. Installing later means you disrupt the soil profile and established turf, which may lead to uneven settling.



As a lawn maintenance pro, you can't afford to see it from the smallest trimmer to the largest chain saw, is built

What's it all mean to you? Crews that are more productive. Equip-

ment that costs less to own. And

a business that's better able to

deal with little things like taxes

and payroll. So when you're ready

to take a break from looking at

grass, go see the fastest-growing

line of professional equipment

in the industry. Visit your local

Shindaiwa dealer.

Most people see grass. You see taxes, the rent, and next week's payroll.

any other way. Sure, you appreciate a pretty yard. But it's a good bet you appreciate a healthy



for commercial use. Our equipment is light. Powerful. Refreshingly easy to use. And designed,

business even more. So let us suggest a way to win on both fronts: Shindaiwa. We offer a complete line of hand-held power equipment. Every model,

bolt by bolt, to shrug off the harshest treatment. If you ever do need service, you're backed by a national network of independent dealers.



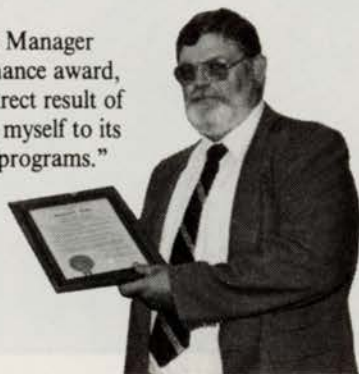
shindaiwa
WE SIMPLY MAKE THEM BETTER

The Case of the 'If's':

If professional grounds management means something to you, you belong with us.

"If I can become a *Certified Grounds Manager and win a recognized national maintenance award, so can you. Those attainments are a direct result of being a member of PGMS, dedicating myself to its principals and taking advantage of its programs."

Randy Willis, CGM
Grounds Supervisor
NW Missouri State University



Let PGMS Join YOU in your future.

Yes, we're a membership organization, but we don't just expect you to join us for joining's sake. We're vitally interested in our members' futures. We literally intend to and will add our expertise and strength to you for your greater attainment.

Join together with fellow grounds professionals who serve in all areas of the profession. Comprised almost equally of independent contractors and on-staff grounds managers, PGMS is THE broad-based professional organization for you.

*Conferred by PGMS, grounds manager certification is a program of developing and administering a program of voluntary peer review to establish acceptable competence levels, and to help the grounds professional attain his personal goals.

Clip and send today to PGMS

Name _____ Org. _____

Street _____

City/State/Zip _____

Telephone _____

Send to: PGMS, 120 Cockeysville Rd., Hunt Valley, MD 21031

- ✓ soil type and absorption/drainage capacity,
- ✓ desired turf varieties,
- ✓ type and frequency of sports activities and
- ✓ desired quality level.

The "Ten-Plus-One Commandments of Design" (as taught at the University of Maryland by the Professional School of Irrigation from Chantilly, Va.) lay the groundwork for installing a workable, in-ground sprinkler system or the basic considerations for an above-ground system.

Lay out the design on paper for accuracy.

Whichever in-ground system is installed, get a copy of the design ("as built" is the term designers use) to keep on hand in case of problems. Make sure at least one person on staff has a working knowledge of the system.

Whether installing a new in-ground system or upgrading an older one, take time to evaluate suppliers. Select a company that has the ability to analyze specific needs, design a

Irrigation test during reconstruction of Rosenblatt Stadium, Omaha, Neb. Determine how quickly the field's soil absorbs water. Water should be delivered at, or slightly below, the soil's capacity to absorb it.



✓...have controllers connected to a computer. Valves are operated by radio waves from the computer to radio antennae hooked to the controllers in the field. The computer's clock is the only one needed.

✓...are especially beneficial in multiple-field operations in which the one-time major investment is quickly paid back by the reduced hours spent on irrigation operation.

✓...almost think for themselves. New software programs allow the

THE ULTIMATE IN-GROUND SYSTEMS...

computer to adjust scheduling according to information supplied on variable conditions. Information can be gathered and typed in manually or fed to the computer from in-ground sensors located at strategic places in the fields.

-R.F.

7th Int'l Turfgrass Research Conference



July 18-24, 1993 ■ Breakers Hotel ■ Palm Beach, Florida

**Turf researchers from 16 different countries!
First time in the U.S. in 20 years!**

- Attend symposia on the latest turfgrass research topics
- Practical information will be presented as well as research papers
- Tour notable turfgrass sites

For more information contact: Dr. George H. Snyder University of Florida, IFAS
Everglades Research and Education Center Post Office Box 8003 Belle Glade, FL 33430-8003
U.S.A Tel: (407) 996-3062 Fax: (407) 996-0339

suitable system within budget restraints, and provide the back-up service required. When considering system options, examine both long-range and short-term cost-to-

efficiency ratios. Irrigation systems should make turf maintenance easier and more effective—not add to the turf manager's workload.

—The author is commercial sales representative for Turf Equipment and Supply Co., Baltimore, Md., and an active member of the Sports Turf Managers Association.

ABOVE-GROUND SYSTEMS

■ If an in-ground system is too costly, steps *Plus 1-1-2-3-7-9-10* will help in pre-planning an above-ground system.

Options include:

- a manual system with a network of above-ground hoses and impact heads;
- travelling sprinklers; or
- a semi-automatic system using a retractable tripod-based sprinkler head run off 1½- to 2-inch hose.

For in-ground installations, manufacturers offer heads designed for athletic field safety. When properly installed, these heads become a non-factor during play. The valves for athletic field irrigation should be positioned off to the side of the field for further safety.

● A basic in-ground sprinkler system could be manually operated. Gate valves—which are similar to

the water outlet valves outside a home—on the main and lateral lines give immediate on-off response.

● To cut costs, quick-connect valves can be used in lieu of sprinkler heads, with a limited number of heads purchased to move from zone to zone for watering.

● A typical electronic system would use all electronic controllers to operate the system on a prearranged schedule with a manual override. Electronic systems nearly always operate with valves that remain closed unless electronically opened to prevent systems from turning on during electrical outages.

● Another mid-range system operates using hydraulics, with an electronic controller and tiny tubes of water channeled to and from each valve.

—R.F.

Stump cutter maintenance

Preventive maintenance helps keep them productive, expert Brad Yochheim says.

by James E. Guyette

■ When operating a stump cutter, you need to pay extra attention to preventive maintenance.

"A stump cutter is a very powerful and productive machine when used properly," explains Brad Yochheim of Rayco Inc., Wooster, Ohio. "However, when improperly operated, a stump cutter can prove dangerous to the operators as well as onlookers."

Stump cutters need a detailed inspection program before and during operation. "Make sure all necessary guards are in their proper places and functioning correctly," Yochheim urges. "Use extra guards such as plywood or canvas curtains when operating near houses, windows, roadsides and other public places."

The stump and surrounding areas should be clear of rocks, metal objects and utility lines. If you are unsure about utility lines, call the utility company to locate the lines for you, or you could end up paying any repair bills.

Engine hints—"The engine is the most expensive part of the machine to replace, so religious maintenance on it will be very beneficial in the long run," says Yochheim.

Check and clean the **air filter** at least once a day because of the dusty environment the engine is exposed to.

"The air filter should be taken out and tapped on the sides to get rid of the dirt. It should not be blown out with an air hose."

The engine **cooling fins** should be cleaned at least once a week (to prevent build-up of dirt, wood chips and other debris with an air hose).

"It is very important that the engine's **oil** be checked and changed as recommended by each manufacturer," says Yochheim. "Be sure not to skimp on engine oil quality."

Check and heed your manual's advice on the break-in time needed for the oil and filters on a new machine.

"The **spark plugs** should be checked periodically and re-gapped when necessary. Wisconsin recommends that you replace the plugs after every 350 hours of operation; Kohler recommends 100 hours," Yochheim says.

On all engines, the **fuel** tank should be drained once a month to get rid of debris and

DOs, DON'Ts

DO:

- ✓ Watch for people not in safety zone.
- ✓ Wear all proper safety gear.
- ✓ Make sure all guards are in place properly.
- ✓ Use extra guards in populated areas.
- ✓ Inspect stump and area for rocks, metal, etc.
- ✓ Use air hose to clean engine fins weekly.
- ✓ Check, replace oil frequently.
- ✓ Replace, gap spark plugs when needed.
- ✓ Drain fuel tank monthly.
- ✓ Check hydraulic oil daily.
- ✓ Grease bearings daily.
- ✓ Grease pivot points often.
- ✓ Check V-belts, sheaves, chains, sprockets.
- ✓ Check teeth almost hourly.
- ✓ Secure trailer hitch properly.

DON'T:

- ✗ Walk near turning cutter wheel.
- ✗ Grind near unverified utility lines.
- ✗ Use an air hose to clean air filter.
- ✗ Skimp on oil quality.
- ✗ Use air-type grease gun.
- ✗ Gnaw at stump with dull teeth.
- ✗ Haul stump cutter with undersized truck.

changed once a month and the oil should be changed once a year.

The **hydraulic oil filter** should be replaced after a 10-hour break-in period and every 250 hours thereafter.

All **bearings**, such as the cutter wheel bearings and jackshaft bearings, should be greased with a hand-held grease gun daily. "An air-type grease gun should not be used so as *not* to blow the seals out of the bearings," Yochheim notes.

Belts, etc.—All of the **pivot pins** (cylinder ends, king pins, hinge pins, etc.) should be greased once a week or after 10 hours of operation.

Belt guards, chain guards and rubber curtains should all be checked daily for loose belts or worn parts.

"The drive system on your stump cutter is composed of V-belts and/or a steel roller chain—or, on newer models, a polychain," Yochheim explains. "A faulty drive system will result in loss of power and productivity."

The stump cutter's **V-belts** should be checked daily for tension. Yochheim says that you should be able to depress one belt thickness in the center of the belt span when the belt is engaged. Check the manual for adjustment tips.

"If the belts are constantly screaming—or loss of power is experienced—the **sheaves** on the end of the belt drive should be checked for wear," he advises. "Usually, the sheave at the engine shaft will wear first." Also, make sure there's no debris on the sheaves or belt path.

The **steel roller chain** or **polychain** should be checked periodically for proper tension and wear. The **chain housing** should be thoroughly cleaned of wood chips, dirt and other debris. Check for sprocket wear, too.

Yochheim says that a steel roller chain needs proper lubrication to function efficiently. The most important part of using a polychain is making sure that it is correctly aligned on the sprockets, or it will wear out sooner.

A stump cutter's **teeth** are the biggest wear item, says Yochheim. "These should be inspected for wear or damage almost every hour," he says.

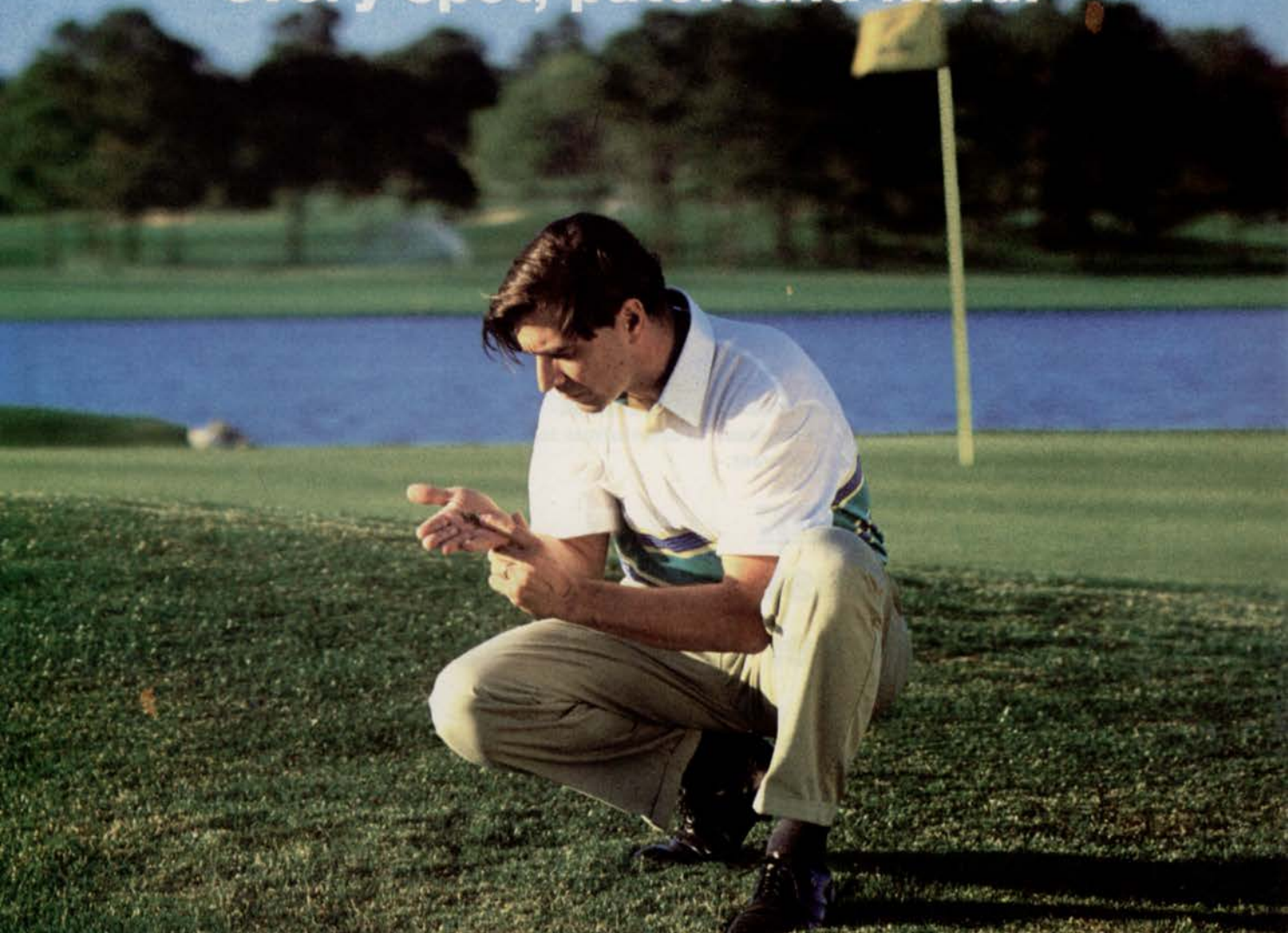
—James E. Guyette is a freelance writer who specializes in the green industry. He is based in South Euclid, Ohio.



sediment, and reduce sludge build-up. Each day, the **fuel line** should be checked to insure that it is not kinked or cut. Replace the **fuel filter** accordingly.

Hydraulic systems—Be sure the **hydraulic system oil** level is checked daily. A low oil level will result in sluggish hydraulic cylinder performance. "The hydraulic oil should be changed once a year, every 500 hours, or sooner, if it is noticeably dirty or smells burnt," Yochheim says. On a newer hydrostatic drive, the oil filter should be

For the turf manager who worries about every spot, patch and mold.



There's Curalan™ DF fungicide.

Broad spectrum Curalan DF controls eight diseases without harm to turf so turf managers can sleep nights.

Two-way protection

Like Curalan flowable, Curalan DF gives you the option of preventive and curative treatments by adjusting the application rate.



Labeled for all turf grasses

You can apply Curalan to any turf grass variety, at any stage of growth without concern for injury.

DF formulation is easy to use

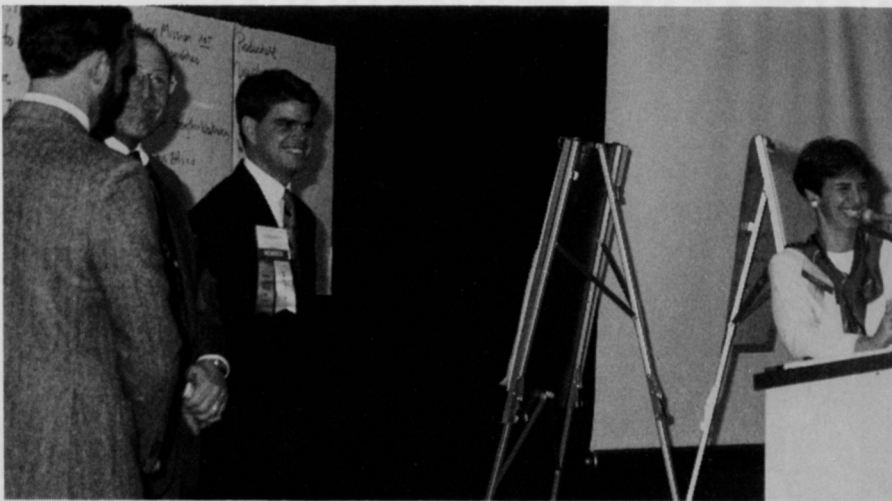
Curalan DF is easy to handle and leaves less residue in the jug.

Simple solutions to complex problems
For more information call 1-800-878-8060

BASF Corporation

*Always read and follow label directions.
Curalan is a trademark of BASF Corporation.
©1992 BASF Corporation JJ8247*

BASF



Linda Wolff Reed, extreme right, uses ALCA members to demonstrate how great teams can be different because people are different.

Building a team: **Maybe the most important thing you'll ever have to do**

People who complement each other and know how to work together make a great team.

■ "You must create the magic that makes a team work," says Linda Wolff Reed, an organizational development consultant based in Portland, Ore.

"Every employee must know the company's mission," she says. "The company's goal is the common goal. There is no other agenda. But don't get so over-committed to accomplishing the goal—the end result—that you don't focus on the process."

"I look at a team as the entire company. If the employee sees him or herself as working for one person, the team concept won't work," she says.

Communicating with employees is the first step in building a winning team. "It's the first step in creating trust," Reed continues. "Eighty percent of communications is listening."

She says the key to establishing trust is DWYSYWD: "Do What You Say You Will Do: your actions must follow your words."

Reed suggests you ask employees for written responses to these questions:

1) If you could change two things in this company, what would they be?

2) Do you really think the company listens to you? How?

3) What two things do you like most about the company?

4) What resources are here that we're not using?

5) How are we at recognition?

6) What should the company do this year?

"Not a lot will change in the first year, except that you'll build trust," says Reed. "Tell your people what you learned, how you're going to accomplish it, and what role they will play. And putting it into writing to your employees makes you accountable."

"As people see targets developing, the trust is created. But they will hold you accountable, and it is not fun."

Finding leaders is the next step in creating a winning team.

"In any given situation, anyone can be a leader," Reed notes. "Leadership qualities have been over-emphasized. In a team, the pieces all fit, so you must first find out people's strengths."

Look past what

might be negative conations, or instincts, in a team player, she says. Look to the positive. "When you're building on strengths, there are no weaknesses."

According to Reed, there are four forces that drive the actions of employees:

1) The instinct to **probe**, to ask why. This kind of employee might always be argumentative, but he or she is also an answer-finder.

2) The instinct to **pattern**, a person who is driven to completion. Though this kind of employee won't deviate from a pattern, he or she sees the "big picture."

3) The instinct to **innovate**; to ask "what if." Though this type of employee might be entirely too impulsive, you can depend on him or her in a crisis.

