

THE VOICE OF THE GREEN INDUSTRY

LANDSCAPE *management*

SEPTEMBER 1996 • \$4

The LM 100

*Recognizing Industry
Excellence*

**LM Reports:
Chippers/shredders**

**Turfseed pricing
for '96-97**



The New Generation Of Top-Rated Tools.



It doesn't matter if it is a single yard or a sprawling condo community. Tough jobs require top-rated tools. STIHL's tough new BG 75 challenges our own BG 72 in power and performance.

Lightweight, quiet and powerful, the BG 75's new, larger

25.4 cc engine goes from zero to 134 mph and back without breaking a sweat. STIHL's unique ElastoStart™ shock absorbing handle and electronic ignition make it fast starting, reliable and comfortable.

The telescoping extension tube means one size truly fits all and with optional gutter cleaning and vacuum kits, this blower

is one of the most versatile yard tools on the market. Get your hands on the new BG 75.

Call 1-800-GO STIHL (1-800-467-8445) for more information or for the name of your nearest STIHL dealer.



STIHL®

INSIDE



ON THE COVER: ENVIRONMENTAL LANDSCAPE SERVICES WORKERS SPIFF UP THE WESTCHASE HILTON HOTEL IN HOUSTON.

COLUMNS

- 2 OPENING SHOTS
- 8 ASK THE EXPERT

DEPARTMENTS

- 10 HOT TOPICS
- 36 EVENTS
- 38 SUPPLIERS CORNER
- 38 INFO-CENTER
- 40 PRODUCT REVIEW
- 64 CLASSIFIED
- 67 AD INDEX
- 68 GRAB BAG

THE VOICE OF THE GREEN INDUSTRY

LANDSCAPE *management*

FEATURES

- 12 **COVER STORY:
THE LM 100**
Our spin on some of the best and most visible golf courses, athletic and grounds facilities, and lawn-/landscape companies in North America—ones that help set the standards for green industry excellence. How did we pick them? See Jerry Roche's "Opening Shots" column on page 2.



- 26 **SEED AVAILABILITY:
IT'S SHORT**
It will not be easy to find the exact turfseed you might want this fall, if reports from seed growers are accurate. Here is a complete rundown of suppliers' most requested cultivars.
JERRY ROCHE

- 33 **LM REPORTS:
CHIPPERS/SHREDDERS**
The original "Don't Bag It" program was meant to address turfgrass clippings, but there is some wisdom in extending the concept to other landscape debris like tree prunings, broken branches, twigs and brush.
JERRY ROCHE

- 30 **CONSIDERATIONS IN
PESTICIDE SELECTION**
You must understand your pest problems, observe the environmental concerns where they're being used, and know the pesticide's characteristics to make the right choice.
R.L. BRANDENBURG, PH.D.

- 43 **CORPORATE
CAPABILITIES**
The top suppliers to the green industry take a few sentences to tell you more about their companies and the products and services offered.

LANDSCAPE MANAGEMENT (ISSN 0894-1254) is published monthly by Advanstar Communications, Inc. Corporate, editorial and advertising offices: 7500 Old Oak Blvd., Cleveland, OH 44130. Accounting, advertising production and circulation offices: 131 West First St., Duluth, MN 55802.

Subscription rates: one year, \$39, two years \$58 (U.S.); one year \$66, two years \$99 (Canada and Mexico); one year \$130, two years \$195 (all other countries). For air mail delivery, include an additional \$70 per order annually. Current issue single copies (pre-paid only): \$4 (U.S.); \$7 (Canada and Mexico); \$12 (elsewhere); add \$3.50 per order for shipping and handling. Back issues, if available, \$10 (U.S.); \$14 (Canada and Mexico); \$20 (other countries); add \$3.50 per order for shipping and handling (pre-paid orders only).

Office of publication: Advanstar Communications, Inc., 131 W. First St., Duluth, MN 55802. Periodicals postage paid at Duluth, MN 55806 and additional mailing offices.

Copyright ©1996 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 Advanstar Marketing Services, Attn: Permissions, 7500 Old Oak Blvd., Cleveland, OH 44130 or phone (800) 225-4569 x123. Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by Advanstar Communications for libraries and other users registered with the Copyright Clearance Center.



Canadian G.S.T. Number: R-124213133, IPM number: 841919

POSTMASTER: Send address changes to Landscape Management, P.O. Box 6198, Duluth, MN 55806.



LANDSCAPE

If you're asking what an "LM 100" is, you can join most of our other 50,000+ readers. Simply put, it's this month's cover story, a new project we have undertaken this year. It's a vehicle by which we can recognize the biggest, brightest and best of the green industry. We hope to make this an annual "event" in the magazine, and there's no reason why it can't be, with your help.

Certainly, a project of this magnitude isn't undertaken on a whim. But there wasn't much staff debate about giving it a go. We are united in

the firm belief that many top organizations in the U.S. green industry should, in some way, be further recognized for their valuable contributions to the industry's image.

Some of the friends and acquaintances you've made at turf meetings might be on this year's list. You might recognize the names of some of your competitors. And if you're a progressive organization dedicated to pro-

pounding the benefits of well-maintained, beautiful turf and ornamentals, we may even have contacted you last month about joining our list.

We selected this year's "LM 100" based on a variety of criteria. Probably the most important was national visibility, both in the green industry itself and in the general public's eye. That might mean a PGA Tour championship golf course. It might mean a landscaping company whose owner has served on his or her national organization with due diligence in the past year. It might mean a lawn care company that goes beyond the call of duty to uphold the virtues of green grass and customer retention. Or it might mean a college whose grounds manager has personally invited us to his campus to check out the athletic fields.

The other criteria we used to select these

100 included:

- ▶ continuing relationship with the leading national association serving their specific trade (and we asked the associations for referrals);
- ▶ good business practices;
- ▶ availability to the trade press (specifically LANDSCAPE MANAGEMENT) for quotable quotes, good business/agronomic tips;
- ▶ "image" (a subjective quality, at best);
- ▶ dedication to the green industry; and
- ▶ efficiency of the organization.

We realize that this entire list is very subjective indeed. We expect our 100 to be discussed, debated and contested—not necessarily for the organizations we've named to the list, but more for those that we've left off (and we've left off quite a few).

Senior editor Ron Hall was final authority on what lawn and landscaping companies were selected. Managing editor Terry McIver handled selection of the golf courses and athletic fields that made this year's list. And the three of us continued to be amazed at the number of really good, visible organizations from which we could choose. We realize that, if we had the room in this month's magazine to do justice to 250 organizations (or even more), we could have easily expanded the list.

So to those who made our "LM 100" this year: thank you, and keep up the good work. You can look forward to receiving your official "LANDSCAPE MANAGEMENT 100" frangible certificate in the mail in the coming weeks.

To those who didn't "make the cut" this year: let us know about your organization (we've always got time to chat), keep up the good work, and remember that there's always next year. **LM**

The LM 100: what makes them tick?



Jerry Roche

JERRY ROCHE
Editor-in-Chief

Questions, comments? Contact Jerry by phoning (216) 826-2830, faxing (216) 891-2675 or e-mailing to 75553.502@compuserve.com.



Taking over new turf.

You know our M-Series mid-size tractors for their all-round versatility. Now we're going after some new turf.

Introducing our M4700, 2-wheel drive Turf Special. It's got wide flotation turf tires, a low-profile front end, creep speed for spraying and turf conditioning and a sunshade for added comfort.

Like all Kubota tractors, the M4700 is loaded with features that increase productivity and make operation easy.

An ISO-mounted, semi-flat deck greatly reduces vibration

Creep speed transmission has 12 forward speeds (0.17-13.76 mph) with turf tires.



Kubota also offers an M4700 model with 4-wheel drive.

and minimizes fatigue, while hanging pedals add comfort and ease of operation.

The E-TVCS 5-cylinder diesel engine delivers maximum power, with high torque, low noise and low vibration. Enhanced combustion efficiently

reduces fuel cost and lowers emissions.