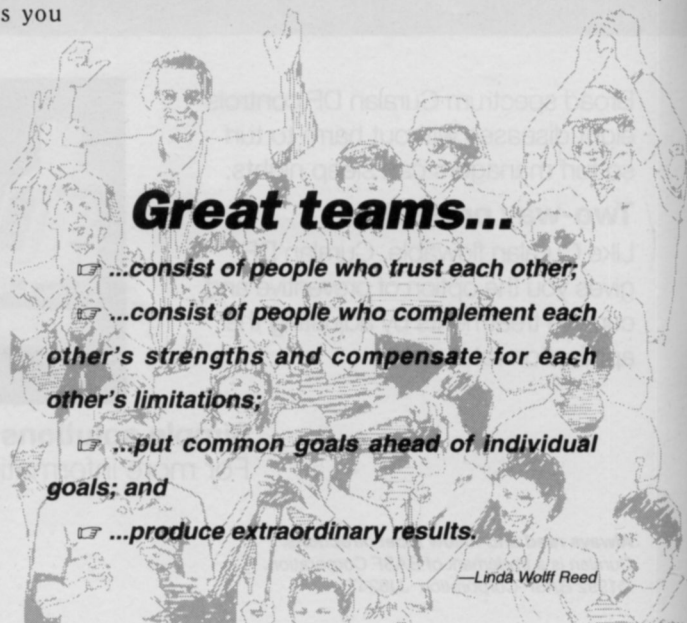
4) The instinct to be **physically demonstrative**. While this employee might be non-communicative, he or she can show you how to more efficiently perform physical tasks.

"The respecting of differences is the way to accomplish trust and strengthen one another," Reed observes. "Respecting differences is the most difficult thing we have to do as human beings. Our society is very individualistic. So if the leader is unwilling to respect differences, no one else on the team will."

What happens with a good team? Synergy—the sum of all the talents you have assembled is greater than its parts. And that should be the goal of your team-building process.

Reed made her observations at the Associated Landscape Contractors of America's annual conference last November in Indianapolis.

—Jerry Roche



Great teams...

☐ ...consist of people who trust each other;

☐ ...consist of people who complement each other's strengths and compensate for each other's limitations;

☐ ...put common goals ahead of individual goals; and

☐ ...produce extraordinary results.

—Linda Wolff Reed

Full 10" overhang makes trimming a breeze.

Get the most out of every ride—even around tricky traps and planting beds—with the generous 10" overhang of the 1684D. One of a complete family of Tri-King™ triplex mowers from Jacobsen.



More choices in agile, compact, high-production mowing.

Select a 16 hp gas, mechanically driven reel unit with 71" cutting width, or 16.5 hp diesel, hydraulically driven models in either 72" or 84" cutting widths.



All three feature your choice of 5 or 10-blade reels that can be switched from fixed to floating simply by removing a bolt. Plus, foot-operated reel lift allows the operator to keep both hands on the responsive steering yoke for fast, precise cross-cutting.

New standard features.

The 1672D & 1684D now come equipped with on-demand, all-wheel drive and power backlapping standard for the ultimate in triplex performance and



value, and the Tri-Kings' wide stance, lightweight design treads softly on delicate turf.

Ask your Jacobsen dealer for a complete demonstration.

THE PROFESSIONAL'S CHOICE ON TURF.

JACOBSEN
TEXTRON

Jacobsen Division of Textron, Inc.

Circle No. 121 on Reader Inquiry Card

HANG TEN

Fertilizing woody landscape plants

Proper technique and fertilizer selection are parts of PHC over which arborists have more control than any other service except tree pruning and surgery.

by Trevor F. Vidic
The Davey Tree Expert Co.

■ Maintaining woody plants in artificial ecosystems such as landscapes is a manipulative science.

Landscape soil usually does not contain the natural nutrients that are found in most wild plant communities. Arborists can use fertilizers to replace these essential elements, which plants need for optimum growth.

Providing nutrients for plants' roots and surrounding soil is probably the most important Plant Health Care (PHC) treatment arborists provide. The Davey Tree Expert Co. and the International Society of Arboriculture are among the industry organizations that endorse and employ PHC. Its strategy focuses on maintaining healthy, vital plants to enhance plants' natural defense systems, minimizing pesticide use.

The best way to promote plant health is proper site and plant selection, planting techniques and cultural maintenance. The right tree in the right soil with a good mulch, watering and fertilization program will function and grow with minimum pest problems.

The ISA notes that woody plant fertilization can increase growth, reduce pest susceptibility, and sometimes help reverse declining health. Fertilizer misuse, however, may not benefit woody

plants at all, and in some cases it actually damages them.

Large, over-mature trees may not need fertilization, for example, and over-application of soluble nitrogen may trigger unnecessary growth that is susceptible to insect and disease attack. Over-fertilized trees often need more pruning at shorter intervals to control or direct vigorous growth that the plant's root system may not be able to sustain. High salt, high nitrogen tree fertilizers also can induce plasmolysis (water loss from root cells) and decrease mycorrhizal populations, the association between roots and certain fungi that improves absorption.

Why nutrients?—Good fertilizers and application technique, while promoting the growth plants need to survive, should also provide nutrients that are necessary for the plant to maintain its structure and function.

All organisms require at least 16 essential elements. Of the 16, bonded carbon, hydrogen and oxygen are the energy-yielding carbohydrates or "tree food" derived from photosynthesis. The other 13 elements are absorbed from the soil as cations and anions.

A fertilizer itself in the soil is not a nutrient. Instead, it is a group of essential elements that will be used as nutrients through the interaction of the plant and soil. Fertilizing a tree is not the same as "energizing" a tree; fertilization simply provides some of the essential elements to the soil that the tree takes in for its own energy system.

An important aspect of woody plant fertilization is the method used to deliver essential elements to the root system. According to Dr. Roger Funk of the Davey Institute, the most limiting factor



The entire area within, to several feet beyond, the drip line should be fertilized. (Photo courtesy Davey Tree Expert Co.)

in fertilizer uptake is water availability. The ISA has studies on mature trees that demonstrate optimal response to fertilization in areas with relatively high soil moisture levels.

In addition to water, application frequency depends on type of material used, the soil profile, plant species and periods of root growth. With these variables taken into account—balanced by the economic realities of arborists being able to apply an appropriate material in a wide range of soil environments and climates during growing and dormant seasons—Dr. Funk developed a complete, slow-release, low-salt fertilizer that is applied with the liquid injection method.

Liquid injection—Of the five general

continued on page 34

We're committed to you from the ground up.



United Horticultural Supply™

The name and the organization are new – United Horticultural Supply – designed specifically to serve golf course superintendents, landscape and lawn care professionals in addition to the nursery and greenhouse industry.

United Horticultural Supply provides a broadbased line of premium quality, environmentally sound products.

Our professional turf product line includes fertilizers, chemicals and seed. Many of these items will be marketed by United Horticultural Supply under the TURFGO™ brand name.

GROWER'S CHOICE™ will be the brand label for many of our nursery, greenhouse and non-turf specialty market products.

Each geographic division of United Horticultural Supply is backed by the United Agri Products company and is

part of a strategically designed system of warehouses, inventory and transportation networks.

These divisions are designed to provide you with unparalleled service by being tailored to meet local needs while at the same time uniting together on national concerns.

If United Horticultural Supply is the type of company you are interested in doing business with, call (503) 390-9473 for information on the representatives in your area.



**United
Horticultural Supply.**

Working To Enhance Our World



Discover The Bottom Line Advantage

PENDULUM™
Preemergent Herbicide.
It's tough against weeds,
gentle on ornamentals
and your budget.

Weed control is top priority with PENDULUM™ WDG herbicide. It's highly effective against most annual grasses and many broadleaf weeds, stopping them dead in their tracks as they germinate.

Yet there's a gentle side to PENDULUM, too. Its active ingredient, pendimethalin, makes it safe for labeled ornamentals. So you can spray over the top of established trees, shrubs, flowering bedding plants and ground covers.

Advantage To Over-The-Top Weed Control.



For added ease-of-use and convenience, PENDULUM now comes in a premeasured water-soluble package.

And when you get right down to it, PENDULUM costs less per treatment than Surlan¹ and other preemergents. The result? Top performance and a more beautiful bottom line.

 **CYANAMID**
American Cyanamid Company
Agricultural Products Division
Vegetation and Pest Control Department
Wayne, NJ 07470 ©1993

PENDulum[™]
WDG herbicide

Good in beds.

Always read and follow label directions carefully.
[™]Trademark, American Cyanamid Company ©1993
¹Trademark, DowElanco

Circle No. 111 on Reader Inquiry Card

application methods (broadcast, drill hole, liquid soil inject, foliar, implants), liquid injection with slow-release fertilizer provides good distribution of material to the rootzone with adequate water included. The fertilizer, suspended in water, is injected using a soil needle or lance attached to a hydraulic sprayer unit.

You should keep several measurements in mind when using liquid injection to ensure uniform and consistent distribution:

- 1) the release rate of the fertilizer material;
- 2) spacing of the injection holes in the soil;
- 3) the amount of liquid injected per hole; and

4) the depth of the needle tip in the hole.

Most contemporary arboriculture texts say that the ideal root system of an "average" tree runs anywhere from 3 to 12 inches below the soil surface out to two or three times the canopy radius beyond the trunk on well-established trees.

The entire area within, to several feet beyond, the drip line should be fertilized. Injection holes should be spaced at about 3-foot intervals in a grid pattern.

Davey uses Arbor-Green 30-10-7 at a rate of 6 lbs./1000 sq. ft. of rootzone (in accordance with 1988 National Arborist Association standards) with one application. The hydraulic sprayer is maintained at 150 to 200 psi to force fertilizer ele-

ments laterally through the soil. Hole depth is generally 8 to 12 inches, and material is injected just as the tip enters the ground, down to maximum depth and as the tip is withdrawn, shutting the flow off before the tip clears the hole.

Davey's needle tip is a replaceable four-holed point that ejects the pressure fluid in an X pattern that further ensures consistent, even distribution per injection hole through almost the entire absorbing root profile in the soil.

These steps help ensure that landscape woody plants receive the nutrients they need to remain healthy.

—The author is technical advisor for the Davey Institute, the research and development arm of the Davey Tree Expert Co., Kent, Ohio.

Subsurface applications grow in SE

Contractors developing market for 'slit' and 'injection' mole cricket control in Dixie; efficacy against white grubs still uncertain in the North.

■ For a turf insecticide to be effective, it must contact the insect. Often only a small amount ever does—particularly products aimed at soil-inhabiting pests. This is true even after irrigation moves enough insecticide to the target area to solve an insect problem.

That's why researchers continue to investigate putting pesticides just below the soil surface, primarily for mole crickets in the South and white grubs in the North.

Equipment that either slices the soil and drops granules into the slits, or that injects liquids under high pressure through the turfgrass canopy, is receiving the most attention.

The concept isn't entirely new. But it's been within the last 10 years that entomologists like Auburn's Dr. Pat Cobb have been testing subsurface application against turfgrass insect pests in the United States. Dr. Pat Vittum at Massachusetts and Dr. Rick Brandenburg at North Carolina State (and probably others) continue subsurface work on turf plots in 1993.

They're evaluating both equipment and insecticides.

Research so far strongly suggests that the target placement of pesticides:

✓ reduces the amount of pesticide needed to control the insect pest, with obvious savings in time and money.

✓ reduces the exposure of insecticides to applicator, bystander and wildlife since the material is being placed below the turfgrass canopy.

✓ reduces the potential for chemical drift or runoff.

"It was apparent from the outset that the concept was solid, that if you incorporated these pesticides on close centers, you could reduce the rate because you are slicing them in."

—Bob Wicker

Misleading term—Robert Wicker is one of a growing number of contract applicators in the Southeast who use "slit application" for mole cricket control, mostly on bermudagrass golf course fairways, but also on athletic fields.

"To describe what we do as subsurface placement or incorporation is prob-

ably misleading. We don't actually till the soil or incorporate the pesticide into the soil," says Wicker, Environmental Turf Control, Inc., Jacksonville, Fla.

Wicker started experimenting with slit applications about four years ago. He is now working with Canaan Industries, Inc., Dothan, Ala., on its granular applicator/overseeder.

"It was apparent from the outset that the concept was solid, that if you incorporated these pesticides on close centers, you could reduce the rate because you are slicing them in," says Wicker. His company treated 3,500 to 4,000 acres of turf last year, most of it using Mocap 10G insecticide. The slit applications provide excellent mole cricket control using 50 to 75 percent of the label rate, he says.

Best results occur when the material is deposited in slits 1/2 to 1 inch deep. "In essence, we wedge the soil open and it closes right behind us," says Wicker.

The unit his company uses is pulled by a tractor. It's sizable. It treats a swath 84 inches wide, much too large for home lawns.

In fact, designing a subsurface unit small and maneuverable enough for home lawns is a tall order. "The lawn care industry wants to treat 1,000 square feet a minute and the subsurface equipment can't do that. A lot of the industry would have to change its thinking," says one industry insider.

continued on page 36

NEW

ProStar®

Your key for
locking out
turf disease



You'll want to be among the first to use PROSTAR®, the remarkable new systemic fungicide from NOR-AM Chemical Company. Extensive tests by leading universities and golf course superintendents have shown that PROSTAR provides outstanding control of brown patch, yellow patch and gray snow mold. It also stops southern blight, pink patch and red thread. In addition, PROSTAR has demonstrated its ability to suppress fairy ring for which no control agent currently exists. So now you can rely on the broad-spectrum activity and extended residual control of this outstanding new compound.

PROSTAR is in the benzamide class; it represents a whole new chemistry that makes it a perfect choice for use in resistance management programs, and it can also be tank-mixed with several other fungicides, including BANOL® or

triazole compounds, for even wider disease protection.

PROSTAR can be used either for preventative or curative control and has shown excellent safety on all species of fine turf.

Now that registration is pending, contact your distributor so you can add real power to your disease control program.

For more information on new PROSTAR, write to: NOR-AM Chemical Company, 6 Mount Vernon St., Suite 249, Winchester, MA 01890

PROSTAR...Your key for locking out turf disease. Turn it to your advantage.

 **NOR-AM**
NOR-AM CHEMICAL COMPANY
Specialty Products Division
A Schering Berlin Company

Little Falls Centre One, 2711 Centerville Road, Wilmington, DE 19808

IMPORTANT: Please remember always to read and follow carefully all label directions when applying any chemical.

Registration Pending

Circle No. 133 on Reader Inquiry Card

The market for custom chemical applications will grow, but only if the equipment and chemical manufacturers cooperate to match specific equipment designs with specific pesticides and formulations.

New technology—Several equipment companies, however, are testing walk-behind subsurface prototypes. They know the units they bring to market will have to be easy to transport, simple to operate and cover lots of ground fast.

"I think we get a call a month from equipment manufacturers about subsurface applications," says Mike Shaw, pesticide product development manager at DowElanco. That company's Dursban insecticide now includes label directions for sub-surface mole crickets. Shaw believes the market for custom chemical applications will grow, but only to the extent that equipment and chemical manufacturers cooperate to match specific equipment designs with specific pesticides and formulations. So far, industry has focused on retrofitting equipment that was originally designed for other purposes.

But, that has an up side too. Ken Lewis of the Rhone Poulenc Ag Company says equipment that can be used for several different tasks such as for slit applications and overseeding is more versatile and, therefore, may be more affordable for turfgrass managers.

More work needed—"The dispensing and metering mechanisms of this equipment are undergoing the greatest amount of development," says Lewis, who is a senior field research and development representative and does subsurface research for RP.

Another area where industry might have some work to do before subsurface applications become more commonplace is regulatory.

For example, this spring Ciba's Triumph insecticide label was finally amended to allow it to be applied with non-conventional equipment under the 24C state "local need" exemptions.

"In other words, there's nothing on our federal label that would keep us



Bob Wicker says the colter/spring arrangement won't damage sprinkler heads during application.

from going to the various states and asking for a 24C if we choose to re-open that door," says Dr. Douglas Houseworth, Ciba's manager of technical support. Injecting the insecticide on test plots several years ago gave excellent white grub control at less than label rates, he points out.

While some insecticides are already labeled for slit applications for mole crickets, others apparently still need label revisions to allow subsurface applications. Turfgrass managers, of course, must follow label directions.

While some insecticides are already labeled for slit applications for mole crickets, others apparently still need label revisions to allow subsurface applications. Turfgrass managers, of course, must follow label directions.

The future—The continuing spread of mole crickets throughout the Southeast—from coastal North Carolina to Texas—will likely drive interest in slit or injection applications, believe

many Sunbelt turfgrass managers. Many golf courses there have the budget to contract for this service, or to buy their own units.

"My concern is that it's so easy with this technology to treat areas that don't need treating, making applications wall to wall rather than mapping," says Dr. Pat Cobb.

The use of slit or injector technology for grub control in the North is still being evaluated with cautious enthusiasm.

"We're making progress, but there are still some questions that must be addressed," says Massachusetts's Vittum, who is putting out several test plots for grubs again in 1993.

—Ron Hall

For more information:

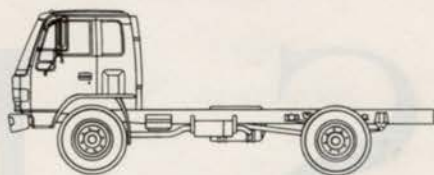
- Canaan Industries, Inc., P.O. Box 8097, Dothan, AL 36304. (800) 633-7560.
- Cross Equipment Company, 1401 Radium Springs Road, Albany, GA 31705. (912) 435-1781.
- Dol Brothers Ltd., R.R. 4, Cookstown, Ontario L0L 1L0. (705) 458-4353.
- Gandy Company, 528 Gandrud Rd., Owatonna, MN 55060. (507) 451-2857.
- Cushman Inc., A Ransomes Co., 7027 Cushman, P.O. Box 82409, Lincoln, NE 68501. (402) 475-9581

WE REMEMBER WHY YOU CALL IT PAYLOAD.

W SERIES
LOW CAB FORWARDS

It's very simple. The more your trucks can carry, the greater your profit potential.

That's why we offer lawn and landscape businesses a series of low cab forward trucks with payloads ranging from 5,751 to 22,790 pounds:* the GMC Truck Forward and Chevrolet Tiltmaster W4, W5, W6, W7 and W7HV series of low cab forward trucks.



W6 Series Model

They're easy to maneuver in tight spots, with their set-back front axle and standard power steering. They give you the great visibility of a panoramic windshield with their cab-over-engine design. And they're built to carry the specialized loads you need to

carry. See your GMC Truck Forward or Chevrolet Tiltmaster dealer and see how the W Series can pay off with payload for your business.

*Payload includes weight of cargo, body, equipment and passengers.

Buckle up, America! 



GMC, GMC Truck, Forward, Chevrolet and Tiltmaster are registered trademarks of General Motors Corp. © 1992 General Motors Corporation. All rights reserved.

 **FORWARD
TILTMASTER** 

Circle No. 117 on Reader Inquiry Card

Choose Bayleton this year for the same

CON

reason everyone chose it last year.

SIS

And the year before that. And the year

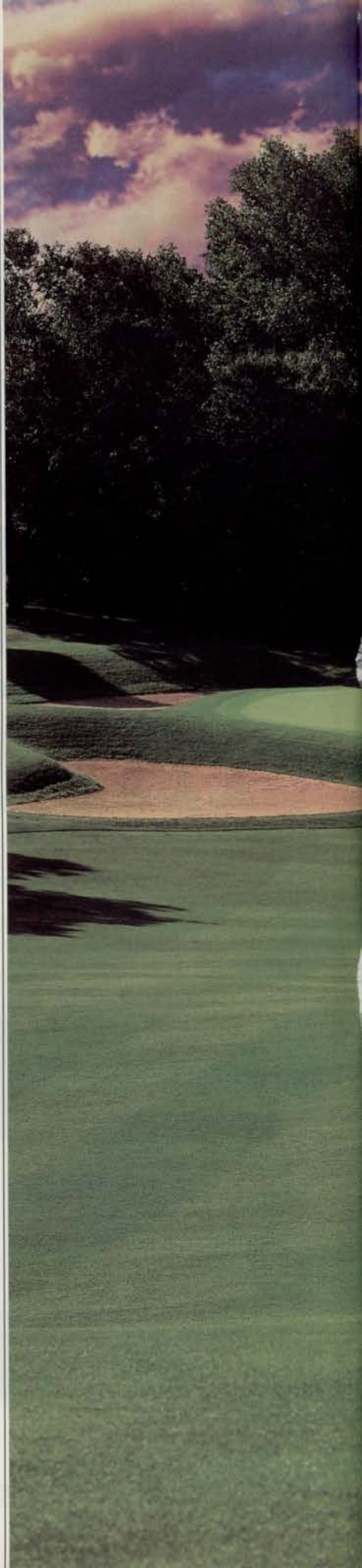
TEN

before that. And the year before that.