The Kubota M4700 Turf Special. It's designed from the ground up for landscape and turf applications. And then some.

For more information, please write to:

Kubota

KUBOTA TRACTOR CORPORATION
P.O. Box 2992, Dept. GM
Torrance, CA 90509-2992

or call Toll Free 1-888-4 KUBOTA ext. 401
(1-888-458-2682 ext. 401)

Financing available through Kubota Credit Corporation



**Everywhere You Look
- There We Are!**



**Ranked Among the Best
Franchise Opportunities in America!**

Success Magazine GOLD 100	Entrepreneur Magazine Franchise 500	Income Opportunities Platinum 200	Business Start-ups The Top 150
-------------------------------------	---	---	--

- Proven Leaders in the Lawn Care Industry
- 17 year Track Record of Successes
- In-depth Training
- Exclusive Territory
- Extensive Support



Call Roger Albrecht at: **1 800-982-5296**

Circle 125

PRO'-fect: having all professional qualities for performance and longevity.

THE PRO-FECT TRIMMER

Professionals need PROformance. That's why our new PROFORCE TBC-2510 trimmer has more quality features than others in its class. At 11.6 lbs. with 1.3 hp, it has excellent power-to-weight and outstanding acceleration. A heavy-duty



The New
PROFORCE
2510 Brushcutter

anti-vibration system combined with a SOLID-STEEL drive shaft and the new BRAIN® autofeed cutting head ensure smooth and reliable cutting power. The engine has been tested to last over 1500 hours and complies with new emission standards. To enjoy PROfection, see your Tanaka dealer or call **206-395-3900**.

THERE'S MORE
TO LIKE ABOUT
Tanaka

Tanaka equipment is used exclusively at



Circle 135

LANDSCAPE management

EDITORIAL STAFF

Fax (216) 891-2675
E-mail 75553.502@compuserve.com

Jerry Roche **Editor-in-Chief** (216) 826-2830
Terry McIver **Managing Editor** (216) 891-2709
Ron Hall **Senior Editor** (216) 891-2636
Dr. William Knoop **Technical Editor** (903) 860-2410
Vernon Henry **Group Editor** (216) 826-2829
Lisa Lehman **Art Director** (216) 891-2785
Lisa Bodnar **Graphic Designer** (216) 891-3101

READER ADVISORY PANEL

Jerry Coldiron **Boone Links / Lassing Pointe G.C.** Florence, Ky.
Corey Eastwood **Stockdale Country Club** Bakersfield, Calif.
Mike Guthrie **Ground Control Landscaping** Orlando, Fla.
Larry Iorri **Down to Earth Landscaping** Wilmington, Del.
Pat Nibler **ProGrass** Wilsonville, Ore.
Russell Studebaker **Horticultural consultant** Tulsa, Okla.

BUSINESS STAFF

John D. Payne **Publisher** (216) 891-2786
Leslie Montgomery **Administrative Coordinator** (216) 826-2856
Judy Miducki **Production Manager** (218) 723-9281
Donna Pack **Group Business Manager** (216) 891-3131
Debi Harmer **Production Director** (218) 723-9325
Rosy Bradley **Senior Production Manager** (218) 723-9352
Karen Edgerton **Circulation Manager** (218) 723-9280
Sandy Ollah **Green Book Supervisor** (218) 723-9618
Lynn Viele **Green Book Coordinator** (218) 723-9393
Alex DeBarr **Group Publisher** (216) 891-2789

ADVERTISING OFFICES

Headquarters 7500 Old Oak Blvd.
Cleveland, OH 44130-3369
(216) 243-8100 Fax: (216) 891-2675

John D. Payne **Publisher** (216) 891-2786
E-mail: jpayne222@aol.com

Kerry Jacobson **Southeastern Sales Manager**
(216) 891-2626

Tom Galligan **National Sales Manager**
3901 52nd Ave.
Kenosha, WI 53144-1830
(414) 653-9523 Fax: (414) 653-9524
E-mail: tgalligan@aol.com

John Kiesewetter **Western Sales Manager**
859 Willamette St.
Eugene, OR 97401
(541) 461-0022 Fax: (541) 461-0044

Dan Hoke **Classified / Market Showcase** (216) 891-2672

MARKETING SERVICES

Marcie Nagy **Reprints (100 minimum)** (216) 891-2744
Anita Knight **Circulation List Rental** (800) 225-4569, ext. 172
Advanstar Marketing **Microfiche/Film Copies** (800) 225-4569, ext. 839
Chris Baxter **Subscriber/Customer Service** (218) 723-9477
Mary Abood **International Licensing** (216) 826-2804
Books, directories, back issues, photocopies
(800) 598-6008; (218) 723-9180



President & CEO Robert L. Krakoff
President, Advanstar Publishing Robert L. Krakoff
President, Advanstar Expositions James M. Alic
VP/Finance, CFO and Secretary David W. Montgomery
Vice Presidents Kevin J. Condon, William J. Cooke, Brian Langille, Phil Stocker
Treasurer & Controller Adele D. Hartwick

IF YOU WANT TO KNOW HOW LONG
GALLERY WORKS TO PREVENT BROADLEAF WEEDS,
ASK SOMEONE WITH TIME ON THEIR HANDS.



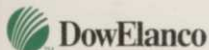
After applying Gallery* preemergence herbicide, you've got about 6 to 8 months of good solid waiting before you'll spot the emergence of any of over 95 different broadleaf weeds. Even the tough ones like spurge, dandelion and plantain.

In fact, Gallery is the only preemergent on the market today that's designed to prevent so many broadleaf weeds, yet is safe over the top of all turfgrasses,

and over 400 different species of ornamentals.

So now that you have a little extra time on your hands, maybe you can get around to digging up even more business.

For further information on Gallery, or any other product in the extensive line of DowElanco products, give us a call at 1-800-352-6776. Always read and follow label directions.



*Trademark of DowElanco



COLORBLENDS

TAKE THE GUESS AND THE WORK OUT OF BLENDING TULIPS.

Above Item #1205 Tulip Colorblend "The Royals" Purple/Yellow
1000 Topsize bulbs ... \$292 delivered (cont'l 48 states)

Order Now! For Fall Delivery and Planting
Toll Free 1-888-TIP-TOES (847-8637)

Over 50 Colorblends available.
Cemet., Cities, Hosp., Hotels, Univ., Zoos - We accept P.O.'s.
GCSSAA members have pre-approved credit.

SCHIPPER & CO. USA Box 7584 Greenwich, CT 06836



SCHIPPER
& CO. USA

Circle 132

NEW PUBLICATION!

Containment System Design:

Chemical Storage,
Mixing and Recycling

by Fredric R. Haskett

Item #668 \$74.95



Find out how to prepare your company for the scrutiny of government regulators. Learn how your operation can comply with new regulations. Understand the legal implications of compliance versus noncompliance. Discover the difference between the cost of recycling finished product residues and the cost of disposal.

Areas covered in this comprehensive guide include: Planning, The Containment Facility, Equipment Standards, Site Standards, Emergency Response Procedures, and more.

Call 1-800-598-6008

Outside the U.S. call 216-826-2839

Advanstar Marketing Services

7500 Old Oak Blvd. • Cleveland, OH 44130

Price subject to change

CODE: 949511

LANDSCAPE management

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 Association of Nurserymen
(National Landscape Association)**
1250 I St. NW, Suite 500, Washington, DC 20005
(202) 789-2900



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



**Independent Turf and Ornamental
Distributors Association**
1217 Wayburn
Grosse Pointe Park, MI 48230
(313) 331-7739

International Turfgrass Society

Crop & Soil Environmental Sciences, VPI-SU,
Blacksburg, VA 24061-0403
(540) 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

P.O. Box 14824, Columbus, OH 43214
(614) 261-6750



Professional Grounds Management Society

120 Cockeysville Rd., Suite 104,
Hunt Valley, MD 21031
(410) 584-9754



Professional Lawn Care Association of America

1000 Johnson Ferry Rd., NE, Suite C-135,
Marietta, GA 30068-2112
(404) 977-5222



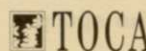
Responsible Industry for a Sound Environment

1155 15th St. NW, Suite 900,
Washington, DC 20005
(202) 872-3860



Sports Turf Managers Association

1375 Rolling Hills Loop, Council Bluffs, IA 51503-8552
(712) 366-2669; (800) 323-3875



Turf and Ornamental Communicators Association

P.O. Box 156, New Prague, MN 56071
(612) 758-5811



Introducing The Quietest Backpack Blower Ever Designed.