CY



Circle No. 125 on Reader Inquiry Card





Year after year, BAYLETON fungicide has controlled the tough diseases. Like summer patch and dollar spot. Not to mention a broad spectrum of other turf diseases.

Plus, BAYLETON has provided excellent control of powdery mildew and rust on ornamentals.

That's why it's been a leading fungicide on the finest courses in the country for more than ten years.

As if that weren't enough, consider the fact that BAYLETON is systemic. Which translates into longer control.



Our new water soluble packets give you consistency in formulation and control.

Which is all good reason to treat your entire course with BAYLETON. Especially your fairways, since it keeps your customers from tracking disease up to your tees and greens.

For more information, contact Miles Inc., Specialty Products, Box 4913, Kansas City, MO 64120. (800) 842-8020.

It may be the most consistently rewarding choice you make.



STRICTLY GOLF

Moving the players through the course

'Ready Golf' keeps public golfers moving and helps run 400+ people through 45 holes in a day.

■ There is no dawdling on the city golf courses in Overland Park, Kan.

Check out these numbers: 149,400 total rounds in 1992 on two 18-hole courses and a brand new nine-hole layout.

"My favorite days are when we get more than 400 people out," says Sandy Queen, Overland Park's manager of golf operations.

Those days, players are moving around the course at the rate of 18 holes every four hours. At all times of the year, they are guaranteed of spending no more than 4 hours, 32 minutes on the course.

"The number one problem of golf is slow play," Queen observes. Overland Park's courses are doing their best to alleviate that problem with their "Ready Golf Program," instituted three years ago by Queen.

Ready?—Here's how the program works:

Fivesomes tee off in eight-minute intervals, with a 16-minute gap every hour. Each five-some has a "team captain" responsible for keeping the group moving. He gets a card from the starter that notes optimum times for ending each nine holes.

Golfers leave in what Queen calls "waves," three to a day: morning, around noon, and afternoon. Fivesomes start on each of the two Overland Park nines and Westlinks. They rotate in unison for their second nine holes. "The timing on the wave gets critical," says August Lietzen, superintendent at the Overland Park course.

"We also experimented with 7- and 10-minute starting times, but 8 worked the best," notes Queen.

Eighty-five volunteers, mostly seniors, make up a team of starters, tee managers and "play managers." They each work two six-hour shifts per week and get unlimited free golf play in return.

"We have an opportunity to provide an education for everyone playing the course. Tee managers take tickets, tell team captains about the speed of play, conditions and so on," Queen notes.

"The play manager has a responsibility to contact each group. He works the course, in a cart, in reverse and has a

County, Ohio. Queen tailored his Ready Golf program after Cavanaugh's. "The program would work at any course, modified based on public demand," Queen contends.

Red (no) and green (yes) posts tell golfers when they can leave cart paths. Golfers are urged to adhere to the "90-degree rule" (straight to ball at a 90-degree angle from cart path and return) when leaving paths.

Course set-up also has a tremendous impact on golfer pace, Queen notes.

"We can alter play pace," notes Lietzen, "by shortening holes and softening pin placement."

Wear and tear—All of this play, of course, has its effects on the turf.

"General wear and tear is our biggest problem," Queen notes. He says high-traffic areas are re-sodded every year. Each course also uses 5 lbs. of nitrogen fertilizer per year, about $\frac{3}{4}$ to 1 lb. more than you might expect. And, Queen says, "players are really good in regard to repairing divots."

The Overland Park and Westlinks courses have bluegrass fairways and Penncross bentgrass greens. St. Andrews has seven pushed-up-dirt greens planted in 1955 with Cohansy bentgrass and two new USGA-specified greens. All three courses suffer through a 6- to 8-week period in the summer during which turf quality declines.

Each course has five full-time and nine seasonal maintenance people. Lietzen and Russell Bonneville (Westlinks superintendent) have degrees from Kansas State University; Terry Rodenberg (St. Andrews superintendent) is a University of Missouri grad. Two more Kansas State graduates, one of whom holds a master's degree, are also employed.

"These guys are exceptionally talented," notes Queen. He says Lietzen is particularly inventive, and Rodenberg adds that, "we're kind of like a support group for each other."

Year-round play the last three years has helped the course break attendance records. (Normal season is March 1 to November 1). Yet, since budgets are based



Yes, Overland Park's Manager of Golf Operations (Sandy Queen) is allowed to take his golf cart on the course—but only where green stakes allow.

pocket play manager (slide rule) that tells him where the group should be on every hole. He's also responsible for maintaining pace."

Queen spent two days in 1988 visiting Marty Cavanaugh at a course in Franklin

TALK TO TERRA

For the right products.

You'll find a single, convenient, and competitive source for pesticides, adjuvants, fertilizers, micronutrients, turfseed, and much more. Choose from a line-up that includes all major brands as well as our own high-quality line of Terra Professional Products.



For the right service.

There are over 300 Terra sales and service locations in 30 states. All it takes is a phone call and you'll have what you need, when you need it, with no need to maintain large inventories, and all at a price that's competitive.



For the right advice.

When you need agronomic advice, technical support, product information, and even employee training, Terra's professionals are there to help. You'll get solid recommendations and help solving problems in areas of seed selection and pest control. Plus, you'll have direct access to an advanced fertility recommendation program from our state-of-the-art soil and plant-tissue testing laboratory. Talk to Terra.

For your nearest sales and service location, call:

1-800-831-1002

Ext. 225



Terra International, Inc.
600 Fourth Street
Sioux City, Iowa 51101
1-800-831-1002

Circle No. 138 on Reader Inquiry Card

Overland Park's 'support' group includes, left to right: St. Andrews superintendent Terry Rodenberg, Westlinks superintendent Russell Bonneville, manager of golf operations Sandy Queen, Overland Park assistant super Steve Olson and Overland Park superintendent August Lietzen.



on the previous year's attendance, Queen has had some extra money lately.

"This is a self-sustaining course operation that has to pay the city a 12 percent overhead," he says. "We budget very aggressively to make sure any extra funds stay in the golf department. I should never exceed my forecast."

The city's master plan includes \$6.5 million to improve golf facilities over the next 10 years.

—Jerry Roche

(For more information on 'Ready Golf,' contact Sandy Queen at (913) 897-3805.)

TALK TO TERRA

FOR ACTIVATE PLUS

**When the label says you need
a non-ionic surfactant for coverage.**

Activate Plus spreads herbicides more evenly over weed surfaces. And better coverage means better control. Activate Plus is highly concentrated with 90% active ingredient. It's also nonflammable, making it a lot safer to store, transport, and use. So when the label recommends adding a non-ionic surfactant to get better coverage, talk to Terra Professional Products for the best, Activate Plus.

 **Terra**
Terra International, Inc.



Circle No. 104 on Reader Inquiry Card

Keeping excess water off greens

■ Researchers at the IFAS Fort Lauderdale Research and Education Center are finding out just how pesticides applied to a USGA green can leach into the groundwater.

For the past two years, they've been carefully monitoring pesticides on and under their own USGA-spec green, and the leachate which passes through it.

This isn't an idle exercise. Groundwater is used by 50 percent of the U.S. population (90 percent in rural areas) for its drinking water.

What the Florida researchers are discovering is both good news and bad news for golf course superintendents.

The good news—From one of the researchers, Dr. John Cisar:

For a pesticide to affect groundwater, it (or one of its metabolites) must make its way through the turfgrass. Turfgrass forms dense plant communities that contain up to 2,000 to 3,000 plants per square foot. Many turfgrasses produce thatch that's high in organic matter that can bind up pesticides.

"As a biological filter, turfgrass is second to no other plant material," says Cisar, associate professor of turfgrass management and water at the University of Florida.

The work at Fort Lauderdale confirms what other researchers have discovered—some pesticides never get very far into the soil before they're broken down. They are subject to photo-decomposition at the soil surface, also by chemical decomposition or biological degradation in the soil.

Even so, once a chemical does leach below the rootzone, because of excess irrigation or rainfall, it's less likely to degrade. And if its journey is through sand, the likelihood of groundwater con-



Dr. George Snyder discusses the fate of pesticides applied to this USGA-specification green during the Turf Field Day in Ft. Lauderdale.



Stainless steel containers filled with the same layers of materials as the green allow researchers to capture and measure leachate.

tamination increases.

Today's sand-based greens—usually containing about 20 percent by volume of organic matter and little or no clay—allow, in some instances, pesticides (or their metabolites) to percolate to the groundwater. That's the case at the research green in southeast Florida where the groundwater is just five feet below turf which is maintained identically to a course there (without the play, of course).

"You have a system that's actually geared toward, and possibly favoring, moving pesticides off site," says Cisar.

The bad news—The researchers determined that there is risk of contaminating groundwater, particularly if a green is irrigated excessively. They discovered this by collecting leachate from large, stainless steel containers buried under the research green.

For instance, they found metabolites of the nematicide fenamiphos in the leachate a few days after an initial application of the material during their first study in November 1991. The parent compound is strongly absorbed by organic matter, but the metabolites (also active against nematodes) are less strongly absorbed and more leachable.

"If you are going to be using Namacur (fenamiphos), really be careful about excess irrigation, especially after a first-time application," says Cisar. "If you irrigate excessively, you're going to lose some of the pesticide and you may not get the nematocidal activity that you want."

During the second test in January 1992 there was a substantial drop in the amount of chemical found in the leachate, says Cisar. He attributes this to decreased percolation and to enhanced degradation of the pesticide by microbes.

The research project is receiving strong backing from the USGA, the Florida Turfgrass Association and the South Florida Golf Course Superintendents Association.

—Ron Hall

NEW FROM TERRA

THALONIL™ 90DF

**The leading turf and
ornamental fungicide.**

New Thaloniil™ 90DF delivers the same proven, broad-spectrum control of turf and ornamental plant diseases that you've always had with chlorothalonil. And it's now available from Terra, the leader in new-generation dry flowable technology. Terra offers you a single source for all major brands of pesticides, adjuvants, fertilizers, micronutrients, and turfseed — including our own Professional Products line — all at competitive prices. You'll find helpful technical support, agronomic advice and information, and the most advanced fertility recommendations available. With over 300 sales and service locations serving 40 states, a phone call will get you what you need, when you need it. Talk to Terra. For your nearest location, call 1-800-831-1002, Ext. 225.

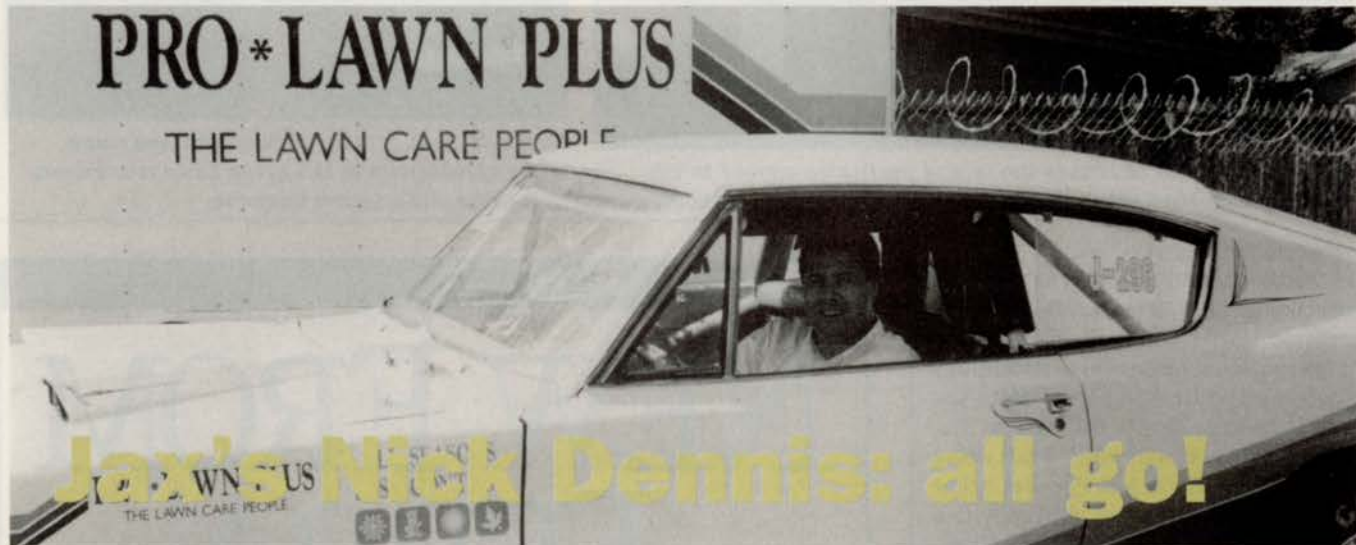
Terra
Terra International, Inc.

*Always read and
follow label directions.*



Circle No. 105 on Reader Inquiry Card

LAWN CARE INDUSTRY



Incoming FTGA president on fast track with lawn care business and automobile racing.

■ Drag racers call the metal pole with its row of colored lights "the Christmas Tree."

It signals the start of each race.

It flashes yellow, yellow, green!

Reflexes uncoil like a great spring. Hands grip the wheel. The right foot slams down so hard on the accelerator it's a wonder it doesn't burst through the firewall. Headers belch so loudly as to split your skull. The driver launches his car and, in less than 10 seconds, rockets past and triggers an invisible timing beam.

"Stress relief," says Nick Dennis, weekend driver and car sponsor, and full-time family man and lawn care pro, as he describes his involvement with drag racing—"But it's really not.

"Racing is perfect for you, a friend told me," says Nick. "He said, 'You're the most impulsive person I've ever met. If you don't like something, you'll tear it apart and rebuild it because you love to experiment.'"

Nick Dennis operates Pro Lawn Plus, Jacksonville, Fla., with

partner and former college roommate (U. of Georgia) Mike Feely. You'll recognize Mike immediately. He's the calm one. "I'm always in everybody's face," admits Dennis.

Nick Dennis started his lawn care business almost 14 years ago after visiting Atlanta and noticing, really noticing, ChemLawn trucks for the first time. "I started snooping around, looking at their trucks, talking to their people," he recalls.

Within a few months, he'd told his wife that he was quitting his pest control job and starting his own lawn care company in Jacksonville. She urged him to go for it.

Nick's timing turned out to be pretty good. He caught the industry moving up.

Florida home owners, long used to professional insect control in their homes and in their yards, also started to realize their lawns could be even nicer with regular fertilization and weed service. Adding to the demand was the steady stream of retirees, Yankees from the North buying homes in Florida and wanting nice lawns too.

Nick, however, believes the industry's heyday is over in north-east Florida.

He points to severe price cutting in his market as proof. Also, the ever-growing amount of lawn care regulation.

"As an industry, we've brought a lot of this scrutiny on ourselves by sloppy work and sloppy marketing," says Dennis, "by hiring warm bodies and throwing them out there and saying they're trained when they're not trained."

He says lawn care business owners now *must* be more responsible and responsive to customers if they want to survive.

To be profitable and have their companies grow, their service



Pro Lawn Plus crew with production leader Mike Feely, rear center, and Nick Dennis, kneeling.



Save a few lawns this year.

Treat for grubs with OFTANOL insecticide. It's about twenty cents per 1,000 square feet than most grub control products. Which means you'll be saving more



than your customers' turf this year. For more information, contact Miles Inc., Specialty Products, Box 4913, Kansas City, MO 64120. (800) 842-8020.



'The mentality that it's a fastbuck industry, that it's an easy mark for money—that really bugs the hell out of me.'



'Just show me what needs to be done. Give me some guidelines and leave me alone. Don't ask me how I'm going to do it. Just let me do it.'



'Price cutting is a big threat to the industry. It's like telling homeowners that we're going to sell them a new Lincoln at a Geo price.'



quality and/or delivery, *must* be markedly better or different from competitors.

"The only way we (Pro Lawn Plus) can hope to out-distance ourselves from everybody else in the marketplace is to be different from the others, more flexible than everybody else," says Dennis, who says his company grew by 7 percent during 1992.

That's one reason why Dennis is so involved in the Florida Turfgrass Association, regularly making the 2-hour-plus drive to Orlando while working on various committees. In September he becomes the first lawn care business owner ever to serve as FTGA's president.

"Being involved with the association has allowed us to keep a sharp eye on all the turfgrass research taking place in Florida," says Dennis. "We know all the latest on nematodes and mole crickets. We know about the updates on the herbicides, the hybrid grasses as they're being developed.

"A lot of this is information we can use on our customers' lawns. Sometimes it's information they should know, and we can



Pro Lawn Plus is using Isuzu trucks this season with 600 gallon main, 100 gallon drop tanks.

pass it on in the newsletter we leave with each service round."

Dennis admits his schedule is just about as full as it can get.

"I like what I do, but when I get tired of it, I have other things, other diversions. Maybe that's how I keep such a strong interest in this business. When the men and women come here every morning, they see that I'm still excited about what we're doing," says Dennis.

"I guess I look at this as kind of like a NASCAR race team, and I'm the car owner.

The sales guys are out there getting us sponsors when they sign up customers. The people in the office, they're the pit crew. Our drivers are the men on our trucks. Would I put an unskilled, untrained driver in a car that goes 120 mph? No, I'm not going to put an unskilled, untrained applicator in my trucks either.

"This is a very intense race, but we're going to win the race. We're going to win a lot of races," says Dennis.

—Ron Hall

1993 a big, big year for Florida turf

■ This promises to be a milestone year for the 41-year-old Florida Turfgrass Association (FTGA).

Sometime this summer or early fall—perhaps in time for the FTGA Conference and Trade Show Sept. 25-30 in Tampa—the 1,000-member association will help:

- ✓ unveil the first Florida Turfgrass Survey since 1974. It promises to have some eye-opening numbers. There were only about 400 golf courses in the state in 1974 and an estimated 1200 (and still counting) in 1993.

- ✓ dedicate a state of the art turfgrass research facility at the University of Florida, Gainesville, the Envirotron. The Envirotron was funded by private support from the FTGA and by matching funds contributed by the state. It has been under construction since March 11, 1992.

FTGA Executive Director Robert J. Yount says Florida's turfgrass industry is justifiably excited as the two projects near completion.

Results of the survey should give state lawmakers proof of just how vital turfgrass is to Florida's economy. "Legislators keep asking how big turfgrass is in the state, and now we're going to be able to tell them," says Yount. "This will be extremely

important as the state continues to deal with issues like water."

Also, by surveying and categorizing the industry, suppliers can more accurately and comprehensively match their products with the markets, says Yount.

The Envirotron, being built on the U. of Florida campus, will consist of a research laboratory, a greenhouse, a study/living area and a rhizotron—a glass-walled laboratory which allows researchers to study roots and soil.

"Turfgrass is so important to Florida that we have to continue to recruit excellent students," says Yount. "It's almost like recruiting a top quarterback. And we think the Envirotron will help the

University of Florida get top-flight students."

In an unrelated matter, Yount reports that its *Turfgrass Friends* coloring and activity book has been a big hit with youngsters. The FTGA had distributed almost 15,000 by the beginning of summer.