THE PB-46LN — THE QUIET 1™ FROM ECHO.

With Echo's revolutionary new Quiet 1™ clean-up jobs never sounded so good because it's a full 50% quieter than its predecessor — even when it's being operated at full throttle!

With a maximum air velocity of 180 MPH and an average air volume of a whopping 790 CFM, you've got the power of a user friendly hurricane, with the sound output of a finely tuned imported automobile.

Patent-pending sound reduction technology enables the PB-46LN to operate at only 65 decibels (as measured according

to ANSI B175.2-1990 Guidelines), which is ideally suited to meet the needs of the many communities that have enacted noise legislation. This exciting innovation in commercial backpack blowers will allow you to take full advantage of the labor savings afforded by a backpack blower without disturbing noise sensitive communities.

This new technology also makes the PB-46LN ideally suited for resort maintenance where excessive noise can be a problem with discriminating guests. Best of all, the new PB-46LN is made by Echo. It's powered by an industry tested and approved 44cc commercial grade engine that's built to take the abuse of long work days. The durable, yet lightweight frame, protects critical engine

components under demanding usage, but still allows them to be serviced with ease. The automotive type air filter, for example, can literally be replaced on a job site in a matter of seconds.

The Quiet 1™, another in a series of product innovations from Echo, the choice of professionals! For the name of your nearest Echo dealer, call 1-800-432-ECHO (3246). Or write: Echo, Incorporated, 400 Oakwood Road, Lake Zurich, IL 60047.

ECHO
Ask Any Pro!

Post-emergence grass control

Is there a product or practice which can help manage weedy grasses in Kentucky bluegrass, ryegrass and fine fescue lawns once they have germinated?

—INDIANA

You may be dealing with annual grassy weeds or perennial grassy weeds. For annual grassy weeds, like crabgrass, post-emergence herbicides such as Daconate-6, Acclaim or Dimension can be used. Ideally, these products should be applied when annual weedy grasses are very young.

Since Dimension has both pre- and post-emergence activity, it can be applied during the period of germination. After germination, until about the six-leaf stage, Acclaim has given the best results in our field studies. Once the plants begin to tiller, the treatment response may vary, depending on the type of product, air temperature and other factors.

In addition to chemical management, it is also beneficial to provide good cultural practices such as mowing, watering, fertilizing and pest management—as needed—to improve the health of desirable turfgrass.

Other groups of grassy weeds include perennial plants, such as coarse or tall fescue and quackgrass. For tall fescue management, consider using Lesco TFC selective herbicide. Reports indicate that TFC treatments in the fall give the best results. Another option is to ei-

ther mechanically hand-dig the tall fescue clumps or spot-treat them with Roundup or Finale, and then overseed the area.

For weeds such as quackgrass, there is no selective herbicide. Digging and removing is not practical because the quackgrass has rhizomatous underground stems. It is very prolific and difficult to remove the roots. Portions of the plant can produce new growth. So instead of treating just the plant, it is a good idea to treat a large, heavily infested area with Roundup or Finale. Be aware that these herbicides will kill every green plant which they contact. Also, caution should be taken while applying these herbicides. If the herbicide comes in contact with your shoes, it could be carried to other parts of the property. Quite often, plants like quackgrass with underground rhizomatous growth habits may require a follow-up treatment 7 to 10 days later.

Once the treatment is satisfactory, (after 7 to 10 days), prepare the treated area for seeding and seed it with desirable compatible grass mixture or blends.

Always read and follow label specifications for best results.

Tiny trees a vexation

We are finding young seedlings of maple and oaks in lawns. What can be done to get rid of these?

—OHIO

The wet spring we have had in the Northeast supported the germination of maple and oak seeds. Seedlings can be man-

aged either mechanically or chemically.

They can be pulled by hand, which would be laborious and time consuming. Instead, mow the yard at the proper height and frequency. Since these plants are young, once the terminal bud is removed, they tend to die off.

Another approach is to use any of the common broadleaf herbicides applied on lawns that contain 2,4-D, dicamba or MCPP.

Two for nutsedge

What can we use to manage serious problems with nutsedge in lawns?

—LOUISIANA

Consider using selective herbicides such as Image or Manage. Purple nutsedge is most common in your area, but these products are registered to help manage both yellow and purple nutsedge.

Provide treatments when the nutsedge is in the 8- to 10-leaf stage and provide the second application 8 to 10 weeks later, as needed. These products are post-emergent and will help manage the weeds that are active at the time of application, but they will not help manage the germinating seeds of nutsedge. Therefore, if nutsedge is severe in some lawns, additional treatments may be needed in subsequent years.

Maintain good cultural practices, particularly mowing to help reduce future weed seeds.

LM



BALAKRISHNA RAO
*Manager of Research and
 Technical Development
 for the Davey Tree Co.
 Kent, Ohio*

SEND YOUR 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.

FIRST THERE WAS MANHATTAN, THEN MANHATTAN II, NOW THERE'S

The Best
Just Got
Better!

Manhattan 3

Turf-Type
Perennial
Ryegrass

Formula for a Successful Turf

Step 1: Draw from the most celebrated turfgrass breeders of all time to advance the time-proven best perennial ryegrasses, Manhattan and Manhattan II.

Step 2: Select Oregon's finest grass seed growers to raise high standard, certified seed. Most have produced Manhattan for more than 25 years!

Step 3: Market only high quality, competitively priced seed consistently on a long-term basis. An adequate Manhattan supply has been available in good and poor crop years.

Step 4: Select dependable, knowledgeable distributors to get your product to the marketplace. Some helped introduce the original Manhattan in 1970.

Step 5: Specify Oregon certified Manhattan 3 for all ryegrass applications!
Look for this familiar skyline on the bag you buy:

Manhattan 3 characteristics:

- An elite turfgrass cultivar
- High endophyte level
- Dark green color
- Improved density
- Improved mowing quality
- Improved rust resistance
- Better summer color
- Lower growth habit

Manhattan 3 is co-marketed by:



TURF MERCHANTS, INC.

33390 Tangent Loop, Tangent, OR 97389
Outside Oregon 800-421-1735
541-926-8649 / FAX 541-926-4435



TURF-SEED, INC.

PO Box 250, Hubbard, OR 97032
800-247-6910
503-651-2130 / FAX 503-651-2351



Circle No. 138 on Reader Inquiry Card

Minimum wage act disallows paying travel time to workers who take company trucks home

by JAMES E. GUYETTE / Contributing Editor



Russ Schmidt (above) of Schmidt Landscaping, St. Louis, lets a trusted employee who's been with him for 10 years 'home-garage' his other truck. 'He takes care of it like it's his own,' Schmidt says. 'You get to a point where you can only offer people so much pay, so you begin to look around for ways to give them other perks. A company vehicle is one way.'

Legislation that increases the minimum wage to \$4.75 an hour also includes a provision that allows workers to take home company vehicles without being paid for the time spent traveling.

Known as "home garaging," the strategy of allowing landscape crew members to commute to and from the jobsite in

company trucks parked overnight at their homes had been under fire from the U.S. Department of Labor. The main issue is that landscape managers and other small business owners, such as contractors, seldom pay their workers an hourly wage for this time spent driving to and from the jobsite. This put them on a collision course with Labor Department regulations that mandate such travel time payments—even though workers may have negotiated away the pay in exchange for being able to take the truck home.

Allowing crews to take home company vehicles can be a matter of good business sense. Workers can arrive at the jobsite quicker, and a vehicle parked overnight at a worker's home rather than in a company lot, is often more secure. Using the company truck to get to and from work is largely viewed by employees as a perk, yet national union officials had opposed these arrangements.

The "Travel Time Bill" within the Minimum Wage Act will permit this type of program as it

amends the Portal-to-Portal Act of 1947.

"The bill will become law as soon as the President signs it," says John Runyan of the Labor Policy Association, an industry trade group based in Washington. He adds that the measure first has to be passed by a Congressional conference committee because the House and Senate have approved differing specifics. "Under any scenario, it is now a virtual certainty that the travel time problem will be resolved favorably," he reports.

"Commuting in company-owned vehicles is beneficial to both employer and employees. Yet under the [previous] law, employers were at great risk if they had such programs and did not compensate employees for time spent commuting," Runyan notes.

Owners of landscaping businesses that set up these programs faced the possibility of stiff fines and other business repercussions. Runyan seeks "a common-sense answer to this dilemma. It makes clear that commuting in company-owned vehicles is not working time so long as there is an agreement between the employer and employee, and the commute is 'within a normal commuting distance' of the employer's business."

Runyan says voluntary use of company-owned vehicles results in:

- consumer savings,
- expeditious service,
- employee convenience,
- parking and vehicle storage advantages, and
- vehicle and cargo safety.

Municipal lawmakers might have something additional to say, however, many of them have laws against parking commercial vehicles of certain sizes in residential driveways. □

Nemesis 'numero uno' on lawns: brown patch



Brown patch: a frequent summer killer of turf

According to a survey of turfgrass disease diagnostic centers across the U.S., brown patch is the leading killer of grass across three frames of reference: frequency of occurrence, intensity of damage and estimated economic impact.

"There are some surprises

here," says survey originator Chris Sann of the Turf Information Group, Wilmington, Del. "Conventional wisdom holds that dreschlera and dollar spot are the most common turfgrass diseases, rather than fifth and third, respectively.

"That brown patch is first is a mild surprise, but that anthracnose is second and pythium root rot is fourth is a huge surprise." Sann says that *bipolaris* coming in sixth is also a "moderate surprise."

The survey numbers indicate the number of specimens tested by labs. *However*, many turf managers can often diagnose the most common diseases themselves, simply

by symptoms and cultural factors—including weather patterns—and thus do not send specimens to labs.

"These results indicate that labs are more sophisticated than thought, and that management practices, product use and plant breeding are having an effect on disease occurrence," says Sann.

The survey was part of a future project being conducted cooperatively by the Turf Information Group, *LANDSCAPE MANAGEMENT* magazine and *American Cyanamid*. Forty-eight questionnaires were mailed, and 27 were returned. Here are the complete results:

'Day on Hill' features Robert F. Kennedy, Jr.

Robert F. Kennedy, Jr., will be the guest speaker at PLCAA's 8th Annual Legislative Day on the Hill in Washington D.C., Feb. 3-4, 1997.

Also participating will be Edward A. Grefe, chairman of International Civics Inc., who will be conducting a classroom session entitled "Strategic Management of Political Issues & Grassroots Politics." Grefe specializes in coalition building and crisis management.

PLCAA says all lawn and landscape professionals are encouraged to attend its Legislative Day on the Hill and help influence legislation. One-on-one visits with legislators on Capitol Hill are the highlights of the event. There is no registration fee, and most meals are included.

For more information on Legislative Day, contact PLCAA Director of Government Affairs Tom Delaney at (800) 458-3466; fax is (770) 578-6071; e-mail: plcaa@atcom.net.

TURF DISEASE SURVEY

Disease	Frequency of occurrence	Intensity of damage	Est. economic impact
Brown patch	4.08 (1)	3.48 (1)	3.59 (1)
Anthracnose	3.26 (2)	2.89 (4)	2.74 (4)
Dollar spot	3.22 (3)	2.56 (6)	2.48 (7)
Pythium root rot	3.07 (4)	3.30 (2)	3.00 (2)
Dreschlera diseases	3.04 (5)	2.56 (7)	2.37 (8)
Bipolaris diseases	2.96 (6)	2.56 (8)	2.56 (6)
Red thread	2.96 (7)	2.33 (9)	2.04 (12)
Pythium blight	2.67 (8)	3.07 (3)	2.80 (3)
Rust	2.63 (9)	2.11 (13)	2.30 (9)
Summer patch	2.63 (10)	2.70 (5)	2.74 (5)
Pink snow mold	2.30 (11)	2.33 (10)	2.04 (13)
Gray snow mold	2.26 (12)	2.04 (14)	1.81 (14)
Necrotic ring spot	2.19 (13)	2.26 (12)	2.19 (11)
Take-all patch	2.15 (14)	2.30 (11)	2.30 (10)

NOTES: Numbers are average of all responses (5=most frequent, 1=least frequent). Numbers in parentheses are rank in group. Responses based on best estimates of personnel at participating diagnostic centers.

THE LM 100:

Excellence is
everywhere!

Our spin on some of the best and most visible golf courses, athletic and grounds facilities and lawn/landscape companies—ones that help set the standards for green industry excellence.



Golf course and grounds facility selection based on design features, reputation, accessibility, volume of acres managed, and solicited, peer-group opinion.

Landscape/lawn care companies chosen for their volume, regional and/or national reputation, and media accessibility.

We know we could have included at least another hundred. Nonetheless, we hope you find this informative, entertaining and useful. —The editors





GOLF COURSES

Augusta National Golf Club, Augusta, Ga.

Formally opened for play January of 1933, the course was built and designed by Bob Jones and Dr. Alistair Mackenzie.

"All members of the maintenance staff receive a daily schedule every morning with their specific responsibilities," says Jack Stephens, chairman of Augusta National Golf Club. "Frequent meetings are conducted to update the staff on the latest innovations and procedures in the turfgrass industry."

Boone Links/Lassing Pointe, Florence, Ky.

The two Boone Links courses—Brookview and Lakeview—were designed by the von Hagge Company and golf professional Bruce Devlin. Lassing Pointe was designed by



Michael Hurdzan.

"I bring out the best in my people," says superintendent Jerry Coldiron (shown). "I look at everybody as an individual. We let them

know how much we appreciate them."

Bob O' Link, Highland Park, Ill.

A Donald Ross course from 1916, Bob O' Link is known for its elevated greens and large bunkers. Certified superintendent Bruce Williams—who is also the current GCSAA president—followed in his dad Bob's footsteps at Bob O' Link.

"Agronomically, I try to stay up with everything as much as I possibly can," says Williams, who reads constantly. "I try to stay on top of the cutting-edge technology, through reading and turf conferences."

Collier's Reserve, Naples, Fla.

One of the first Audubon Cooperative Sanctuary courses, Collier's is a lesson in how to build a golf course without disturbing the native wildlife and vegetation.

"There's not a whole lot of



room for boredom in this business if you're motivated," says certified superintendent Tim Hiers (shown) a staunch defender of golf course superintendents as environmentalists.

Canterbury Golf Club, Beachwood, Ohio

Since 1921, Canterbury has been a frequent stop for touring pros. It's hosted four U.S. Open Championships and four USGA



championships.

Superintendent Terry Bonar (shown) says he had fun getting the course ready for the 1996 U.S. Senior Open Championship, held at Canterbury this past July.



"I think we exceeded the USGA's criteria," says Bonar. "They wouldn't let us

get the greens any faster than 10 [on the stimpmeter]. We could have had them up to 11."

Congressional Country Club, Bethesda, Md.

Two nine-hole courses—The Blue Course and The Gold Course—were designed in 1924 by Devereux Emmet, a dog trainer/golfer/huntsman from New York City. Many have reworked or added to the course since then, including Donald Ross, Robert Trent

THE LM 100

Jones, Rees Jones and Roger Rulewich.