For more information: FTGA, 302 S. Graham Ave., Orlando, FL 32803-6399; (407) 898-6721.

—Ron Hall



Bob Yount: FTGA membership is diverse and growing fast.



Now the environment is right.



Effective,
economical
control of
all major
turf insects.



Lawn Fertilizer Division
P.O. Box 119
Maumee, Ohio 43537
1-800-225-ANDY (2639)

Management's responsibility: support service people

■ Your technicians have the most contact with customers, right?

Do they get just enough pay, encouragement, and/or support to get them through another day?

Do they really matter to your firm?

Are they *only* the technicians? Are they *only* the people who deliver service to your customers?

Second in a series on Zemke and 'service.'

"We've got to come to grips with what we pay people in front-line service jobs," says nationally known business consultant Ron Zemke. The operators of service businesses will have less and less choice anyway, says Zemke, because the number of eligible and trainable people looking for entry-level service jobs is shrinking.

Zemke directed a three-day ALCA Executive Forum this past February, and a big part of its message was that responsible, effective front-line people are the soul



Zemke: A manager's role is to support the service providers.

of any successful service company. About 250 lawn/landscape business owners took part in the Forum.

Zemke says some service delivery operations never rise from mediocrity because their management is like a pyramid and rigid. These operations foster the perception that the only way for employees to advance their careers is to become managers, to concentrate more on the organization's operation as they retreat further and further away from customer concerns.

This is dangerous thinking. The function of managers, in fact everybody in a service organization, should always be focused on customers. Or, says Zemke, in

serving the people who serve customers.

A manager's role is, in many respects, a servant's role, he believes—supporting service personnel, running interference, creating an atmosphere of understanding and trust and support.

"You have to have people at the front line who are comfortable with the idea that they have some control, and that you support their effort," says Zemke.

Back to the issue of technician pay.

Do high-quality service delivery organizations always pay their service people more than competitors? Not necessarily.

"Sometimes people are willing to trade off higher pay off for long-term employment and security," he adds. Other organizations reward competent people by giving them increasingly more responsibility and/or job variety. Don't be afraid to be creative when it comes to compensation.

More info is available from: Ron Zemke, Performance Research Associates, Inc., 821 Marquette Ave., Suite 1820, Minneapolis, MN; (612) 338-8523.

—Ron Hall



Some tools require a lot of time and manpower ...

GMAW picks two for top honors

■ Instead of a single "Person of the Year," why not two?

That's what the Grounds Management Association of Wisconsin (GMAW) members decided when they voted both Joe Bilskemper, LaCrosse, and Terry Kurth, Barefoot Grass, the honor.

Bilskemper, representing Lawn Care Specialist Inc., is a 1976 graduate of Viterbo College. He serves on four LaCrosse Chamber of Commerce commit-

tees. Kurth, a 1974 graduate of the University of Wisconsin, operates Barefoot Grass of Madison. He's GMAW's president and the past president of the Wisconsin Turfgrass Association.

Both green industry professionals served on the Ad Hoc Committee for the revised AG-29 rules, attended PLCAA's 1992 Day on the Hill, and also testified to defeat the Louis Forest Lawncare Bill AB-468 in Wisconsin.

The men were honored during the Wisconsin annual conference at Chula Vista Resort in the Wisconsin Dells.

Partners now in NH

■ Partners Quality Lawn Service, Inc., based in Easton, Mass., opened a new branch in Londonderry, New Hampshire.

Earlier this year, Partners purchased the customer base of Orkin Lawn Care's consolidated offices in Billerica and Marboro, both in Massachusetts.

Partners' President Dick Ficco, said plans had already been under way during 1992 to expand into markets north of Boston prior to acquiring Orkin's accounts.

Partners was formed in 1987. Ficco is a board member of the Professional Lawn Care Association of America.



Winners Terry Kurth, left, and Joe Bilskemper surround PLCAA board member Lou Wierichs.

Correction

■ An error was made in the article about Nutrilawn International.

The article stated that Nutrilawn has 50,000 customers in Winnipeg, Canada when, in fact, those customers are nationwide. It also states that franchisees need at least 30 customers to make a franchise viable. The correct number is 300.

Roundup® herbicide is the ideal management tool when budgets are tight or manpower is limited.

You can cover more ground in the same amount of time it would take using mechanical methods or pulling weeds by hand.

Better yet, Roundup gives you long-lasting control. So crews don't have to keep coming back. You'll be able to allot more manpower to other jobs and save wear and tear on equipment—getting the most out of your budget.

If you're not already using Roundup, don't waste another minute. Ask for our **FREE brochure** telling how Roundup combines ecology and economy.

Call: **1-800-332-3111. LOWEST PRICE EVER**



.....Some don't.



HOT TOPICS

Are answers needed to sports field questions?

Little data exists to justify or support a cost/benefit rationale for reconstruction or renovation.

OLATHE, Kan.—According to Stephen McWilliams, president and CEO of Turf Diagnostics & Design here, numerous questions remain about defining athletic field costs, benefits and performance. In a letter to *LANDSCAPE MANAGEMENT*, McWilliams writes:

"Dr. (Henry) Indyk didn't reveal the most critical piece of information that begs the question in his article ('Renovation or reconstruction?') in the April issue of *LANDSCAPE MANAGEMENT*: How much stress is too much stress for a native field?"

"Native soil athletic field research data on the ability of sports fields to handle the day-to-day levels of stress is relatively non-existent. Until we determine this information, 'renovation or reconstruction?' is guesswork.

"Dr. Indyk cites drainage as the single most important factor in the failure of a sports field. I couldn't agree more.

"Unfortunately, the cost of installing effective types of drainage systems in a native soil athletic field is approximately \$50,000 to \$70,000. The cost of sodding an athletic field is approximately \$10,000 to \$20,000, depending on sod quality. The price could approach \$100,000 to renovate one sports field with no realistic idea of what the long-term performance characteristics will be, or the cost to operate the field.

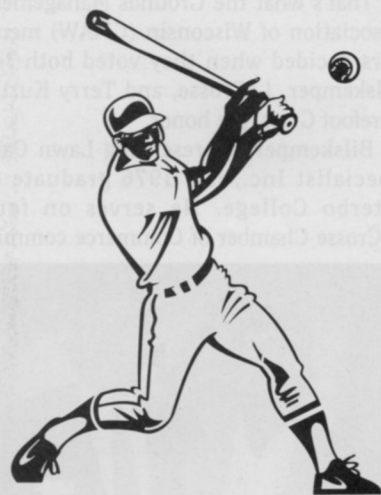
"The industry needs to know the performance expectations of a variety of

sports fields under different stress conditions. What are the internal drainage characteristics of a good native soil field with good performance? What is the percolation rate for different types of native soils, compacted and uncompacted?"

"The percolation rate for a compacted native soil field can be as low as 0.01 inches per hour. Is a \$50,000 to \$70,000 drainage system an effective solution to a soggy sports field, when it could take 12 days for the water to reach the system?"

"What is the relationship between field grade and soil matrix performance, with or without supplemental drainage systems? What are the moisture retention properties of native soils? How do we determine the impact of stress at various soil moisture levels? How much maintenance expenditure is needed to protect the facility's investment in the field?"

"We have very little data to justify or support a cost/benefit/performance rationale for reconstruction or renovation. We continue to put bandages on a problem which is rapidly heading toward resolution



in the courtroom.

"Of one thing I am certain: the legal community would be happy to hold our collective hands at about \$100-\$200 an hour for sports field injury litigation.

"With the various associations—Sports Turf Managers Association, National Youth Sports Foundation for the Prevention of Athletic Injuries, National Youth Sports Coaches Association, National Federation of High School Athletic Associations—there is no lack of talented people available to solve the problem and move toward meeting the common goal: making sports fields as safe as possible."

OSU working on turfgrass that withstands drought

COLUMBUS, Ohio—In dry years, it takes more than 4,500 gallons of water each week to keep an average home lawn green and growing.

That's only an inch of water over a 50-by-150-foot lawn. But it's still too much, water conservationists say, especially during drought years.

So researchers at Ohio State University are teaming up to develop drought-toler-

ant turfgrass using the most current biotechnology.

"Everybody's looking for a high-quality turfgrass that requires less maintenance," says OSU's Dr. Karl Danneberger. "Especially water—there are some areas of the nation that can only use non-potable water on their grass. This project is really opening doors to allow us to reduce inputs

continued on page 54

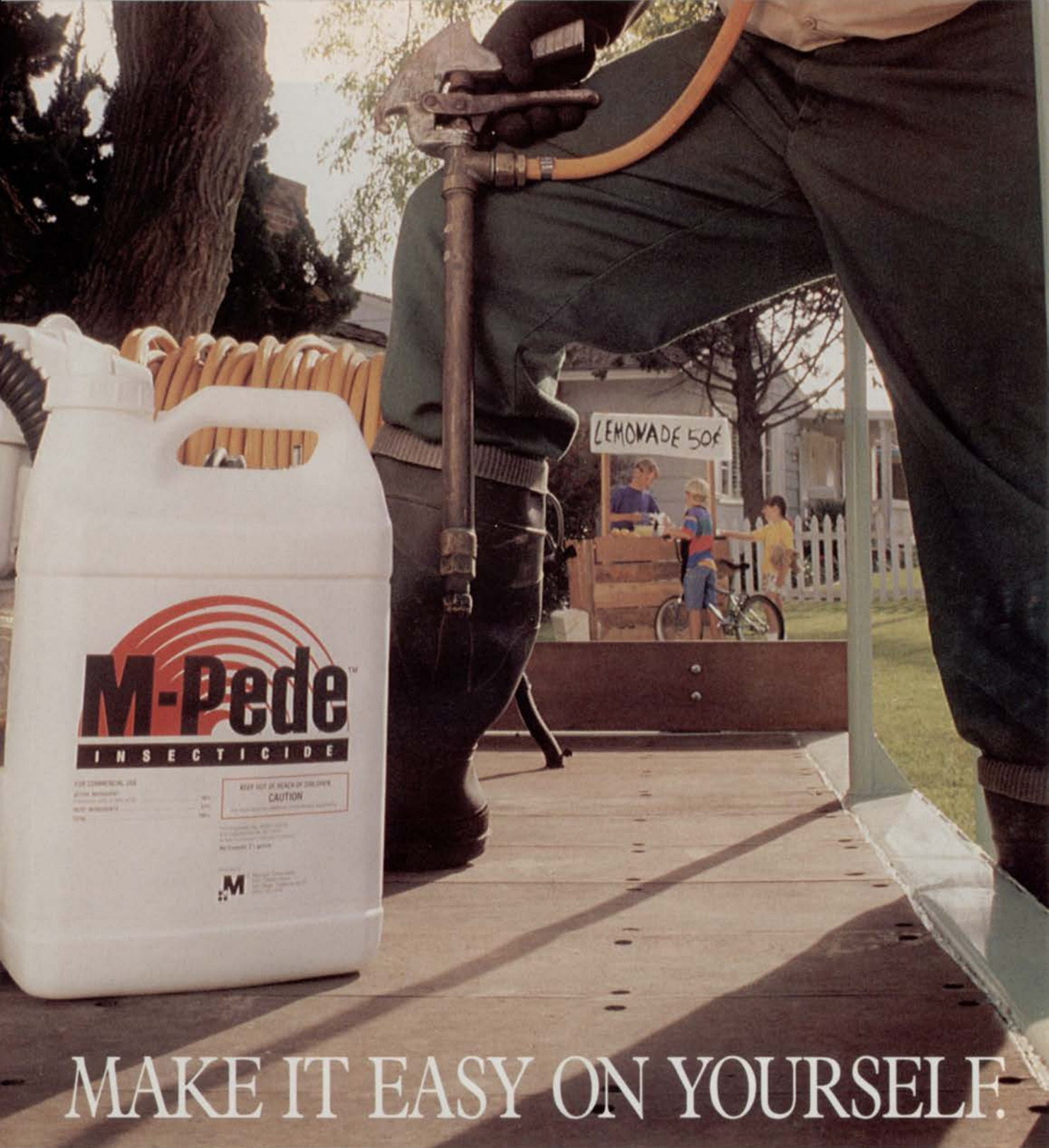
ELSEWHERE

House, EPA hear industry, page 54

Residential landscaping up, page 56

New group eyes members, page 58

Info-Center, month's events, page 58



MAKE IT EASY ON YOURSELF.

Eliminate the hassles of pesticide residues and reentry restrictions in landscape settings. M-Pede® bioinsecticide controls mites, aphids, whiteflies, adelgids, psyllids, scales and other soft-bodied pests without all the problems.

The neighbor kids can even set up their own enterprise right next door. No delays. No arguments. No hassles.

Make it easy on yourself. For more information on M-Pede, call toll-free: 800-745-7476.



4980 Carroll Canyon Road
San Diego, CA 92121

Always read and follow label directions.
When tank mixing, comply with the most restrictive label instructions.

M-Pede® is a registered trademark and Control Without Compromise™ is a trademark of Mycogen Corporation.

© 1993 Mycogen Corporation.





**NOW YOU CAN
KEEP YOUR
ONGOING BATTLE
AGAINST
TURF DISEASE
FROM BECOMING
AN UNENDING ONE.**

Fighting turf disease can be a vicious circle. As soon as one fairway is cured, another outbreak is bound to appear.

That's why many of today's top superintendents are tank-mixing Banner® with an effective contact fungicide like Daconil 2787® Flowable.

It allows them to use the most economical rates for the prevailing disease conditions. And its dual mode of action fights disease both inside and outside the plant.

Which doesn't just make turf disease go away. It makes it stay away.



are proud to be a 1993 GCSAA Platinum Tee Club Member.

HOLLAND

Circle No. 115 on Reader Inquiry Card

7th Int'l Turfgrass Research Conference

July 18-24, 1993
Breakers Hotel
Palm Beach, Florida

Turf researchers
from 16 different
countries!

- Attend symposia on the latest turfgrass research topics
- Practical information will be presented as well as research papers
- Tour notable turfgrass sites

**First time in the U.S.
in 20 years!**

For more information contact:
Dr. George H. Snyder
University of Florida, IFAS
Everglades Research and
Education Center
Post Office Box 8003
Belle Glade, FL 33430-8003
U.S.A.
Tel: (407) 996-3062
Fax: (407) 996-0339



POLLUTION CLEAN-UP INSURANCE FOR COMMERCIAL LAWN CARE FLEETS AND EQUIPMENT

Through the National Lawn Care Risk Purchasing Group, Inc., Lawn Care firms can now purchase pollution clean-up insurance for spills which are the result of an automobile accident.

Reasonably priced clean-up insurance is available for all sizes of trucks and production equipment providing up to \$100,000. in annual clean-up costs.

Coverage is provided by Lloyd's of London and is subject to a \$2,500. deductible per accident. This program will not replace your automobile insurance—it will fill a void in your current policy. Consult your Agent or Broker to verify that your current policy does not provide pollution clean-up protection.

For further details contact:

**Richard P. Bersnak, Jeanne Bartkus, or Dan Remley
at:**

**M.F.P. Insurance Agency, Inc.
50 W. Broad St., Suite 3200
Columbus, OH 43215
(614) 221-2398**

Circle No. 108 on Reader Inquiry Card

OSU from page 50 on turf."

Danneberger is cooperating with OSU's Biotechnology Center, which has isolated a gene that helps plants jumpstart the production of proline, a common amino acid associated with drought tolerance in many plants.

"Proline helps to hold a lot of water," says Dr. Desh Pal Verma, a professor of molecular genetics. "It prevents damage in the cell, so the cell remains alive during drought."

Biotechnologist John Finer is ready to bombard creeping bentgrass tissue with the drought-tolerance gene, and will soon begin work with several varieties of bluegrass.

The Ohio Turfgrass Foundation, Sam Stimmel president, has granted OSU \$100,000 to fund the drought tolerance project, which was to begin April 1st.

**Danneberger:
Turfgrass that's
low-maintenance
is the
goal.**



"The technology that comes out of this," notes Stimmel, "could lead to other things (like) developing pest-resistant varieties, and helping the plant make better use of nitrogen so we need less fertilizer."

Already, researchers who make up OSU's newly-formed Turfgrass Biotechnology Consortium—12 researchers from five departments—are looking at other possibilities.

"This is leading-edge technology," Stimmel says. "There's not another group doing this in the country, on turfgrass."

'We need the tools,' House, EPA are told

WASHINGTON—"Pesticides involve risk. Life itself involves risk," said U.S. Rep. Robert F. Smith (R-Ore.). "It's not pesticides that present the risk but improper use of those pesticides."

Rep. Smith's observation capped a "Specialty Pesticide Federal Symposium" here April 29. Rep. Smith is the ranking Republican on the House Agriculture Subcommittee on Department Operations and Nutrition. More than 30 U.S. congressional aides, members of the U.S. Environmental Protection Agency and Department of Agriculture, attended.

Dr. Joseph Neal of Cornell University pointed out that:

- Gardening is America's No. 1 leisure activity.
- 20 million acres are in home lawns and landscapes.
- 56 million Americans maintain their own lawns.

● 500,000 people make their living from turf care.

● Ornamental crops, including sod, nursery and greenhouse products, represented 10 percent of farmgate wholesale value in 1987.

"Cultural practices, such as mowing, cultivars, fertilization and irrigation are essential parts of the equation," said Neal, "but we also need the tools, the pesticides to get rid of the pests."

Others speaking on behalf of the green industry and its need for specialty chemicals: Tom Tri, environmental project manager for St. Louis, Minn.; Dr. Maxwell McCormack, Jr., U. of Maine Cooperative Forestry Research Unit; Bob Andrews, president of The Greenskeeper Inc., Carmel, Ind.; and Dr. Kirk Hurto, director of technical services for TruGreen-ChemLawn.

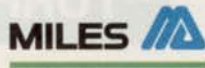
EXPECTED CHANGE, 1992 to 1993

Region	Low Cost	Low Cost	Low Cost	Low Cost	Low Cost	Low Cost	Low Cost	Low Cost	Low Cost
Northwest	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%
Southwest	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%
Great Lakes	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%
Great Plains	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%
South	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%
West	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%
Overall	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%	+1.5%

The only grub control fast enough to compete in the fifty-yard dash.



Nothing works faster than DYLOX insecticide. Plus it has no turf restrictions, it's low odor, and it's available in an 80% water soluble powder and 6.2% granular. So it's easy to apply as well. Which helps when you have to cover a lot of ground. For more information, contact Miles Inc., Specialty Products, Box 4913, Kansas City, MO 64120. (800) 842-8020.



EXPECTED CHANGE, 1992 to 1993

Region	Overall	New Res.	New Comm.	Res. Ren.	Comm. Ren.	Res. Maint.	Comm. Maint.
Northeast	+14.6%	+13.7%	+4.9%	+12.5%	+4.4%	+12.0%	+15.0%
Southeast	+9.4%	+8.8%	+6.8%	+2.9%	+3.3%	+5.0%	+4.8%
Great Lakes	+9.3%	+10.9%	+0.6%	+0.9%	-1.7%	+6.5%	+8.3%
Great Plains	+10.3%	+10.1%	+5.6%	+6.0%	+2.9%	+3.8%	+5.0%
Survey Avg.	+11.6%	+11.5%	+2.9%	+8.9%	+1.4%	+6.7%	+8.8%

ACTUAL CHANGE, 1991 to 1992

Region	Overall	New Res.	New Comm.	Res. Ren.	Comm. Ren.	Res. Maint.	Comm. Maint.
Northeast	+5.6%	-11.7%	-19.3%	+5.2%	-5.3%	+13.1%	+13.6%
Southeast	+4.4%	-10.2%	-2.4%	-5.0%	+1.7%	-3.3%	+5.0%
Great Lakes	+6.0%	+5.8%	-7.7%	+6.1%	-4.0%	-1.1%	-3.7%
Great Plains	+16.1%	+12.4%	+9.0%	+15.0%	+2.8%	+7.0%	+6.2%
Survey Avg.	+7.0%	0.0%	-5.6%	+6.6%	-1.8%	+2.2%	+3.2%

Source: National Landscape Association

New residential business expected to grow by 11.5%

WASHINGTON—New residential installation is the hot ticket in the landscape maintenance market, according to members of the National Landscape Association.