Superintendent Paul Latshaw—now in his third season at the Congressional—is readying the course for next year's U.S. Open.

"What keeps me going is the satisfaction of seeing your work reach completion," says Latshaw, who has also served as superintendent of Oakmont.

Fairmount Country Club, Chatham, N.J.

Hal Purdy designed Fairmount in 1960, with moderate undulations and "fall-away" greens. Vince Bracken (shown), superintendent at Fairmount since 1989, calls the course "difficult but fair."



Seeding a bluegrass/rye mixture in the roughs has recently helped Bracken highlight the con-

tours between fairways and rough areas.

Firestone Country Club, Akron, Ohio

The North Course was a 1969, Robert Trent Jones/Roger Rulewich design. William Way gave us the South course in 1929. Firestone is the site of the NEC World Series of Golf, held every August. Brian Mabie is the superintendent.

The Greenbrier, White Sulphur Springs, W.Va.

Robert Mitchell (shown), executive director of golf & grounds, keeps the three Greenbrier courses running smoothly with the help of a solid team of people.



Sixty percent of the Greenbrier's business comes from groups staying at the

resort hotel that is part of the Greenbrier complex. Average annual "guest days" at the hotel reach 230,000.

Mitchell says his strengths include being able to bring about a teamwork approach, and the budgeting/accounting side of managing a golf course resort.

"Slammin'" Sam Snead is The Greenbrier's golf pro emeritus.

Harborside Golf Course, Long Grove, Ill.

Formerly the site of two Chicago landfills, the links-style, 456-acre Harborside International Golf Center is under the care of superintendent Clay Putnam.

"My biggest concern is the health of the turfgrass," says Putnam. "I want to be as efficient as



possible. I want to achieve the perfect balance, between amount of fertilizer and pesticide used. I would also like to establish a true integrated pest management program."

Assistants Mark Schmitz and Donnie Fitzgerald help Putnam manage 72 employees.

Hartfield National, Avondale, Pa.

This one-year-old, 18-hole course is one of the finest public courses in America—as Tom Fazio designed it to be, according to superintendent Steve Edkin.

"We are an upscale public course that gives the daily fee player a country club experience," says Edkin. The course draws golfers from Philadelphia, Delaware, south New Jersey and Maryland.

Crenshaw/South Shore creeping bentgrass greens are nicely contrasted by perennial ryegrass fairways and tees, and roughs are sodded Kentucky bluegrass.

The Honors Course, Ooltewah, Tenn.

Superintendent David Stone says the Honors Course has been

known to have great greens and zoysiagrass fairways. It hosted this year's NCAA Championship, won by teen phenom Tiger Woods.

"It's always been an environmentally-friendly course; it was designed that way," says Stone, who has been with the Pete Dye-designed course since it opened in 1983.

The Robert Trent Jones Golf Trail, Alabama

You can golf all you like in Alabama nowadays, with the completion in late 1993 of 18 courses by Robert Trent Jones, Sr. The trail winds through the foothills of the Appalachians in north Alabama, down to the Gulf of Mexico. Included are Highland Oaks in Dothan and Cambrian Ridge in Greenville, both voted among the best new public courses of 1994.

Kiva Dunes, Gulf Shores, Ala.

Golf professional Jerry Pate designed it, and Mike Rienzi built it, grew it in and is the superintendent of this 18-hole course voted by *Golf Magazine* as one of the best public golf courses of 1996.

Rienzi calls himself "a perfectionist," an attitude he says he developed during stints at Augusta National and Old Waverly in Mississippi.

"I have an eye for detail and above-average playing conditions," says Rienzi. I see and do things above and beyond what is considered good enough."

La Quinta Hotel, Golf & Tennis Resort, La Quinta, Calif.

Michael Tellier says computers and safety issues are very much in the future of the golf course superintendent's job.

"Agronomically, water management is an increasing issue," says Tellier. The courses of La Quinta—Citrus, Dunes, Mountain and Resort—were designed by Pete Dye between 1981 and 1987, and comprise much of that designer's contribution to California golf.

The Merit Club, Gurnee, Ill.

The club is composed of 30

acres of wetlands, a 30-acre savannah and a two-acre nursery. Owner Bert Getz wanted to save the scenic and natural character of the land when he built the course. "I didn't want to see it paved or roofed over," he says. Oscar Miles is the superintendent. Pennlinks, Penneagle and Penncross varieties are used. Natural grasslands grow as high as four feet.

Oakmont Country Club, Oakmont, Pa.

Legendary Oakmont was designed by Henry Fownes in 1904, and later improved by his son, William. Described in one golf encyclopedia as a model of "the penal school" of golf course design, the course under William Fownes was meant to be "the toughest course in the world."

Certified superintendent Mark Kuhns tries to check each green's speed every day, with a stimp meter in one hand and a putter in the other. Greens are mowed twice, with riding and walking mowers.

Oak Hill Country Club, Pittsford, N.Y.

Designed by Donald Ross, the east course was host to the 1995 Ryder Cup. Oak Hill has hosted six LPGA events, a U.S. Senior Open and a U.S. Open.



Superintendent Joe Hahn (shown) believes in doing

mechanical turf care operations at "the right time," which just might mean aerifying greens during times of busy play, for example. As far as staff management, "I try to surround myself with good people, and mold them into the best they can be," says Hahn.

Oakland Hills Country Club, Bloomfield Hills, Mich.

Oakland Hills consists of a North and South course, and has been the host course for six U.S. Opens. It was designed by Donald Ross in 1917-1918, and later reworked by Robert Trent Jones.

Strong enough to stand on its own four wheels.

You understand the difference between spending and investing. That's what sets the Toro Workman® utility vehicle apart from all others.

You not only get the versatility you expect, but generous dividends as well. Surefooted stability. Easy maneuverability. And unfailing strength to take on the toughest conditions, year after year. The Workman 4000 series' four wheel

drive gives you amazing traction and stability on just about any terrain, wet or dry. With a very tight turning radius. High torque power. Huge cargo capacity. Quick hitch systems for tools and attachments. And, of course, Toro's legendary durability.

The Toro Workman utility vehicle. Another product of our longtime partnership with grounds maintenance professionals. Making your investment a sure thing.



Workman with topdresser attachment.



Workman with sprayer attachment.



©1996 The Toro Company, 8111 Lyndale Avenue South, Bloomington, MN 55420. All rights reserved. "Toro" and "Workman" are registered trademarks of The Toro Company.

For more details, contact your local Toro distributor.

1-800-803-8676
ext. 176

Circle No. 137 on Reader Inquiry Card



The Workman utility vehicle is manufactured in Tomah, WI ISO 9002 Certified Plant.

THE LM 100

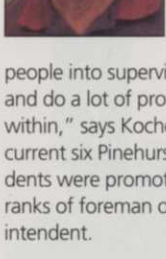


Superintendent Steve Glossinger (shown), a superintendent for 21 years, is relaxed and confident on the job. "My system is to stay organized, stay focused," says Glossinger. "Look at your priorities: tees, greens and bunkers."

Pinehurst Country Club, Pinehurst, N.C.

Donald Ross built Pinehurst's #1, #2, #3 and #4 courses, and was also the pro at Pinehurst until his death in 1948.

Brad Kocher (shown), certified superintendent and director of golf course maintenance, puts his own beginnings in the business back to when he was 12 years old and he watched his dad build a par three course in eastern Ohio.



"We try to bring the right people into supervisory positions, and do a lot of promoting from within," says Kocher. Four of the current six Pinehurst superintendents were promoted from the ranks of foreman or assistant superintendent.

Pine Valley, Pine Valley, N.J.

Pine Valley opened in 1922. Builder/designer George Crump began the project in 1918, and had it nearly completed, but died before the course was finished. The course is generally acknowledged to be among the world's finest. Rick Christian is the superintendent.

The Stanwich Club, Greenwich, Conn.

Designed in 1963 by the father & son team of William and David Gordon, the greens are some of the most undulating anywhere, says certified superintendent Scott Niven.

"You cannot get away from good technical skills," says Niven,

who emphasizes the importance of the mowing, the watering and the spraying. "You have to eat, drink and sleep it." Then, says Niven, you have to be able to communicate well, whether it be to the staff, members, the press or the public.

Sylvania Country Club, Sylvania, Ohio

Many consider virtuoso designer Willie Park, Jr. to have been the best ever. He built this private course near Toledo in 1917. Superintendent Michael Barton says the large push-up greens decline sharply in back. "I think Park thought that the guy who could putt the best would win the match," suspects Barton, now with the club for nine years. His strengths are in, "communication, and the management of the whole thing.

"They give you the tools and the money to grow grass, and most of the time you can," says Barton, who grows *Poa annua* greens and fairways of *Poa annua*, *Poa trivialis*, bentgrass and rye.

Valhalla Country Club, Louisville, Ky.

Designed by Jack Nicklaus, Valhalla was the site of the 78th PGA championship in August. Superintendent Mark Wilson's motto is "no problems, only solutions."

"Establish your goals and make habits into routines, like making your bed in the morning," he says. "Our people know the plan, and the backup plan. If something goes wrong, we find a way to fix it."

The Waconda Club, Des Moines, Iowa

Waconda features extreme changes in elevation. Fairways are narrow, and heavily-wooded with oaks and hickories.



Superintendent Steve Cook (shown) has been in the golf maintenance industry for the past 15 years, the last four at this private, 18-hole club. He also built a golf course in Paris, France, called Golf



de Joyenval.

"Work hard, pay attention to details, and have fun" is Cook's philosophy. "You can always look around and find something else that needs to be done."

The Wilds, Prior Lake, Minn.

The Wilds opened in 1995 and quickly made it to *Golf Magazine's* list of the "Top Ten Public Courses" in the U.S.

Designed by Jay Morrish and Tom Weiskopf, The Wilds fits nicely into the surrounding countryside. "There's a great variety of very playable, solid golf holes," says certified superintendent James Gardner.

Wynstone Golf Club, North Barrington, Ill.

"It gets pretty hectic," says 16-year veteran superintendent Tommy Witt

(shown). "Wynstone is a family club. We have to understand the season is short and our members want to enjoy the course as much as possible."

Witt says the best golf courses, "don't happen by accident. It's a trifold effort between a qualified staff to manage it; a governing body that's willing to fund the effort; and a membership that is proud and willing to take care of it."

GROUNDS & ATHLETIC FIELDS

Boone Community School District, Boone, Iowa

Bill Antons has been the super-

intendent of buildings and grounds here for eight years. His athletic field responsibilities include getting the stadium ready for junior and senior high school play, flag football and of course, band practice. "Get out and make sure the preventive stuff is done on time," suggests Antons, who uses a computer to keep track of field care—fertility, spraying and striping.

Broward County Schools, Broward County, Fla.

Lanny Dixon is the certified pest control operator for 200 schools and educational sites. Her responsibilities include all fence line spraying, fire ant control and sports turf management on 80 acres of fine turf, along with close interaction between the mowing and irrigation departments.

"We also maintain close to 100 clay surfaces," says Dixon, who believes she is most adept at coordinating the various work schedules, and using her computer skills to help plan and implement the program.

Carol Department of Parks, Carol, Iowa

Carol—pop. 10,000—is a "well-turfed" city, with 11 neighborhood parks and eight ball fields. Seven more fields are under construction.

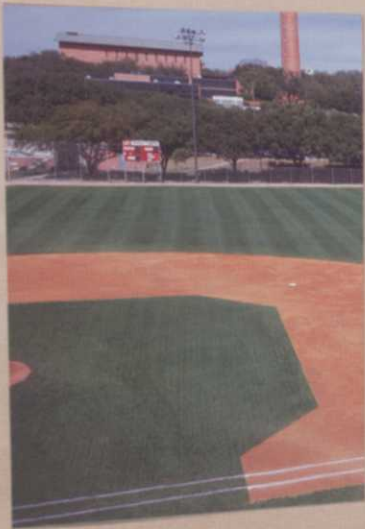
Among his many duties, Parks Superintendent Scott Parcher grows 15,000 annuals each year. He's been with the city for 16 years.

"I have to be versatile," says Parcher. "For a town this size, you need somebody with a wide range of skills."

Chicago Bears Practice Facility, Lake Forest, Ill.

Ken Mrock (shown), in his 11th season as head groundkeeper for the Chicago Bears NFL team, will open five acres of new practice fields in November, including 80,000 sq. ft. of fields heated with the Sub-Air system. The sand-based fields are seeded with seven propri-





*Everywhere
you look,
ISI makes
the scene.*



"Seed - the Gift of Life"®

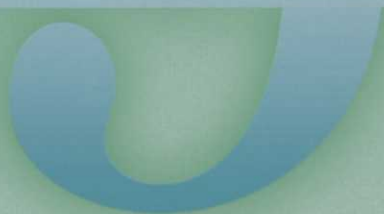
INTERNATIONAL SEEDS, INC.

Post Office Box 168 • Halsey, Oregon 97348 • (541) 369-2251 • 1-800-445-2251 • FAX (541) 369-2640 • intlseed@intlseed.com



HOUND DOG

TURF-TYPE TALL FESCUE



TALL FESCUE AT ITS FINEST

Recognized as among the very best in mean turfgrass quality ratings for turf-type tall fescue cultivars, Houndog 5 represents unparalleled achievements in turfgrass breeding technology. Its number two ranking in the mean overall quality ratings at 45 NTEP test locations throughout the United States and Canada attest to Houndog 5's results-oriented breeding.

Its diverse genetic background means Houndog 5 will deliver excellent turf density, a lush dark green color and resistance to a broad spectrum of turf diseases commonly found in warm and cool climatic regions of the U.S.

Houndog 5 natural resistance to leaf and crown feeding insects also contributes to an improved biotic and abiotic stress tolerance.

It will produce and maintain a fine leaf texture with good durable wear characteristics and low fertilization requirements.

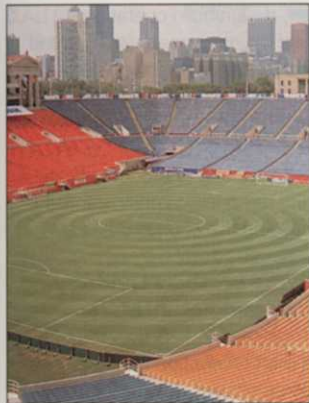
As the tests show, Houndog 5 was bred to deliver the results that will satisfy the demands of not only turf and lawn care professionals, but those of the discriminating homeowner as well.

Developed specifically for permanent turf on home lawns, sportsfields, commercial and municipal grounds in regions where tall fescue is adapted, Houndog 5 offers you the perfect solution to creating and maintaining a beautiful, healthy turf.

"Seed - the Gift of Life"®

 **INTERNATIONAL SEEDS, INC.**

Post Office Box 168 • Halsey, Oregon 97348 • (541) 369-2251 • 1-800-445-2251 • FAX (541) 369-2640 • intlseed@intlseed.com



etary Kentucky bluegrasses.

"We've had good success at our field days," Mrock notes. "We're just hard workers who share our mistakes with everyone, and pour our hearts out." (Shown is Soldier Field)

City of Claremont, Claremont, Calif.

Whether it's receiving awards for drought-tolerant or water-effi-



cient landscapes, or for its urban forestry/street tree program, Claremont, Calif. (pop. 33,000) has every right to be proud of its city landscapes.

"Our urban forestry program is on the cutting edge," claims Mark Hodnick (shown), who manages the city's parks, facilities and urban forest program. "The trees really add to the whole 'oasis' feeling Claremont has, too."

Danvers Tree & Grounds Division, Danvers, Mass.