NLA members, in this spring's annual survey, predicted a sales increase of 11.5% this year. Residential renovations are pre-

dicted to be up 8.9% and commercial maintenance up 8.8%.

The toughest market this year, NLA members believe, will be commercial renovation, predicted to grow just 1.4%.

Overall, NLA members expect sales in their industry to grow 11.6% over 1992 figures. Last year, they predicted an

increase of 8% over 1991, but business actually grew just 7%.

The recently-depressed Northeast predicted the largest overall increases this year, 14%, followed by the Great Plains (10.3%), the Southeast (9.4%) and the Great Lakes (9.3%).

(Complete chart above.)

Designed to keep your turf healthy.

BROUWER VERTICAL MOWER

Make sure those expensive chemicals and fertilizers are doing their best job - by getting right to the roots of your turf via aeration created by the Brouwer Vertical Mower.

The Brouwer Vertical Mower also improves water distribution, prevents thatch build-up, improves the success rate of overseeding and reduces surface compaction.



BROUWER

TURF EQUIPMENT LIMITED

23324 Woodbine Avenue
Keswick, Ontario
Canada L4P 3E9

Tel. (416) 476-4311
Fax (416) 476-5867

INFO CENTER

Special literature and video for LE readers

Management Society. It is free to view. For more information, contact the Society at 1100 Connecticut Ave., Suite 100, Washington, DC 20036-5543. Tel: 202/462-3774.

TY SLICKERS... Urban Treats: A new line of gourmet, artisanal, and organic breads, pastries, and more. The company is currently seeking distributors in the Northeast, Midwest, and South. For more information, contact Ty Slickers at 1100 Connecticut Ave., Suite 100, Washington, DC 20036-5543. Tel: 202/462-3774.

COLIN...AROUND...Karl's of...
 growing without cultivation in West Virginia and throughout the Appalachian and surrounding regions. The book costs \$10. Contact: David L. Beck, 401 E. Main St., Morgantown, WV 26505. Tel: 304/241-1324.

ENVIRO FISHERS...Special offering on freshwater fish. Includes water, the world's largest fish market. The book costs \$10. Contact: David L. Beck, 401 E. Main St., Morgantown, WV 26505. Tel: 304/241-1324.



MEMBER DIRECTORY...A directory of the industry's leading green professionals is available from the Professional Greening Association. The book costs \$10. Contact: David L. Beck, 401 E. Main St., Morgantown, WV 26505. Tel: 304/241-1324.

LEADER...A new line of gourmet, artisanal, and organic breads, pastries, and more. The company is currently seeking distributors in the Northeast, Midwest, and South. For more information, contact Ty Slickers at 1100 Connecticut Ave., Suite 100, Washington, DC 20036-5543. Tel: 202/462-3774.

GREEN INDUSTRY EVENTS...A directory of the industry's leading green professionals is available from the Professional Greening Association. The book costs \$10. Contact: David L. Beck, 401 E. Main St., Morgantown, WV 26505. Tel: 304/241-1324.

AFMS seeking new members

AFMS is seeking new members. The organization is currently accepting applications for its membership. For more information, contact AFMS at 1100 Connecticut Ave., Suite 100, Washington, DC 20036-5543. Tel: 202/462-3774.

The AFMS is currently accepting applications for its membership. The organization is currently accepting applications for its membership. For more information, contact AFMS at 1100 Connecticut Ave., Suite 100, Washington, DC 20036-5543. Tel: 202/462-3774.

USBA considers 'Record' report

USBA is considering a report on the state of the industry. The report is currently under review. For more information, contact USBA at 1100 Connecticut Ave., Suite 100, Washington, DC 20036-5543. Tel: 202/462-3774.

The report is currently under review. The report is currently under review. For more information, contact USBA at 1100 Connecticut Ave., Suite 100, Washington, DC 20036-5543. Tel: 202/462-3774.

KNOWLEDGE IS POWER. Every day, Advanstar opens up a world of knowledge, becoming the prime source of information that you need for success — through leading publications serving diverse business and professional markets...productive expositions that deliver quality audiences...and sharply focused marketing services. Look at your world in a whole new light. *Advanstar. Serving business' need to know.*



PUBLICATIONS • EXPOSITIONS • MARKETING SERVICES
 7500 Old Oak Boulevard, Cleveland, Ohio 44130 216-243-8100 800-949-9049

AFMS seeking new members

SILVER SPRING, Md.—The American Floral Meadow Society is a new professional society formed for the development and improvement of wildflower-grass groundcover plantings for ornamental and low-maintenance uses.

Members of the organization conduct research into selection of wildflower and grass species, formulation of mixes, establishment methods and maintenance.

For a limited time, memberships are \$10 for individuals and \$25 for organizations. For more information contact: AFMS, c/o John Krouse, University of Maryland Dept. of Agronomy, Turf Research and Education Facility, 3120 Gracefield Rd., Silver Spring, MD 20904.

USGA considers 'Record' reprint

CHELSEA, Mich.—Would you like to see the past 15 volumes of the United States Golf Association's "Green Section Record" reprinted in a 7-volume hardcover format?

The USGA, in cooperation with Lewis Publishers here, is examining the interest in such a project. The set will contain all articles exactly as they appeared previously, including a cumulative index released by the USGA at the end of 1991.

The set, if there is enough demand, will be available for approximately \$350. It will have more than 2,000 pages.

If interested in purchasing this item, please contact Kathy Paparelli at the USGA: P.O. Box 708, Far Hills, NJ 07931; (908) 234-2300.

JUNE

11: Iowa Sports Turf Workshop, Loras College, Dubuque, Iowa. Contact: Gary Peterson, (515) 791-0765.

15: Nebraska Turfgrass Field Day and Equipment Show, John Seaton Anderson Turfgrass Research Facility, Lincoln, Neb. Contact: Dr. Roch Gaussoin, (402) 472-8619.

16: Lofts Seed Annual Field Day, Lofts Seed Research Farm, Martinsville, N.J. Contact: Cindy Kinnette, (908) 560-1590; outside N.J., (800) 526-3890.

16: Chesapeake Chapter/Sports Turf Managers Association "Softball Field Renovations," Meadows Park, Chevy Chase, Md. Contact: Tim Moore, (301) 650-2631, or Art Downing, (410) 313-7254.

17-18: Park & Recreation Design Symposium, Little Rock, Ark. Contact: National Institute on Park and Grounds Maintenance, (414) 733-2301.

22: "Diagnosing Landscape Disorders," Riverside, Calif. Contact: HEOF, UC Seminar

INFO CENTER

Useful literature and videos for LM readers

ENVIRO-FIBBERS...Global warming an invention? Ozone depletion untrue? Is the spotted owl in reality far from extinction? The answers to these and other questions about the environment are found in Dixy Lee Ray's new book, "Environmental Overkill; Whatever Happened to Common Sense?" Cost is \$19.95. Contact: Regnery Gateway, 1130 17th St. NW, Suite 600, Washington, D.C. 20036; (202) 457-0978.

CONCRETE PAVERS...The Concrete Paver Institute publishes a basic guide to interlocking concrete pavements. The three-ring guide is in four sections: Basic Skills; Managing a Job and Job Site; Advanced Job Situations; Advanced Product Knowledge. Contact: Concrete Paver Institute, 2302 Horse Pen Rd., Herndon, VA 22071-3406; (703) 713-1900.

MOUNTAIN PLANTS..."Flora of West Virginia" presents descriptions, illustrations, geographical data and other information on about 2,200 species found growing without cultivation in West Virginia and throughout the Appalachian and surrounding region. The book costs \$40. Contact: Seneca Books, Rt. 6, Box 81-B, Morgantown, WV, 26505; (304) 594-1324.

MEMBER DIRECTORY...A directory of the nation's leading grounds professionals is available from the Professional Grounds

Management Society. It is free to members, \$38 for non-members. Contact or send check or money order to the Professional Grounds Management Society, 120 Cockeysville Rd., Suite 104, Hunt Valley, MD 21031; (410) 584-9754.

CITY SLICKERS..."Urban Trees: A Guide for Selection, Maintenance, and Master Planning" by Leonard E. Phillips, Jr., presents detailed guidelines on everything from cataloging and maintaining existing trees to selecting the right trees for future planting. How to use new computerization methods to take a street tree inventory; how to choose trees to fit a specific climate and site; how to implement a high-power, cost-saving maintenance program; and how to work within the scope of the policies, laws and regulations that govern city streets and parks. Contact: McGraw-Hill, (800) 262-4729.

TOOLIN' AROUND...Retailers of Husqvarna equipment might like the company's new video series on product set-up to sales training. The nine videos cover a variety of subjects and benefits relative to Husqvarna equipment. They include information on safety, dealer support programs, customer service training, and business advice. Contact: Husqvarna Forest & Garden Co., 9006 J Perimeter Woods Dr. Charlotte, NC 28216; (704) 597-5000.

GREEN INDUSTRY EVENTS

Coordinator, (602) 684-7308.

22: "Estimating & Managing Principles," Phoenix, Ariz., with Charles vander Kooi. Contact: Arizona Landscape Contractors' Association, (602) 956-4252.

26: Park Seed Flower Day, Greenwood, S.C. Contact: Karen Jennings, (800) 845-3369.

30: National Midwest Regional Sports Turf Institute Trade Show, Wheaton (Ill.) College. Contact: Mike Trigg, (708) 360-4750.

JULY

13-14: "Bulbs for All Seasons" Short Course, Pittsburgh Civic Garden Center. Contact: Michael Masiuk, (412) 392-8540.

14-16: American Sod Producer's Association Summer Convention and Field

Days, Nashville, Tenn. Contact the ASPA at 1855-A Hicks Rd., Rolling Meadows, IL 60008; (708) 705-9898.

14: VPI-SU Nursery Field Day, Hampton Roads Agricultural Experiment Station, Virginia Beach, Va. Contact: Hampton Roads Station, (804) 363-3900.

14-15: MAPPA-PGMS Grounds Management Conference, Oxford, Ohio. Contact: George Persinger, Miami University, (513) 529-6786.

15: Southern Illinois Nurseryman's Association Field Day and Trade Show, Dintelmänn Nursery, Belleville, Ill. Contact: Dintelmänn Nursery, (618) 233-4638.

15-16: ASPA Summer Convention and Field Days, Opryland Hotel, Nashville, Tenn. Contact: American Sod Producers Association, (708) 705-9898.

18-20: Mid-Atlantic Nurserymen's Trade Show, Baltimore Convention Center. Send \$8 pre-registration to MANTS, P.O. Box 314, Perry Hall, MD 21128.

Let it on your course, and you may have to answer
to a mob of angry people carrying clubs.



Dollar spot

Your golfers want to play on healthy greens, tees and fairways. So if they run across Dollar spot, they'll probably end up running you down.

That's why you need the superior protection of Daconil 2787® fungicide. It controls summer diseases like Dollar spot on all Northern area grasses — including Bentgrass tees, greens and fairways.

Daconil 2787 also provides effective broad-spectrum control of 17 other disease-causing organisms. That includes those that cause Brown patch, Leaf spot and Anthracnose. Plus, it's now registered for effective control of algal scum. And you can count on Daconil 2787 to protect labeled ornamental plantings and plant beds from disease.

So make Daconil 2787 the most important component in your turf management program. Remember, it's an excellent contact fungicide for disease resistance management. Use Daconil 2787. It helps keep the people carrying clubs happy with you.

ISK Biotech Corporation, Turf & Specialty Products Division, 5966 Heisley Road,
P.O. Box 8000, Mentor, Ohio 44061-8000.



Nothing performs like Daconil 2787. Nothing.

LANDSCAPE MANAGEMENT

INCORPORATING LAWN CARE INDUSTRY

RESOURCES FOR LANDSCAPE PROFESSIONALS

GOLF & TURF

New & Best-Selling Books
Specialized Videos

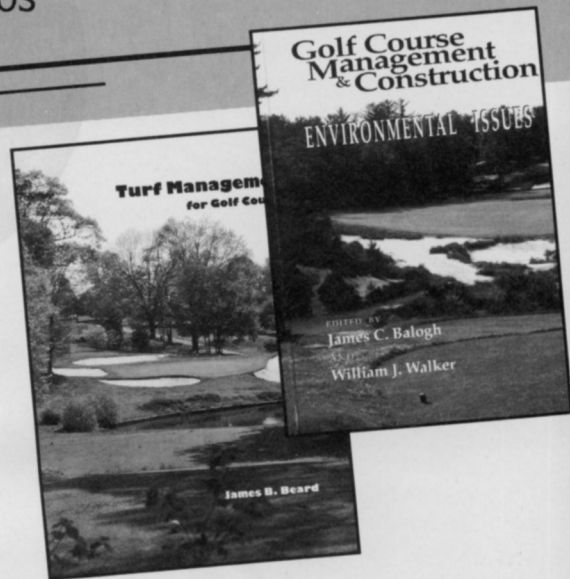
Golf

Golf Course Management and Construction: Environmental Issues

edited by James C. Balogh, Ph.D., William J. Walker, Ph.D.
For turfgrass specialists, landscape and golf course architects, developers, superintendents and land-use regulators, this volume summarizes and assesses environmental effects of turfgrass system construction and maintenance. Covers water resources, fertilization, pesticides, integrated management systems, wildlife, wetlands, aquatic and terrestrial toxicity tables. 976pp. BK-617-\$65.00

Turf Management for Golf Courses by James Beard

Written by the eminent turfgrass researcher, this USGA sponsored text is an ideal reference and "how to" guide for your bookshelf. This comprehensive guide details all phases of golf course operations including course design and construction, turf management, course administration, irrigation, equipment, and disease and pest control. 642pp. BK-615-\$74.00



Turf

Turf Managers' Handbook by Daniel and Freeborg

2nd. ed. Totally revised and updated, this valuable and practical guide targets the turf practitioner. Chapters on grasses, growth regulators and diseases have had extensive modifications. Innovations resulting from research and practice have been added to reflect the current techniques available for turf manager. 437pp. BK-110-\$39.95

Controlling Turfgrass Pests by Shurtleff, Feramanian, Randell

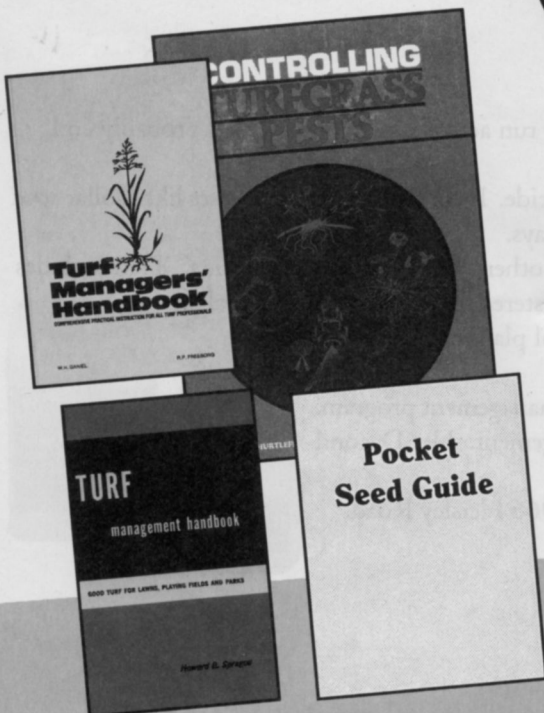
New comprehensive guide provides the most up-to-the-minute information available on the identification, biology, control and management of every type of turfgrass pest. 449pp. BK-220-\$56.95

Turf Management Handbook by Howard Sprague

This is a practical guide to turf care under both healthy and poor turf conditions. Chapters cover turf in cooler and warmer regions, fertilizer use, regular turf care, weed and disease control, and special turf problems. Useful seasonal schedules for management of turf areas. 255pp. BK-620-\$26.60

Landscapes Management's Pocket seed Guide

You'll refer to this handy guide again and again. It provides sections on why seed?, overseeding, Florida study, adaptability and disease susceptibility. Section 2 covers the National Turfgrass Evaluation Program results about perennial rye grass, Kentucky blue, Bentgrass, and Fineleaf fescues. Quick supplier listing included. 36pp. BK-655-\$10.00



Pocket Seed Guide

TURFGRASS SCIENCE AND CULTURE

JAMES B. BEARD



Turfgrass: Science and Culture by James Beard

This is the comprehensive basic text and reference source used in many leading university turf programs. It includes findings of current research compiled from more than 12,000 sources. 658pp. BK-630-\$62.95

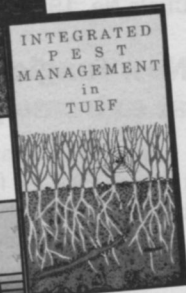
Turf Irrigation Manual by James Watkins

The perfect guidebook for engineers, architects, designers and contractors. Keeps pace with the latest developments in turf and landscape irrigation. Specific chapters deal with rotary sprinkler design systems, golf course design systems, and expanded engineering and reference materials. 364pp. BK-640-\$32.95



2nd Edition
T&O CR
1993

Turf & Ornamental Chemicals Reference



1993 Turf and Ornamental Chemicals Reference

2nd. ed. For every professional who makes decisions about the selection, proper use, storage, and handling of chemical products. Provides fast access to new developments. Includes complete product label and information organized by manufacturer, tabbed for quick reference, indexed six different ways, by brand name, manufacturer, product category, common name, plant and site use, pest use. Complete product Material Safety Data Sheets alphabetized by company and brand name, HazCom, SARA and OSHA regulations, table of DOT shipping information, storage requirements, application/record keeping chart. 930pp. BK-645-\$110.00

Compendium of Turfgrass Diseases

2nd. ed. Contains important new information on biological disease control, root-infecting fungi that cause patch disease, diseases, disorders, and causal agents. Over 60 color photos for easy disease identification. Covers abiotic agents of noninfectious diseases, foliar and/or root diseases, disease diagnosis and control strategy. 128pp. BK-650-\$30.00

VIDEOS!

The Most Effective and Economical Training For New and Current Staff:

IPM in Turf (VHS Video)

See how an Integrated Pest Management (IPM) program for turf increases pest control, cuts costs, reduces use of pesticides and protects health of the environment. Learn how to effectively monitor weeds, insects, diseases, then use habitat modification, horticulture, physical/mechanical, biological and least-toxic chemical controls. Thorough, interesting, practical. Sell your clients on the IPM concept. Help your turf business prosper. VD-100E-\$89.95

Professional Turf Management (VHS Video)

A good turf specialist needs a good education and varied practical experience. This video shows all required in the maintenance of turfgrasses. Starts with how grasses grow and looks at what a site assessment determines. Learn: common types, mowing, irrigation, soil fertility, fertilization, cultural practices, weed/insect/disease/pest control. VD-101E-\$89.95

ORDER TODAY! For the Landscape Professionals

Title & Number	Qty.	Price	\$ Total

Account # _____ Exp. Date _____

Signature _____ Date _____

Name _____ Title _____

Company _____

Address _____

City _____ (Please use street address) State _____ Zip _____

Telephone (_____) _____

Check Enclosed or Charge my: MasterCard VISA

American Express (\$10 minimum charge card order.)