Jack Schmidgall, supervisor of trees and grounds for the city of Danvers, Mass., oversees the maintenance of roadsides, parks and athletic facilities, with 150 acres to mow. He's developed a working long-term plan in the 13 years he's been with the city, and has a degree in turf management from the University of Massachusetts.

University of Delaware, Wilmington, Del.

Landscape engineer Tom Taylor and assistant director for grounds maintenance Sam Jones manage 400 acres of athletic fields and landscaped areas. Compost amendments are a big part of the program. Two hundred yards of leaf compost was recently used to complete "The Grove," a two-acre stand of beech trees, ground covers, walkways, nightlighting and seating areas.

Fremont Parks Department, Fremont, Neb.

Ken Walter directs about 50 full-time employees and up to 300 seasonal workers, all of whom are needed to maintain 400 acres of playgrounds and athletic fields.

This summer's projects include a new playground and softball diamond. Soon, a new greenhouse will be installed to grow up to 200,000 bedding plants, a regular practice for the past 20 years.

"I suppose my strong point is working with employees and the public," says Walter, who calls himself a 'people person.'

Howard County Bureau of Parks, Howard County, Md.

Jeff Bourne (shown) oversees care of about 6,000 acres of park sites that vary in size from 600 acres to a mere sixteenth acre.



An "open space dedication program" enables the county to acquire small pieces of land adjacent to all new developments, thereby matching the growth of park land to the rate of develop-

ment in the county.

"My strength is in listening to people, trying to make sure they know what our goals are, from turf management, to sports fields," says Bourne, who has been the director of the Bureau of Parks since 1989.

Jacksonville Sports Complex, Jacksonville, Fla.

The complex is home to the NFL expansion team Jacksonville Jaguars, and the Detroit Tigers' AA ball club. Prescription Athletic Turf is used on the baseball infield. The football stadium and three football training fields are built to USGA greens specifications, using a 90/10 mix of sand/Dakota reed sedge peat. Turf of choice is 419 bermudagrass.

"We're good at juggling it all at the same time, to make it all happen," says manager Mark Clay.

Jacobs Field, Cleveland, Ohio

It's become visible in major league baseball for its newness, its resemblance to the ball fields of old, and for the Indians' resurgence as World Series contenders.



Brandon Koehnke (shown) is manager of field

maintenance at the site. His success is based on attention to the infield, a good crew and an optimistic attitude.

Jefferson County Schools, Lakewood, Colo.

By Hanson and his assistant Dave Rulli have squeezed 70 football games each of the past two years out of 40-year-old Jefferson County Stadium. But they've done



it, and all the work is paying off. Trailblazer Stadium (soccer and football) opens Aug. 29th, and three more stadiums to accommodate the 17 local high schools are slated to be completed by the 1998 season.

"By that time, we will have a system that could be a model for all other school systems," says Hanson, manager of stadium operations.

Midway Stadium, St. Paul, Minn.

The four-year old facility is home field for the St. Paul Saints of the



Northern Baseball League; Hamlin and Bethel colleges; Minnesota youth baseball and various adult sports teams.

"There's a lot of 'grin-and-bear-it'-type situations and last-minute details," says facilities manager Connie Rudolph (shown), "and it takes an easy-going personality to deal with it."

Jack Murphy Stadium, San Diego, Calif.

As many as 125 events keep Jack Murphy Stadium hopping throughout the year. The Padres, Chargers and San Diego State Aztecs are the



major sporting events, along with motocross, "monster truck" clashes and concerts.

"You have to be able to work around all the scheduled events, and

make people want to get a job done; and when times get tough, to keep them going," says Field Manager Steve Wightman (shown). After 23 years in the business, Wightman says he "knows what the players like and don't like."

Nebraska Wesleyan University, Lincoln, Neb.

Twyla Hansen, grounds manager at Nebraska Wesleyan Univer-

THE LM 100

city since 1982, also serves as curator of the Alice Abel Arboretum in Lincoln. University grounds under her supervision include three multiple-use athletic fields. Hansen, a graduate of the University of Nebraska at Lincoln, is most accomplished in the proper placement of plants and turf.

University of Notre Dame, South Bend, Ind.

Site of many a classic football contest, the field used by the Fighting Irish of

Notre Dame is managed by Dale Getz (shown), who has been in charge for the past seven years. Getz says his strength is in managing



the human resources required to get the job done.

E.J. Nutter Training Facility, Lexington, Ky.

It's not easy to grow bermudagrass as far north as the University of Kentucky (in the heart of bluegrass country), as Bucky Trotter can tell you. But with Vamont and Quickstand, it's not only possible, it's preferable.

"The University of Kentucky football coaches and players like the bermuda because it's better on their legs," Trotter says. "It's dense so it covers up some of the rocky soil we have here in Kentucky, and we mow it at less than one inch, so the players feel real fast on it."

The bluegrass/ryegrass mix Trotter used to use wouldn't hold up during two-a-day practices, so Kentucky turf prof Dr. A.J. Powell recommended the bermuda.

City of Pompano Beach, Fla.

Grounds supervisor Tom Curran (shown) oversees work on 175 acres of turfed landscapes, including 11 large parks, grounds surrounding an amphitheatre, equestrian trails and a stadium. He's been with the city for eight years.

"I try to praise the crew when they do a good job, and I try to get their suggestions," says Curran,



Parks & Greenhouse Department, City of Sandusky, Ohio

Superintendent Tom Ott has served the city for 25 years. He's got a knack for plant propagation, and grows more than 100,000 plants per year in the Sandusky greenhouse.

Ott's management style doesn't allow him much time behind a desk. "I work with everyone in the crew," he says. "That way, you know what they need. It gives everyone a better feeling when we're working together for the same goal."

Schaumberg Parks, Schaumberg, Ill.

Dan Otto, superintendent of parks and planning, is teamed with assistant superintendent Jeff Richards and park foreman John Gerker. They and their crews handle 40 baseball infields, 13 soccer fields and 60 playground sites for the park district's 73,000 users; 103 park sites cover 26 square miles. Mowing is divided into 80-acre zones. Add ornamental care and maintenance, and you're looking at a busy week.

"The key to efficiency is management of time," says Otto. A new 79,000 sq. ft. maintenance facility has helped to tweak efficiency and organization.

Sea World of Ohio, Aurora, Ohio

In this video age, horticulturist Rob McCartney wants to "bring unique, intriguing plants to people, to evoke a reaction." The landscape around a theme park, says McCartney, "can be a feature that complements an exhibit."

Waukegan Parks District, Waukegan, Ill.

Superintendent of parks Mike Trigg (shown) handles maintenance

who seeks crew opinion on equipment purchases, and believes that once you know the job, you shouldn't have too many questions.

of all grounds and properties of the District's 38 park sites, as well as athletic field maintenance of 34 ball diamonds, 12 soccer fields and a football field.



Trigg credits the look of the fields and his smooth-running operation to the daily working of a

well-devised plan, as carried out by a dedicated team.

LANDSCAPE COMPANIES

Allen Keesen Landscape, Inc., Denver, Colo.

Keesen provides quality "exterior care" services on Colorado's Front Range. Allen and Bev Keesen started this firm in 1975 focusing on design/build and maintenance. Executive Vice President Eric Keesen says the company, which has about 120 employees, is constantly reinventing its service delivery.

Arteka Corporation, Eden Prairie, Minn.

Arteka has been providing clients with quality, award-winning landscapes for over 20 years. It installs, designs and builds, and maintains many types and sizes of projects, from medium size residential to large commercial. Arteka, with over 100 employees, will generate revenues of \$7.5 million in '96.

Bland Landscaping Co., Inc., Apex, N.C.

This company began in Tom Bland's home in 1976. Now the company has five divisions with 90-95 employees in peak season. At first, BLC focused on commercial installation but has since added commercial maintenance, floriculture, and residential services too. BLC is a multiple award winner at the state and national levels.

The Bruce Co. of Wisconsin, Inc., Middleton, Wis.