Detach and mail this form with your payment or credit card information to:

Sub Total - \$ _____

Deduct 10% when you order 4 or more books - \$ _____

Tax: CA, CO, CT, GA, IL, MN, NJ, NY, OH, TX - \$ _____

Postage/Handling - \$ _____

Total Amount Enclosed - \$ _____

Postage, Handling, and Tax must be included with payment.

Shipping & Handling Domestic: Please add \$5 per order + \$1 per additional book.

All others add \$15 per order plus \$2 per additional copy..

Please allow 3-4 weeks for delivery. Prices subject to change. Quantity

rates available upon request. For information or to order call 1-800-598-6008

or FAX 216-891-2726.

ADVANSTAR GUARANTEE -

If you are not completely

satisfied with the material

you order, return it to us

within 15 days for a full

refund. No questions

asked.



ADVANSTAR
COMMUNICATIONS
MARKETING SERVICES

7500 Old Oak Blvd., Cleveland, OH 44130

PRODUCT SHOWCASE

Fungicide combo controls summer disease complex

A new fungicide tank-mix combination can effectively prevent and control turfgrass summer stress complex and prevent subsequent decline in turf quality, according to Rhone-Poulenc.

Chipco Aliette WDG fosetyl-al fungicide and Fore WP mancozeb fungicide are the control products. University research shows crown and root rot diseases caused by pythium and rhizoctonia can be controlled. The combination fungicides are used every two weeks from mid-June through September: 4 oz. of Chipco Aliette WDG plus 8 oz. of Fore WP per 1,000 sq.ft.

Circle No. 191 on Reader Inquiry Card

New fungicide controls at extremely low rates

Grace-Sierra has just released Algaen-X turf algaecide and fungicide for use in golf, commercial and residential turfgrass.

Grace-Sierra says this new product can control algae at application rates of 1.6 oz. per 1000 sq. ft., and may be safely used on bentgrasses, bluegrasses, bermudagrasses, fescues, ryegrasses, St. Augustinegrasses or their mixtures as well as diondra.

Circle No. 192 on Reader Inquiry Card

Fungicide combines contact and systemic

Lesco's Touche Flowable Fungicide delivers 14- to 28-day preventive and curative control of dollar spot, leaf spot, brown patch and red thread on turfgrass. It is also effective for pink and gray snow mold control.

A flowable formulation, each gallon of Touche contains 4.17 pounds of active ingredient, for reduced handling and easier storage and disposal.

Circle No. 193 on Reader Inquiry Card

Fungicide treatment attacks six turf diseases

Fungicide IX, from O.M. Scott & Sons, is designed to control six common turfgrass disease, including Pythium blight and dollar spot on golf course fairways,

Broad spectrum fungicide effective at 1-2 oz. rates, with long residual

Banner systemic fungicide from Ciba-Geigy controls 12 different turf diseases, including dollar spot, brown patch, red thread, anthracnose, rust and summer patch.

Banner is concentrated to be effective at rates of 1 to 2 oz. per 1000 sq. ft. Its long-lasting residual means less frequent applications, and less wear on turf and equipment.

Banner is now available in Ciba-Geigy's new 15-gallon Turf-Pak dispensing system.

Circle No. 194 on Reader Inquiry Card

tees, putting greens and related professional turf areas.

According to Scotts, Fungicide IX, when used in rotation with its Proturf Pythium Control or Fungicide VII, is effective against resistant strains of those diseases. Fungicide IX also helps prevent or control gray and pink snow mold, brown patch and copper spot.

Circle No. 195 on Reader Inquiry Card

Dry flowable works on turf disease prevention

Thalonil 90DF from Terra International, Inc., is a dry flowable fungicide for broad spectrum ornamental plant diseases. As a dry flowable, the product gives the control of a liquid in an easy to handle formulation.

In case of accidental spills, the dry granules can be swept up with a broom and will not soak into clothes or skin.

Thalonil can be used as a preventive or as a curative.

Continued use at recommended rates and intervals will maintain disease control, lower the risk of disease damage and maintain healthy grass and plants.

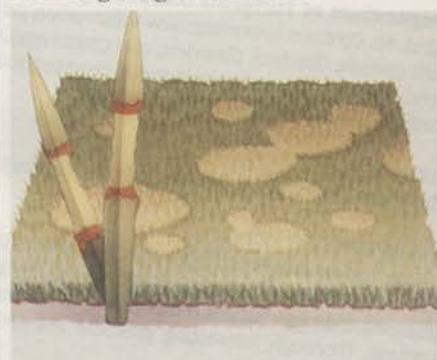
Circle No. 196 on Reader Inquiry Card

Broad-spectrum product for look-alike diseases

Rubigan A.S. broad spectrum fungicide from DowElanco is a local systemic sprayable product that prevents and treats 14 common fungal disease on golf course fairways, greens and tees, parkes, athletic fields, and commercial and residential areas.

Rubigan A.S. also controls *Poa annua*

on intensively maintained stands of perennial turfgrasses such as overseeded bermudagrass greens and tees.



DowElanco

For dollar spot control, one low-rate application offers 14 to 28 days curative control for about 10 cents per 1000 sq. ft. per day.

Circle No. 197 on Reader Inquiry Card

Broad-spectrum fungicide controls eight diseases

Curalan fungicide, from BASF, controls eight turfgrass diseases, including dollar spot, brown patch, leaf spot, pink and grey snow mold, Fusarium patch and red thread.

Curalan offers the option of preventive or curative treatments by adjusting the application rate.

Labeled for all turf grasses, and many ornamentals, Curalan is available in liquid flowable or dry flowable formulations.

Curalan may also be used in rotation with other fungicides for optimum disease control.

Circle No. 198 on Reader Inquiry Card



TREES & SHRUBS

Care of Shrubs:

Diseases and Pests of Ornamental Plants by Pascal Pirone

5th ed. Standard reference discusses diagnosis and treatment of diseases and organisms afflicting 500 genera of ornamental plants. Reflects current national and state laws and new diseases with photos and illustrations. Indicates approaches by symptom and cause. 566pp. BK-410-\$58.00

Diseases of Trees and Shrubs

by Wayne Sinclair, Howard Lyon, Warren Johnson

Comprehensive pictorial survey of diseases of and environmental damage to forest and shade trees and woody ornamental plants in the U.S. and Canada. Important developments in fungal biology and taxonomy, plant bacteriology, virology, and environmentally induced stress in plants are covered. Newly discovered diseases and accounts of old diseases summarized. 575pp. BK-430-\$52.50

Insects that Feed on Trees and Shrubs

by Warren Johnson and Howard Lyon

Essential information you need for identifying more than 650 insect pests and the injuries they cause on trees and shrubs. Over 200 color illustrations aid identification. BK-690-\$52.50

Ornamental Foliage Plant Diseases by A. S. Chase

Essential reading for the interiorscape industry. Includes: fungal diseases; diseases caused by Helminthosporium-like organisms, Phytophthora, Pythium, and Xanthomonas; bacterial, viral and nematode diseases. Plus, an extensive glossary and index for quick identification. 114 p. BK-415-\$30.00

Elements of Pruning (VHS Video)

A knowledge of proper pruning procedures is a vital skill for gardeners. Find proven techniques clearly presented in this popular videotape for beginners: when and why to prune, basic principles of plant growth, pruning tools, types of pruning cuts, applications of pruning techniques to ornamental trees, hedges, roses, conifers, flowering shrubs, rhododendrons. 26 min. English - VD-755E, Spanish - VD-755S-\$89.95

Tree Maintenance by Pascal Pirone

The care and treatment of trees including special sections on abnormalities, diagnosing tree troubles, non-parasitic injuries and assessing the suitability of trees in different environments. BK-760-\$49.95

Identification:

Shrub Identification by George Symonds

Pictorial key to identifying shrubs contains over 3,500 illustrations to check specimens. Popular and botanical names given. Handy index tabs for quick reference. BK-720-\$19.50

Tree Identification by George Symonds

Make sure you have this pictorial reference to identifying trees by checking leaves, buds, branches, fruit, bark. Popular and botanical names listed with easy-find index tabs. BK-750-\$17.95

Hearst Garden Guides: Annuals edited by Ted Marston

Guide to cultivating seasonal plants, lushly illustrated with over 150 color photos. Learn: success secrets for growing annuals, preparing potting soil, seed-sowing techniques; tips for positioning annuals so they thrive; how to eradicate pests/diseases. An A-to-Z encyclopedia of 200 species of annuals and hundreds of other varieties: Latin and common names, descriptions, cultivation, disease control strategies. 192pp. BK-700-\$25.00

Hearst Garden Guides: Perennials edited by Darrel Apps

Gorgeously illustrated book gives fundamentals of growing perennials, featuring pest/disease control, safe use of chemical fertilizers, mulching, watering techniques, crown divisions, and an A-to-Z plant encyclopedia, with 250 full-color photos. Latin and common names, detailed description, hardiness zones, color, shape, blooming season. 208pp. BK-705-\$25.00

Hearst Garden Guides: Bulbs edited by John E. Bryan

Complete guide to gardening with bulbs, this detailed reference includes extensive A-to-Z encyclopedia showing lesser-known varieties. Covers designing and planting for year-round color, storing, propagating, troubleshooting. 150 color photos. 191pp. BK-701-\$25.00

Hearst Garden Guides: Trees & Shrubs edited by R. William Thomas

Complete guide to selecting, planting, nurturing over 1,000 ornamental varieties. 200 color photos, guidance on using trees and shrubs as focal points, selecting the right plant, tips on pruning. 208 pp. BK-702-\$25.00

LANDSCAPE MANAGEMENT

INCORPORATING LAWN CARE INDUSTRY

RESOURCES FOR PROFESSIONALS



ORDER TODAY!

Title & Number	Qty.	Price	\$ Total

Account # _____ Exp. Date _____
 Signature _____ Date _____
 Name _____ Title _____
 Company _____
 Address _____
 City _____ (Please use street address) State _____ Zip _____
 Telephone () _____

Check Enclosed or Charge my: MasterCard VISA
 American Express (\$10 minimum charge card order.)
 Detach and mail this form with your payment or credit card information to:

ADVANSTAR GUARANTEE -
 If you are not completely satisfied with the material you order, return it to us within 15 days for a full refund. No questions asked.



7500 Old Oak Blvd., Cleveland, OH 44130

Sub Total - \$ _____
 Deduct 10% when you order 4 or more books - \$ _____
 Tax: CA, CO, CT, GA, IL, MN, NJ, NY, OH, TX - \$ _____
 Postage/Handling - \$ _____
Total Amount Enclosed - \$ _____
 Postage, Handling, and Tax must be included with payment.
 Shipping & Handling Domestic: Please add \$5 per order + \$1 per additional book.
 All others add \$15 per order plus \$2 per additional copy.
 Please allow 3-4 weeks for delivery. Prices subject to change. Quantity rates available upon request. For more information call 1-800-598-6008, or FAX (216)891-2726.

PRODUCT REVIEW



Utility/dump body works in a variety of heavy-duty ways

The best features of a utility/service body and a small dump truck have recently been introduced to the landscaping industry with the TC-200 from Truck Craft.

The Truck Craft TC-200 is designed to let you save time and money: tools are organized and unloading is a breeze.

The cargo area measures 48.5 x 101

inches. A dual-hinged tailgate offers full dumping or controlled spreading capabilities.

Each dump body provides protection for the truck cab roof, rear window and side boxes. A control switch on a 10-foot cord is included for in-cab or walk-around dumping control.

Circle No. 199 on Reader Inquiry Card

Power rake cuts through heavy thatch build-up

Parker Sweeper's Thatch-O-Matic Power Rake cuts a 19-inch path through built-up thatch. Handle-mounted clutch and throttle controls and easy height adjustment are designed for operator comfort. Three reel options are available for a wide range of lawn care applications, including spring tines for dethatching;



knives for verticutting and controlling creeping grasses, and flails for heavy thatch removal or lawn renovations.

Circle No. 201 on Reader Inquiry Card

Changes make truck bodies safer

Reading Body Works, Inc. has made some changes to its line of service bodies:

- stainless steel bolt on door hinge brackets for security, strength and easy replacement;
- automotive flange mounted rubber door seals; and
- adjustable striker plates on locks for convenient adjustment of door locks.

Circle No. 200 on Reader Inquiry Card



Trenchless system fast and exact

StraightLine Manufacturing, Inc. has a new fluid-assisted horizontal directional boring unit. The DL305 is designed for use with any auxiliary hydraulic power source that provides 9.5-11.5 gpm at pressures up to 2,500 psi. The model shown has the DirectLine 305 Power Pack. The DL305 is fluid assisted, making it capable of fast, accurate and profitable 20-foot to 100-foot installations.

Circle No. 202 on Reader Inquiry Card

BIOTURF NEWS

For the Latest Developments in Biological, Organic and Natural Turf Care!

With our October premier publication of *Bioturf News*, we at *LANDSCAPE MANAGEMENT* magazine continued our commitment to give you the best possible coverage of green industry happenings.

Bioturf News is our new, bi-monthly review of current research and development in "biological, organic and natural" turf care. In 1993, it will exist independently of *LANDSCAPE MANAGEMENT*.

Alternative turf care products can't be ignored. University research has determined them to be viable forms of insect, weed and disease control.

Many of our readers have also

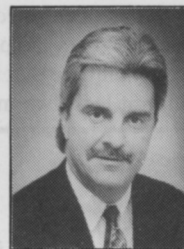
formed opinions of biological and organic products.

Some say biological and organic products are too expensive and take too long to show results. Others believe customers should have a choice. And still others are probably wondering what all the excitement's about.

Our job, as an industry information source, is not to tell you what to think, but to simply relay the information to you—as soon as we can and in the best way possible—and let you take it from there.

There are two sides to every story. Your opinions count, and we want to know what you think of

these products. Have you tried alternative products? If so, what were the results? To make *Bioturf News* the most useful news source it can be, we will always welcome your questions and comments.



Jon Miducki
Publisher



Terry McIver
Editor

BIOTURF NEWS

Bio-Turf: The Basics

Biological alternatives to conventional chemical control products are more than 30 years old, but are only recently attracting serious attention.

Biological control agents are living organisms that kill, suppress or otherwise control pest insects, weeds and plant diseases.

Some of the most common biological control agents are insects, nematodes, fungi, bacteria and viruses.

Nematodes are microscopic worms that feed on plant roots and stems. They are particularly effective against grubs and other soil-dwelling insects.

Fungi and bacteria can be used to control weeds and plant diseases. They work by attacking the plant's cells and causing them to die.

Viruses are also used as biological control agents. They are particularly effective against insects.

Biological control agents are generally safe for the environment and do not leave harmful residues. They are also often more effective than chemical control products.

For more information on biological control, contact your local extension office or the National Biological Control Association.

Bioturf News will be a bi-monthly newsletter reporting on biological, organic and natural products for the specialty turf market. But you have to subscribe in order to receive it. To receive your free one-year subscription, please return the coupon below to:

Jon Miducki, publisher
LANDSCAPE MANAGEMENT
7500 Old Oak Blvd.
Cleveland, Ohio 44130

Bioturf News will appear independently of Landscape Management beginning July 1993. You must be a subscriber to receive it! We've had a terrific response so far. If you haven't sent for your free subscription yet, please do!!

Name _____

Title _____

Company _____

Address _____

City _____ State _____ Zip _____

Phone _____

PRODUCT REVIEW

Wildflower carpet for quick, easy planting

The Wildflower Carpet from Applewood Seed Co. comes to the rescue for immediate, economical wildflower planting.

The carpet is a mat of densely packed, three-inch high wildflower plants with well-developed root systems.

All plants are at least three months old. Roots are nourished by a thin layer of lightweight, non-soil planting medium supported by an exclusive, non-woven fabric that roots can penetrate.

The carpet will grow in any climate that has cold winter nights averaging less than 40° F for at least two months out of the year.



It requires direct sun for more than four hours a day in growing season.

In the first season, Wildflower Carpet begins to bloom within six to eight weeks after planting. Different flowers bloom throughout the growing season. Perennials include black-eyed Susan, Johnny jump-up and maiden pinks.

Others, such as 'Dame's Rocket,' 'Gaillardia' and 'Rock-ress,' bloom from the second year onward. Plants grow from six to 60 inches high. Depending on conditions, certain wildflowers will be more prevalent than others.

Circle No. 203 on Reader Inquiry Card

Deep orange marigolds an addition to seed supply

'Janie Deep Orange' French marigold is new to the Goldsmith Seeds marigold series. The crested, two-inch around flowers have a shapely silhouette and are never hidden beneath the finely cut foliage. The flowers bloom atop compact, uniform, six-inch high plants.

They are an ideal choice for containers or flower boxes. Also for use as foreground plants in mass plantings, or as a short, free-flowering border plant.

Circle No. 204 on Reader Inquiry Card



Marketing agreement for perennial ryegrass

Pennington Enterprises has acquired the exclusive production and marketing rights to Morning Star perennial ryegrass from Pickseed West. The variety was developed by Pickseed as an "endophyte enhanced" variety that is very fine bladed and genetically dark green in color.

It was developed and tested initially by Pickseed as SYN-P.

Morning Star tested within the top 10 percent in the NTEP quality ratings for 1991. The variety had superior ratings in summer and fall density as well as a high tolerance to brown patch, dollar spot and pythium.

Circle No. 206 on Reader Inquiry Card

Hats and caps protect workers from sunburn

A catalogue from Gempler's, Inc. features 19 styles of comfortable hats and



caps that fully protect the ears and neck, which, according to the company, are highly susceptible to skin cancer.

Circle No. 205 on Reader Inquiry Card

New 12-foot seeder covers large areas at precise rates

Brillion Iron Works, Inc. has a new, 12-foot wide Turfmaker Seeder for landscapers, sod farmers, or anyone wishing to seed large areas at precise rates.

The company says the Turfmaker has 20 percent more capacity in the seedbox than the 10-foot model. The larger, nine-bushel seedbox reduces seeding time, and growers can plant more acres before refilling. The Turfmaker crushes, seeds and rolls in one operation.



Brillion's micro-meter adjustment with an infinite number of settings improves the precision metering of small seeds.

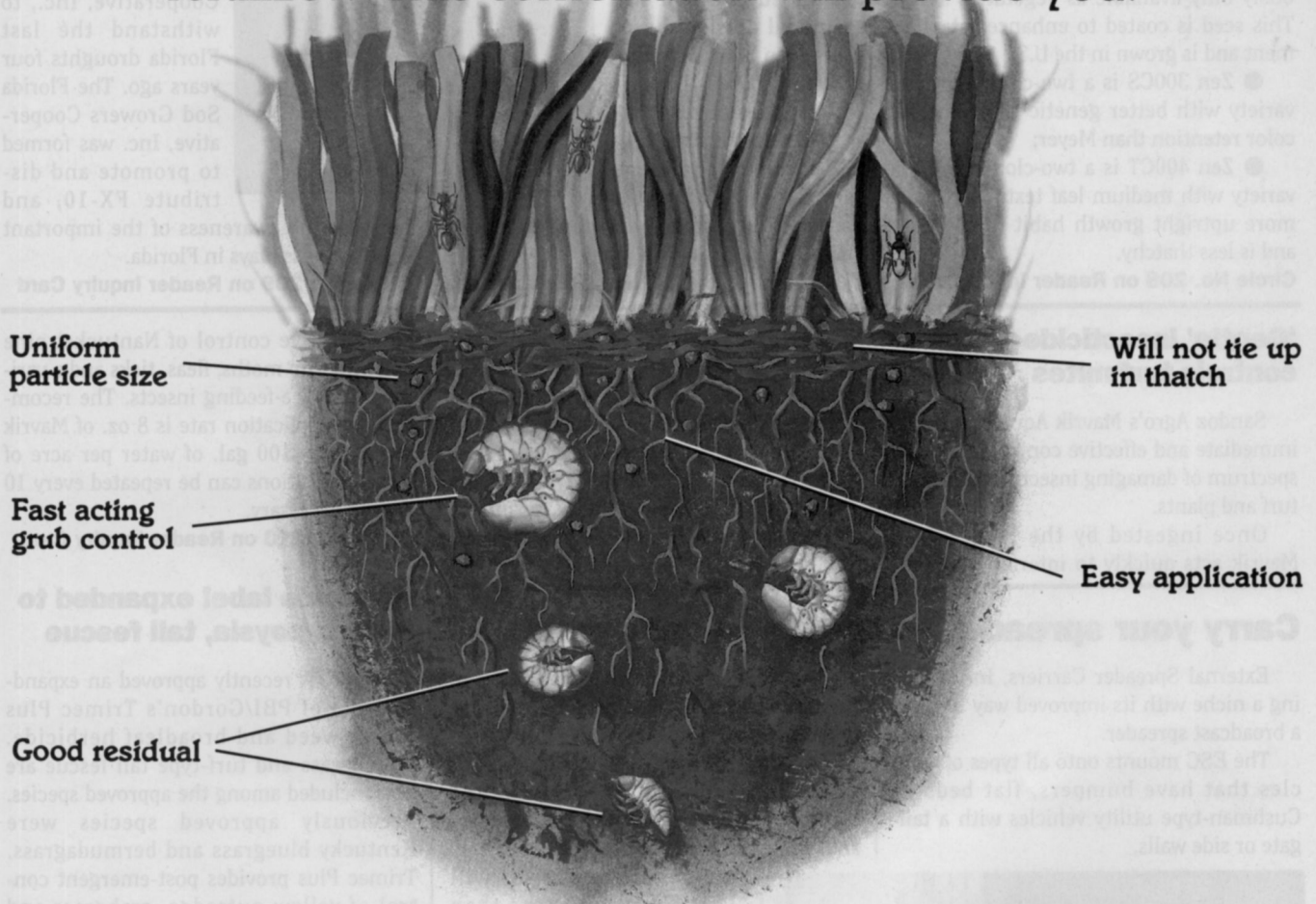
The 12-foot units also feature wider metal deflectors, to help prevent winds from blowing seeds away, and to guide the seed down between the

roller wheels.

Circle No. 207 on Reader Inquiry Card

The Andersons[®] High Quality fertilizers now with the benefits of TURCAM[®] Insecticide

Now you can control 22 Tough surface and subsurface pests including white grubs while you fertilize... This combination will provide you:



Uniform particle size

Will not tie up in thatch

Fast acting grub control

Easy application

Good residual

The Andersons. Uniformly the best in the business.

the professional's
partner

The Andersons

1-800-225-ANDY

PRODUCT REVIEW

New zoysiagrass available in four different selections

Turf Merchants, Inc has developed a new line of seeded zoysiagrasses to meet the developing market for this low-maintenance grass. Four different selections are available in the "Zen Line:"

- Zen 100 is Chinese common *Zoysia japonica*, with medium texture and medium dark green color, chemically treated for faster germination;

- Zen 200CS is the first generation seed from Meyer zoysia which was previously only available as vegetative sprigs. This seed is coated to enhance establishment and is grown in the U.S;

- Zen 300CS is a two-clone synthetic variety with better genetic color and fall color retention than Meyer;

- Zen 400CT is a two-clone synthetic variety with medium leaf texture. It has a more upright growth habit than Meyer, and is less thatchy.

Circle No. 208 on Reader Inquiry Card

Sod root system endures stormy weather

This past winter's "storm of the century" was no match for FX-10 sod, according to the Florida Sod Growers Cooperative. Many of the areas struck by the March torrents were virtually unscathed thanks to the FX-10 grass.

Jim Anderson, of Anderson's Nursery, reported the sod had minimal erosion due to the deep root structure which secured the lawn during the storm.

The Cooperative calls FX-10 drought resistant, and the only grass on the market today that is resistant to chinch bugs.

FX-10 requires little maintenance and



watering. It can withstand longer periods of drought—up to two years—due to the root structure, and requires only quarterly fertilization.

FX-10 was developed by the University of Florida, with patent rights given to the Florida Sod Growers Cooperative, Inc., to withstand the last Florida droughts four years ago. The Florida Sod Growers Cooperative, Inc. was formed to promote and distribute FX-10, and

increase the awareness of the important role turfgrass plays in Florida.

Circle No. 209 on Reader Inquiry Card

'Gentle' insecticide controls turf mites

Sandoz Agro's Mavrik Aquaflo provides immediate and effective control of a broad spectrum of damaging insects and mites in turf and plants.

Once ingested by the target pest, Mavrik acts quickly to interfere with the

insect's central nervous system and destroy its stomach. However, according to Sandoz, the product's low toxicity to small pets, birds and wildlife makes it one of the most gentle insecticides available.

Mavrik eliminates a variety of insects, including whiteflies, aphids, caterpillars, flea beetles, mealybugs, mites and thrips.

The odor-free product also provides

cost-effective control of Nantucket pine and other tip moths, fleas, ticks and a variety of surface-feeding insects. The recommended application rate is 8 oz. of Mavrik mixed with 100 gal. of water per acre of turf. Applications can be repeated every 10 days as necessary.

Circle No. 210 on Reader Inquiry Card

Carry your spreader where it's in easy reach

External Spreader Carriers, Inc. is filling a niche with its improved way to carry a broadcast spreader.

The ESC mounts onto all types of vehicles that have bumpers, flat beds or Cushman-type utility vehicles with a tailgate or side walls.

The carrier will work with Lesco, Scotts, Spyker, Ev-N-Spred or Cyclone broadcast-type spreaders.

Carrying the spreader outside the bed makes room for other items, puts the spreader in easy reach of the technician, and eliminates spills in the truck bed.

The carrier will support more than 300 lbs.; it weighs only 21 lbs.

The cost is \$169. An adapter for Cushman UV's costs \$19.99.

ESC is located in Little Rock, Ark.

Circle No. 211 on Reader Inquiry Card



Herbicide label expanded to include zoysia, tall fescue

The EPA recently approved an expanded label of PBI/Gordon's Trimec Plus grassy weed and broadleaf herbicide. Zoysiagrass and turf-type tall fescue are now included among the approved species. Previously approved species were Kentucky bluegrass and bermudagrass. Trimec Plus provides post-emergent control of yellow nutsedge, crabgrass and other coarse grasses, plus nearly all the broadleaf species controlled with regular Trimec herbicide treatments.

The Trimec Plus rate for tall fescue is the same as Kentucky bluegrass: 3 oz. per 1,000 sq.ft. The zoysia rate is the same as for bermudagrass: 3-5 oz. per 1,000 sq.ft. Recommended spray volume is 1-3 gal. of water per 1,000 sq.ft.

Circle No. 212 on Reader Inquiry Card

PRODUCT REVIEW

Herbicide gets new experimental permit

The EPA has granted an experimental use permit (EUP) for Manage turf herbicide by Monsanto, which has demonstrated excellent control of nutsedge in field trials.

The EPA action allows use on 500 acres in 1993, including golf courses, sod farms and other turf areas where nutsedge is a problem. Manage is safe for all major warm- and cool-season turfgrasses, says Monsanto business director Dennis Plummer.

The sulfonyleurea herbicide is applied at very low rates. Field trials have demonstrated that it has negligible potential to reach groundwater, Plummer notes. Monsanto says Manage also has very favorable toxicological properties.

Circle No. 213 on Reader Inquiry Card

Add to golf course value with ultrasonic club cleaner

The Ultra-Club Cleaner uses ultrasonic sound waves to deep-clean dirty grooves in



golf clubs. The machine also cleans away dirt and grime from grips.

The machine operates on tokens, and a set of clubs can be cleaned for between \$2 to \$4. The Shine A Blind Company estimates an average golf course will gross about \$3,300 per month from the cleaner.

Circle No. 214 on Reader Inquiry Card

Blade balancer is a precision tool for rotary mowers

The new Mag-500 Blade Balancer is designed for precision balancing of rotary mower blades, says Magna-Matic Corp.

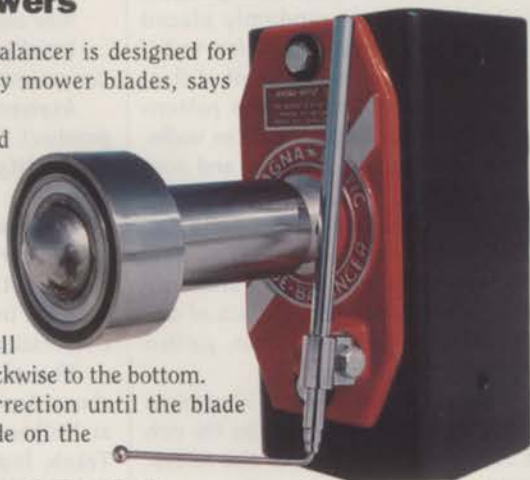
- The blade hole is located on the spring loaded ball and pushed forward onto the magnet.

- The magnet and ball assembly is free to rotate on anti-friction ball bearings.

- The heavy blade end will rotate clockwise or counterclockwise to the bottom.

- The heavy end needs correction until the blade maintains a horizontal attitude on the balancer.

Circle No. 215 on Reader Inquiry Card



Full equipment line features turf edgers

King O'Lawn Products has a full line of turf maintenance products, featuring a wide range of lawn edgers.

Also included in the list are front throw power reel mowers, power sprayers, and turf and hard surface vacuums.

Edger models 216B and 286 use Briggs & Stratton 3 hp engines. They are made of heavy duty 10 gauge stamped steel and have 11 preset blade angle positions that arc over 135 degrees from over vertical to over horizontal.

The cutting blade features a standard 2-by-9-inch hardened steel blade with a full 180-degree blade guard.

Circle No. 216 on Reader Inquiry Card

Harrow promotes turfgrass production

The Parmiter Flexible Harrow not only covers the seed and firms the soil for fast, uniform turfgrass seed germination and uniform growth, but it smooths and levels the ground, too.

According to Parmiter, when used to incorporate herbicides or fertilizers, the harrows provide significant savings to turf and sod producers. The harrows work elements into the soil where they resist wind and water erosion. When used for root aeration, a harrow helps to stimulate growth

for better water infiltration and root development.

A complete range of different type harrow sections is available: drawbars from 4 to 16 feet in width—when used with connectors to couple sets together, a working width of 24 feet can be achieved.

Parmiter harrows can be turned for aggressive or passive tine deflection, or used with tines up for light crumblin and smoothing action. In all positions, they are self-cleaning.

Circle No. 217 on Reader Inquiry Card

Vibratory plow leaves little evidence of its use

Classen's VB-40 vibratory plow can be easily attached to most 3-point tractors, 18 hp or larger. This unit buries poly or PVC irrigation pipe up to 1 1/2 in diameter, electrical wire or cable 12" underground with virtually no sign of installation.

Other features include: blade mount swivel for radius turns, hold down fingers to eliminate lifting, and a rubber isolated main frame for smooth operation.

Circle No. 218 on Reader Inquiry Card

New concrete paving products look natural

Bomanite Corporation adds two patterns, Random Slate and Garden Stone, to its line of colored, textured and imprinted

PRODUCT REVIEW

cast-in-place architectural concrete paving.

There are four Random Slate patterns, each containing six randomly placed stones averaging in size from 2 feet to 3 1/2 feet. Designed to be reminiscent of flagstone with a slate texture, this pattern lends itself well to large pedestrian walks, plazas, malls, driving surfaces and pool areas.

Garden Stone simulates the rocks and stones that line creek beds. This mixture of river pebbles and large, randomly shaped garden stones adds a touch of creativity to any pool or spa areas, garden walk or interior sun room.

Bomanite offers more than 50 patterns and 25 standard colors to combine the rich look of natural paving with the safety, durability and economy of concrete.

Circle No. 219 on Reader Inquiry Card

A single mix of this 2-cycle oil good for most equipment

The Shaler Company says a single gas/oil mixture of its Rislone Premium Quality 2-Cycle Engine Oil can be used in engines calling for gas/oil ratios of 32:1, 40:1 and 50:1.

"A single oil/gas blend meets the needs of the majority of lawn, garden and recreation equipment engines," says J. Bur Zeratsky, marketing manager. "Instead of having three gas cans with separate mixes for chainsaws, weed trimmers and rotary cultivators, one Rislone 2-Cycle fuel mix can end gas can clutter."

In addition, Shaler formulated the oil to provide smokeless operation, which greatly reduces noxious smoke and fumes. "With most people concerned about the environment, it's important we offer a clean burning, smokeless product," says Zeratsky.

Circle No. 220 on Reader Inquiry Card

New modular mower blade sharpening system available

Neary's 500-series modular blade sharpening systems is flexible, with technological advantages.

The 500-S represents a flexible grinding system with a technological advantage. The spin sharpening system offers 3-way ridged mounting, streamlined set up and

Colored asphalt looks better than basic black

New asphalt paving is available in earthtone colors with Asphacolor seal coating.

Developed by Asphacolor Corporation of Sparks, Nev., this product is easily added to conventional asphalt seal coating or slurry seal products.

Asphacolor says the product has the same durability as black sealants.

A full colorbrochure, color chart and application instructions are available from Asphacolor Corporation.

The photo at right shows Asphacolor Paving at Hollywood Park Race Track, Inglewood, California.

Circle No. 222 on Reader Inquiry Card



true cylinder sharpening. The 500 SR features adjustable one-to-45 degree relief grinding to reduce drag between the reel and bedknife.

Circle No. 221 on Reader Inquiry Card

Rubber-tracked vehicle gets great traction on wet ground

ASV, Inc. announces a new, fully tracked vehicle to their product line.

Posi-Track is uniquely designed to provide a broad range of uses. A compact, highly versatile unit with hydrostatic drive, and dual 18-inch all-weather, Kevlar reinforced rubber tracks.

The Posi-Track has extremely low ground pressure (1.25 psi), which means less soil compaction and more productivity because of its ability to operate on soft, wet ground, or in other difficult conditions such as snow, mud, swamps, bogs or hilly areas.

Circle No. 223 on Reader Inquiry Card

Roller unit makes greens putt faster

The Speed Roller from Friend Turf Equipment, Inc. reduces greens stress by eliminating the need for double cutting while improving greens to tournament level play.

Precision ground stainless steel rollers insure accuracy in rolling throughout the

Pressure regulator for more precise applications

The Green Garde Division of H.D. Hudson Manufacturing company offers a low-cost pressure regulator for hand operated compression or backpack sprayers. The Spray Management Valve (SMV) sells for about \$25. According to the company, it has been field-tested in Australia for several years and has resulted in safety awards for its ability to control spray drift.

Three models are available, and control pressure at 15, 30 and 45 psi.

Circle No. 224 on Reader Inquiry Card



life of the machine.

The frosted roller surface provides maximum traction without slippage.

The 3 ft. roller has pedal operated direction and speed control, and responsive, geometrically-balanced handle bar steering.

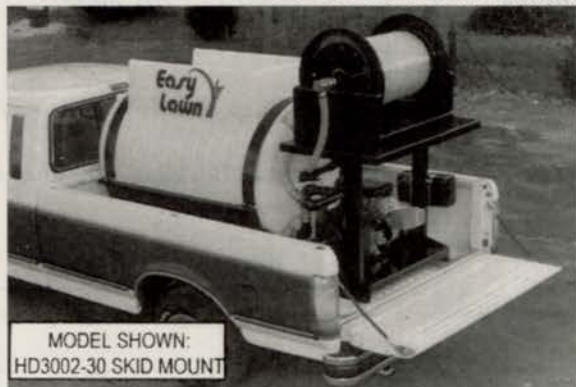
Circle No. 225 on Reader Inquiry Card

MARKET SHOWCASE

Rates: \$105 per column inch for 1x insertion; \$100 for 3x insertion; \$95 for 6x insertion; \$90 for 9x insertion; \$85 for 12x insertion (one inch minimum). Frequency based on calendar year. For ads using a Reader Inquiry Number, add \$30 to the total cost of the ad per issue. For ads using a second color standard red, blue, green or yellow only, add \$65 to the total cost of the ad per issue. Send ad copy with payment to: Brian Kanaba, LANDSCAPE MANAGEMENT, 7500 Old Oak Blvd., Cleveland, Ohio 44130, or call (800) 225-4569 ext. 155 outside Ohio; (216) 891-2665 inside Ohio; FAX (216) 826-2865. VISA, MASTERCARD and AMERICAN EXPRESS accepted.

EQUIPMENT FOR SALE

LEADING THE INDUSTRY IN RESIDENTIAL HYDROSEEDING



MODEL SHOWN:
HD3002-30 SKID MOUNT

Easy Lawn

Hydro
Seeding
Systems

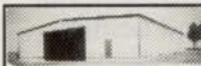
ONLY
\$169.00
A MONTH

MOST MULCH CAPACITY
LOWEST MAINTENANCE
LONGEST WARRANTY
BEST AGITATION
FASTEST MIXING

FREE FREIGHT!

"The Professional's Choice"
FOR INFORMATION CALL
800-638-1769

COMMERCIAL EQUIPMENT



30'x40'x10'
\$4,177

BUILD IT YOURSELF AND SAVE MONEY. 5000 SIZES, ALL STEEL. CALL TODAY FOR BROCHURE AND PRICE QUOTE.

HERITAGE BUILDING SYSTEMS
800-643-5555

Contact Brian Kanaba
at 216-891-3155 to
Reserve Your Space in
Next Month's LM
Showcase

SOFTWARE

TRIMS

MANAGEMENT SOFTWARE
FOR LANDSCAPE AND
LAWN CARE CONTRACTORS

CUSTOMER MANAGEMENT
ACCOUNTS RECEIVABLE
ACCOUNTS PAYABLE
GENERAL LEDGER
PAYROLL

Call or write today for your
FREE
Demo Disk and Literature to
see what TRIMS can do for you!

LABB SYSTEMS/SOFTWARE
6018 EAST OSBORN ROAD
SCOTTSDALE, AZ 85251
(800) 733-9710

LAWN ASSISTANT

1 # 1



To get a FREE 90 page information booklet on the #1 software for the lawn and tree care industry

Call Toll Free:
1-800-422-7478

Real Green Computers
1970 Winner Street, Walled Lake, MI 48390

Circle No. 251 on Reader Inquiry Card

HELP WANTED

LANDSCAPE MAINTENANCE/CONSTRUCTION

Established, Full Service Landscape Maintenance & Construction Company, seeks an experienced quality-minded individual to assist in the continued growth and development of our Maintenance Division. Duties include estimating, sales and scheduling. Must have Horticultural background, sales/estimating experience and 3-5 years field experience. If you are a hard working, responsible individual, please send a complete resume along with past work history and salary to:

Harder Landscape Contractors
632 Jerusalem Avenue
Hempstead, New York 11550

SuperScape™ Landscape Management Software

"Not only are we completely satisfied with the computer program itself, we have been very impressed with the support given by SoftQuest as we have set up the program. . .

We would highly recommend SuperScape to any landscape company who wants to make their business run smoother and more efficiently."

-- Jana Miller
Environmental
Management



Call today and ask for a free demo and see how satisfied you can be.

800-299-9991 512-452-4500

BUSINESS OPPORTUNITIES

LAWNCARE BUSINESSES:

Thinking about selling your Lawncare Business? We'd like to talk about the possibilities. If you are doing business in: Cincinnati, Indianapolis, Columbus, Dayton, Chicago, St. Louis, Atlanta, Cleveland, Detroit or Ft. Wayne, we are interested. All communication is confidential. Reply to LM Box 500, c/o LANDSCAPE MANAGEMENT, 120 W. 2nd Street, Duluth, MN 55802.



Know your soil pH in seconds!

Kelway HB-2

Professional soil acidity & moisture tester

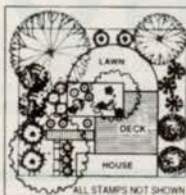
- Big, easy-to-read dial.
- Low cost.
- Portable
- Built for long-lasting use!

Tells you when to lime.

Now, read your soil pH in seconds with KELWAY HB-2 acidity tester. Learn on-the-job whether to add lime and how much. No batteries. No reagents. No chemicals. Just insert KELWAY soil tester in moist soil. Professionally designed for growers, KELWAY tester gives direct acidity and moisture readings. Contact your local distributor or write for FREE informative literature today.

Kel Instruments Co., Inc., Dept. N
P.O. Box 54, Wyckoff, NJ 07481

Circle No. 188 on Reader Inquiry Card



LANDSCAPE DESIGN KIT 3

48 rubber stamp symbols: trees, shrubs, rocks, step stones, vine, & more. 1/4-1 3/4 in. dia.
\$74.95 + \$4.50 s/h FREE 28 PAGE BROCHURE
CA orders add 7.34% tax
AMERICAN STAMP CO.
12290 Rising Rd., Dept. 493
VISA Wilton, CA 95693
MasterCard Phone (916) 687-7102

CLASSIFIED ADVERTISING is available in LANDSCAPE MANAGEMENT!

You can effectively reach readers at low classified advertising rates:

Call Brian Kanaba
216-891-3155
for more information.

COMMERCIAL INSURANCE for LAWN CARE OPERATORS

M.F.P. Insurance Agency, Inc.
50 West Broad Street, Suite 3200
Columbus, OH 43215
(614) 221-2398

Contact:

Richard P. Bersnak, President
or
Jeanne Bartkus

Circle No. 189 on Reader Inquiry Card

LANDSCAPE MANAGEMENT

CLASSIFIEDS

RATES: \$1.25 per word (minimum charge, \$40). Bold face words or words in all capital letters charged at \$1.50 per word. Boxed or display ads: \$105 per column inch-1x (one inch minimum); \$100-3x; \$95-6x; \$90-9x; \$85-12x. (Frequencies based on a calendar year). Agency commissions will be given only when camera-ready art is provided by agency. For ads using blind box number, add \$20 to total cost of ad per issue. Send ad copy with payment to Brian Kanaba, LANDSCAPE MANAGEMENT, 7500 Old Oak Blvd., Cleveland, OH 44130 or call 216-891-3155. Fax Number 216- 826-2865. VISA MASTERCARD and AMERICAN EXPRESS accepted.

BOX NUMBER REPLIES: Mail box number replies to: LANDSCAPE MANAGEMENT, Classified Ad Department, 120 W. 2nd St., Duluth, MN 55802. Please include box in address.

POSITIONS WANTED

FREE CLASSIFIED AD

To all "POSITION WANTED" Classified Advertisers!

- Maximum 40 words
- Maximum 2 issues

Offered as an industry service - Let LANDSCAPE MANAGEMENT help you with your employment needs. For more information contact:

Brian Kanaba
LANDSCAPE MANAGEMENT
7500 Old Oak Blvd., Cleveland, OH 44130
216-891-3155-Phone 216-826-2865-Fax

Position sought that involves research, technical service, or sales with a university, or company involved in furthering the turfgrass industry through education, communication, and scientific evaluation. Turfgrass Masters, June 1993. Paul Zarlengo, 5425 Frank Ave., Canton, OH 44720. 501-443-4229. 6/93

Individual with 20+ years of extensive and diversified horticultural experience seeks management position in field of landscape management, grounds maintenance, growing operation or similar. East Coast. Resume PO Box 247, East Marlton, LI, NY 11939. 7/93

University Landscape Supervisor seeking new opportunities to contribute to a leadership organization. Landscape Architecture degree BSLA, 7 years experience landscape construction, maintenance and design, 4 years supervisor. Will relocate within the western states. Contact Kent Bagnell, P.O. Box 182, Millville, Utah 84326. 801-752-0819. 7/93

EQUIPMENT FINANCING

FINANCE your new or used **EQUIPMENT** acquisition through **LEASING**. Advantages include: no down payment, 100% tax deductible, flexible terms, fast approval. Call **TRIDENT** Leasing 412-325-3464 / FAX 412-325-3466. 6/93

BUSINESS FOR SALE

Family-run pest control business for sale in Wayne, Oakland and Macomb Counties of Michigan. Established in early 1900s. Grossing \$100,000 per year. Excellent record with BBB. Established accounts. Call 313-294-8118. 7/93

BUSINESS FOR SALE: Established Lawn Fertilizing Business. South East Michigan. \$100,000+ gross. All accounts, vehicles, equipment, \$95,000. Call 313-675-7426 after 4:00 P.M. 6/93

Use our Blind Box Service for Confidential Results to Your Classified Advertising!

BUSINESS OPPORTUNITIES

\$3,000-\$6,000 per month. Electrically driven **Curbmate Machine** installs beautiful concrete lawn edging. Simple business. Low overhead. High profit. Increase your landscaping profits and beautify your landscaping jobs. 801-262-7509. 6/93

LET THE GOVERNMENT FINANCE your new or existing small business. Grants/loans to \$500,000. Free recorded message: (707)448-0330. (OL8) 7/93

NOW... Learn professional landscaping and gardening at home. Accredited program provides thorough training in all phases of commercial and residential landscaping. Diploma awarded. Free brochure describes program and opportunities in detail. Call 800-326-9221 or write Lifetime Career Schools, Dept. LF0163, 101 Harrison St., Archbald, PA 18403. 9/93

NaturaLawn® of America provides the Green Industry a successful, growth oriented, lawn care program. Discuss the opportunities available to you by calling the leader in **organic-based** lawn care. The franchise opportunity of the 90's. 800-989-5444. 6/93

SERVICES

NEED A MORE PRODUCTIVE WORKFORCE? We have hard-working, reliable and loyal Mexican Workers who can dramatically increase your production and make your company more competitive. Call Bob Wingfield, 214-634-0500. 6/93

Pumps - Wanner D-10 and D-25 Hydra-cell. New, reconditioned parts and complete 24 hour repair service. Call Industrial Services Co., 614-965-4112. New Lawn Care Hose Reel Swivel. 6/93

EQUIPMENT FOR SALE

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

BROUWER 24" SOD HARVESTOR 450 hrs, 3910 Ford diesel, \$20,000.00, Toro 5 gang fairway mowers excellent condition \$1,800.00, Phone: 517-332-8410. 7/93

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

NEW/USED EQUIPMENT AND RENTALS— Asplundh, Hi Ranger, Holan and Lift-All Forestry Bucket Trucks, Chip Trucks and Chippers. Mirk, Inc., (216)669-2000, 7629 Chippewa Road, Orville, Ohio 44667. TF

FOR SALE: Used Brouwer Sod Harvesters and Brillion Seeders. New Vibro-Netters. **HUBER RANCH SOD NURSERY**, (800)553-0552. 6/93

HYDRO-MULCHERS AND STRAW BLOWERS: New and used. **JAMES LINCOLN CORPORATION**, 3220 S. Jupiter Rd., Garland, TX 75041. (214)840-2440, (800)551-2304. TF


SPYDERS— New/Used/Rebuilt. Full line of replacement parts and update kits. Kubota, Ruggerini, Kohler and Onan engines and parts. Nichols-Fairfield torque hubs. We repair and rebuild Spyder hydraulic pumps and motors. **FAST SERVICE.** Call or write: Mobile Lift Parts Inc., 5402 Edgewood Rd., Crystal Lake, IL 60012. (815)455-7363, (800)397-7509, FAX (815)455-7366. 6/93

Reel Mowers: Hydraulic unit for Steiner Turf Tractor. Excellent condition, used once. \$5200 — Fertilizer Spreader: 4 ton stainless steel hopper, dual rear distribution, tandem axle, high flotation tires. \$1,400 — Spray Rig: Fits Chevy S10 or Ford Ranger, molded fiberglass with 150 gal. cap. and dry storage for 15/50# bags. Excellent cond. \$2100 — Jacobsen Aerator: 24" width, 5 hp Honda Engine, excellent working condition. \$985, 513-871-3992 — 86 Chevy 3/4 ton spray trucks. Fiberglass molded tanks and beds with 375 gal liquid cap and dry storage for 20/50# bags. 50,000 miles, newer tires. Good cond. \$6,800, 4 available — 1986 Chevy 3/4 ton service truck with or without 200 fiberglass spray unit. D50 Hypro pump, 5 hp. B & S Engine, with 300' hose. Together \$7,400, spray unit alone \$1,650. Call with best offers: 513-871-3992. 6/93

FOR SALE: Jacobsen HF-5 Diesel, \$4,000. Also, Toro GM-3 Greens Mower, sharpened, \$2,250. National 84" cut \$1,100. Jacobsen 5 Gang Pole Type Fairway Mower, completely reconditioned \$3,400. 313-653-5695. 6/93

BUCKET TRUCKS: Straight Stick, Corner Mount and Knuckle Boom Cranes. Brush Chippers - New Morbark Disc and Drum Style. New Rayco Stump grinders. Best prices anywhere. Used Chippers - Asplundh, Morbark, 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. We also buy your surplus equipment. 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

 **send a Classified Advertising message...
...write here.**

(Please Print) _____

1. Number of insertions: (circle) 1 3 6 12 TF (Till Forbid)
2. Start with (month) _____ issue. (Copy must be in by 1st of month preceding).
3. Amount enclosed: \$ _____ (To keep our rates as low as possible, payment must accompany order)

SIGNATURE _____ DATE _____

NAME _____ COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

PHONE NUMBER _____

Mail ad copy to: Brian Kanaba, Landscape Management, 7500 Old Oak Blvd., Cleveland, OH 44130 or call 216-891-3155.

RATES: \$1.25 per word (minimum charge \$40). Boldface words or words in all capital letters charged at \$1.50 per word. Boxed or display ads \$105 per column inch, one time; \$100, three times; \$95, six times; \$90, nine times; \$85, twelve times (one inch minimum). (Frequencies based on a calendar year). For ads using blind box number, add \$20 to total cost of ad per issue.

EQUIPMENT FOR SALE

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

Commercial Mowers -Dixie Choppers- World's fastest lawnmowers. **Valco Rental and Equipment.** Canton, OH 44706 (216) 452-6646. 6/93

Finn Hydroseeders, Mulch Spreaders, Krimpers, Pit Burners, Fiber Mulch & Tackifiers. New & Used. **Wolbert & Master, Inc.,** P.O. Box 292, White Marsh, MD 21162. 410-335-9300, 1-800-234-7645. TF

FOR SALE

MAKE MORE MONEY with safe, efficient employees. Free catalog of over 100 professional training videos available from California Polytechnic State University. Perfect for landscape construction and maintenance companies, grounds crews, designers, etc. Call 1-800-235-4146. 6/93

FOR SALE: COMPUTER Slice System w/ALTOS 3068/80 Megabytes hard drive, 2 user w/printer, U.P.S. Call Hardy (404)977-0981. 5/93

FOR SALE: TWO LESCO 500 D FAIRWAY MOWERS, 800 - 900 HRS., SHARPENED & REBUILT CUTTING UNITS, \$3,500 EACH. CALL BILL 609-654-4880. 7/93

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

MEYER Z-52 ZOYSIA SOD FOR SALE. VAMONT AND TUFNOTE BERMUDAGRASS SOD. FORKLIFT DELIVERY. SERVING THE MID-ATLANTIC REGION. OAKWOOD SOD FARM, SALISBURY, MD 410-742-3086. 6/93

Groundwater protection handbook, "Designing Facilities For Pesticide and Fertilizer Containment"; Design/Plan Packet— Two Concrete pads, Construction Details. Write: Ronald T. Noyes, P.E., 1116 Westwood Drive, Stillwater, OK 74074 for order information. 6/93

MARKETING SERVICES

INCREASE YOUR BUSINESS & KEEP YOUR CUSTOMERS with a customized, professional newsletter. You choose the articles and title! **FREE** marketing tips and information! **Special introductory offer!** For free sample and details, call TotalControl Inc. (800)432-5528. In Pennsylvania call (215)430-3960. TF

MISCELLANEOUS

WHOLESALE PARTS CATALOG: Greenline's 1993 Full Line Catalog is now available. 120 pages full of mower blades, belts, pulleys, wheels, tires, pruners, sprayers, safety gear and hundreds of other items the professional landscaper uses everyday. Buy direct and save BIG \$\$\$\$. Call for your FREE catalog today! **TOLL FREE 1-800-356-0171.** Greenline, P.O. Box 1648, Reidsville, GA 30453. 6/93

HELP WANTED

Landscape Management and Construction/Sales- New Jersey's largest Corporate Services Company seeks highly motivated individual to assist in the continued growth of its Landscape Management Company. Areas of responsibilities include: prospecting, estimating, and sales. Must have strong background in Professional Landscape Management Field together with proven sales experience. Please send complete resume and work history in confidence to: Control Environmental Services, 737 New Durham Road, Edison, NJ 08817. Attention Mr. Stewart. 6/93

Landscape Sales: Well established Commercial Maintenance and Installation Firm. Quality oriented and operated, a drug free work place. Will handle all sales in Southeast, Florida. Send resume to: Custom Care, 6560 E. Rogers Circle, Boca Raton, Florida 33487. 6/93

Searching for the right employee? Time for a new position? Contact **Florapersonnel, Inc.,** international search and placement firm for the landscape, irrigation industries and allied trades. **Confidential. Fee paid by employer.** Florapersonnel, Inc., 2180 W. 434, Suite 6152, Longwood, FL 32779-5008. Phone: (407)682-5151 Fax: (407)682-2318. TF

SALES REPRESENTATIVE: Manufacturer of high quality Liquid Fertilizers, Micronutrients and Natural Organics looking for qualified individuals with a high degree of horticultural knowledge (B.S., M.S. in horticulture or proven experience) and sales experience. We are currently establishing territories nationwide. You will be representing a company that provides its customers with quality service. The individual needs to be self-motivated. Must be willing to call on golf courses, lawn care and tree care companies, distributors, phones sales and some traveling. Send resume to: Growth Products, Ltd., P.O. Box 1259, White Plains, NY, Attn: Personnel Dept. 6/93

LANDSCAPING/OPERATIONS: Hermes Landscaping, a well established contracting company, is seeking a self-motivated, professional manager to handle the operations of a Commercial Landscaping and Sprinkler Division. Must have a B.S. degree, 2-4 years of experience, people skills and hands-on supervisory experience. Send resume and salary history to: Hermes Landscaping, Inc., P.O. Box 14336, Lenexa, KS 66215, 913-888-2400. EOE. 6/93

TREE AND LANDSCAPE, TOP WAGES FOR TOP ARBORISTS: Lueders Tree and Landscape, Inc. is searching for tree care supervisors and assistants. Candidates must have strong expertise in trees with a strong horticultural background. Outstanding pay and top benefits for professional arborists. For interview, call LTL, Inc. (617)444-0994/(508)359-9905. 6/93

SOFTWARE

Route Manager System for scheduling and accounts receivable record keeping. Serving the Lawn Care Industry since 1982. List price \$350. Fortunate Computers, 46 N. 4th Street, Coplay, PA 18037. 800-275-0620. 12/93

CLASSIFIED ADVERTISING IS

- * EASY
- * EFFECTIVE
- * ECONOMICAL

ADVERTISER INDEX

110	American Cyanamid	7
111	American Cyanamid	32-33
112	Andersons	47
113	Andersons	69
114	BASF.....	27
109	Brouwer Turf	56
115	Ciba Geigy (Banner)	52-53
103	Ciba Geigy (Triumph)	24-25
116	Florida Nursery.....	65
117	General Motors Corp	37
118	ISK Biotech (Demo)	59
119	ISK Biotech (Demo)	59
120	ISK Biotech.....	Cv3
121	Jacobsen (Textron)	29
122	John Deere (Demo)	20-21
123	John Deere (Demo).	20-21
124	Lofts	Cv4
108	MFP Insurance.....	54
125	Miles Inc (Bayleton)	38-39
126	Miles Inc (Dylox)	4-5
127	Miles Inc (Oftanol).....	45
129	Miles Inc (Dylox).....	55
128	Miles Inc (Oftanol)(Reg).....	60-61
130	Miles Inc (Tempo).....	15
131	Monsanto	48-49
132	Mycogen Corp	51
133	Nor Am Corp	35
134	Nor Am Corp	17
101	P.A. Nurserymans Assoc	12
135	Ransomes	57
136	Shindaiwa.....	23
102	Spraying Devices.....	16
137	Tee 2 Green.....	Cv2
138	Terra Int'l Inc.....	41
104	Terra Int'l Inc.....	42
105	Terra Intl Inc	43
139	Toro Co	13
140	United Horticulture	31
141	Valent	63

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

Dacthal.[®]

For everything it doesn't do.

— Dacthal doesn't let you down. It means healthier turf and a difference you can see. And that makes you look good with your customers.

— Dacthal doesn't leach, because it isn't water soluble, and it's biodegradable, too.

— Dacthal doesn't damage roots regrowing after drought. And don't worry about newly sprouted turf* either. Dacthal is the right choice in high stress situations.



— Dacthal doesn't let weeds get out of control. On crabgrass, annual chickweed, spurge, foxtail, Poa annua, and over 15 other annual grasses and broadleaf weeds, Dacthal is the proven preemergent herbicide performer.

— Dacthal doesn't stress or damage roots, because turfgrass root systems have a high tolerance for it. And that means less stress and worry for you.

ISK Biotech Corporation,
Turf & Specialty Products Division
5966 Heisley Road, P.O. Box 8000,
Mentor, OH 44061-8000.



*Of uniform greening and 1 to 2 inches in height.
Always follow label directions carefully when using turf chemicals.
® Registered trademark of ISK Biotech Corporation.

Wherever You Need A Low-Maintenance Turf Rely On

Reliant

HARD FESCUE



Roadsides, cemeteries, golf course roughs, vacation homes, orchards, reclamation areas. Wherever maintenance is impractical, Reliant Hard Fescue is the one you can rely on. It thrives on low maintenance:

- Good performance without supplemental irrigation
- No fertilization needed (after initial establishment)
- Low growing
- Resistant to crabgrass encroachment
- Adaptable to full sun or moderate shade
- Improved disease resistance
- Tolerant to cold
- Dark green, leafy and fine-textured

Blend Reliant with other fine fescues. It's ideal for poor, infertile soils. Or wherever a fragile ecology doesn't allow fertilization. Reliant can be used on any area that's mowed infrequently or not at all.

Rely on Reliant Hard Fescue — the high performance turf for low-maintenance areas.

NOW WITH ENDOPHYTES
for insect control



Lofts Seed Inc.

World's largest marketer of turfgrass seed

Bound Brook, NJ 08805
(908) 356-8700 • (800) 526-3890 • (800) 624-1474 (NJ)

Lofts/New England
Arlington, MA
(617) 648-7550
(800) 648-7333

Lofts/Maryland
Beltsville, MD
(800) 732-3332
(800) 732-7773 (MD)

Lofts/Great Western
Albany, OR
(503) 928-3100 or
(800) 547-4063

Lofts/Ohio
Wilmington, OH
(800) 328-1127
(513) 382-1127

Sunbelt Seeds, Inc.
Norcross, GA
(404) 448-9932 or
(800) 522-7333

To locate the Lofts' distributor nearest you, call
(800) 526-3890 (Eastern U.S.) • (800) 547-4063 (Western U.S.)



Over \$100,000 in scholarships already presented to Rutgers University turfgrass students