Bruce has a nursery (500 acres) and sod farm (150 acres), retail cen-

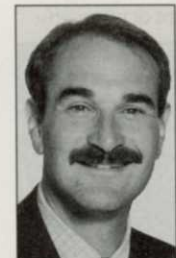
ter, design/build operation (12 L.A.s) and maintenance division. Leland Bruce started this company literally as a schoolboy in the mid-1950s, and he remains its driving force. In recent years The Bruce Co. has been earning praise for golf course and remodeling construction; it's building five courses this year.

Byrne Brothers Landscaping, Inc., Middleton, Mass.

Byrne Brothers uses state-of-the-art production methods so its 35 employees tackle a lot of big jobs, a BBL specialty. With offices in Massachusetts and Santa Rose Beach, Fla., this firm offers commercial management, design/build, irrigation, and arboriculture services.

Scott Byron & Co., Lake Bluff, Ill.

This "total care" landscaping firm offers integrated design, installation and maintenance services for 800 to 1000 residential customers. Formed by Scott Byron (shown) in 1984, the company's most visible designs are on display at the Chicago Botanic Garden in Glencoe. The company strives for "simple yet elegant" designs.

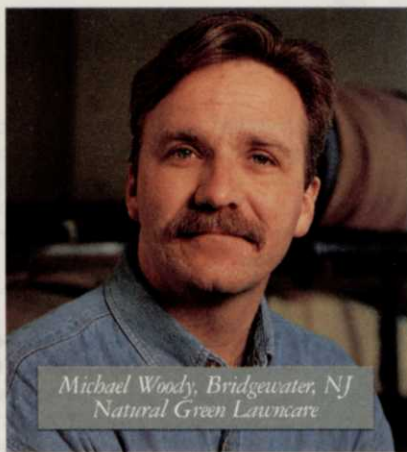


Cagwin & Dorward Landscape Contractors, Novato, Calif.

This 41-year-old contractor provides commercial maintenance, ornamental pest control, irrigation, renovation, construction, erosion control and color programs. One unique feature of this quality company is its emergency phone response. A designated emergency on-call person is available 365 days a year, 24 hours a day. The firm reported a 1995 gross dollar volume of \$11.5 million, and has 265 employees.

Chapel Valley Landscape Co., Woodbine, Md.

Landon Reeve (shown) and wife Janet started this company in 1968. That first year the 3-person company generated revenues of



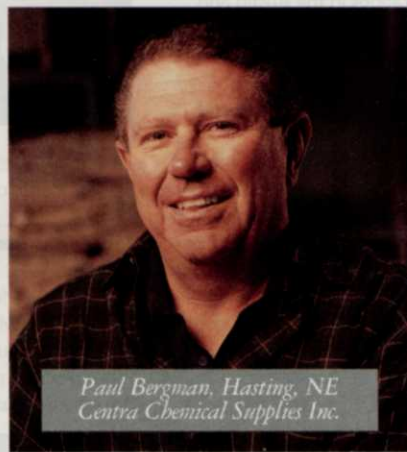
*Michael Woody, Bridgewater, NJ
Natural Green LawnCare*

"When it's my investment and my reputation, Pendimethalin is my herbicide."



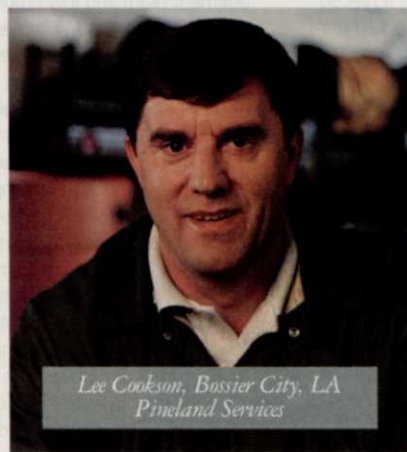
*Mike McLain, Knoxville, TN
Emerald Green LawnCare*

"After a season of using Barricade®, I appreciate Pendimethalin more than ever."



*Paul Bergman, Hasting, NE
Contra Chemical Supplies Inc.*

"We want maximum performance against a wide spectrum of weeds all season long. We use Pendimethalin."



*Lee Cookson, Bossier City, LA
Pineland Services*

"In addition to delivering outstanding performance, Pendimethalin has helped my business grow by offering cash rebates for every purchase I make."

Take it from those who know. For broad-spectrum, season-long control and cost-effectiveness, no other preemergent turf herbicide can match Pendimethalin. For more information or for the distributor nearest you, call 1-800-545-9525.

Pendimethalin

Nothing Beats Pendimethalin



Agricultural Products Division
Specialty Products Department
One Cyanamid Plaza, Wayne, NJ 07470

THE LM 100



\$85,000. Now, Chapel Valley employs 175 people with projected 1996 revenues of \$10.5 million. CVLC has offices in Maryland and Dulles, Va., and a 35-

acre tree nursery. The company's focus is design/build/manage, emphasizing a start-to-finish service.

Clarence Davids and Company, Blue Island, Ill.

This is a full-service landscape company with branches in Plainfield and Ingleside, Ill. Founded in 1951 by Clarence Davids Sr., it has 50 fulltime employees and 120 sea-

to use color and flowers in landscapes. It does everything from small residential landscapes to big jobs like a 22-acre sports complex it completed. CLC's employee safety record is enviable.

David J. Frank Landscape Contractor, Inc., Germantown, Wis.

An experienced, focused man-



agement team and low employee turnover make this Milwaukee-area contractor special. Almost 37 years after beginning, Dave Frank heads a \$10 million company with about 240 employees doing first-rate design/build, maintenance (including lawn care), interiorscape, irrigation and snow removal. Employees are active in over 30 different trade, civic and community organizations.

Environmental Industries, Inc., Calabasas, Calif.

The '96 Olympics in Atlanta featured several examples of this landscape leader's work, including the turf surface at the equestrian venue which drew unanimous praise from the demanding international horse crowd. Environmental Industries, with sales of \$267 million and 4,100 employees (over 1400 with the company more than five years), is becoming a nationwide presence.

Environmental Industries does it all in landscape and site development; everything from showcase projects for Disney to on-going landscape construction and/or maintenance in about 30 states. Burton Sperber started the firm in 1949 and heads a management team of Bruce Wilson, president of Environmental Care, Inc.; Richard Sperber, presi-

dent of Valley Crest Landscape, Inc.; and Stuart Sperber, president of Valley Crest Tree Company.

Environmental Landscape Services, Inc., Houston

Environmental celebrates its 25th anniversary this year. Charles R. Racusin (shown) started the com-



pany with \$2,000 capital; today its client list includes properties of some of America's top corporations. ELS numbers 150 full-time employees, and

has operations in the Austin and San Antonio markets, too. ELS plans continued expansion.

Ground Control Landscape, Inc., Orlando, Fla.

The company celebrates turning 18 this year with a new 6,400-sq.-ft. office building and a separate 7,200-sq.-ft. shop. Combined, GCL's Construction and Maintenance Divisions employ 140-160 and will generate revenues over \$8 million. President Mark S. Yahn's company refuses to compromise on quality.

The Groundskeeper, Tucson, Ariz.

Jack Hasbrouck, president, started this company 20 years ago. The company is now employee-owned and provides about every conceivable landscape service throughout Arizona and Nevada. It employs about 500 full-time and reports annual sales exceeding \$20 million.

L&L Landscape Services, Inc., Sunnyvale, Calif.

L&L marks its 20th anniversary this year. Co-owned by Steve



Glover and Rob Zolezzi (shown) this northern California company has been growing at an annual 15%-20% clip, and will generate about \$7 million in revenues. L&L seeks "partnerships" with clients, vendors and employees.

Laflamme Services, Inc., Bridgeport, Conn.

This company, established in 1971, provides a full range of quality landscape services throughout Connecticut and New York. "We are recommended to others by the clients we serve, and the result has been a continued rapid growth each year," says Edmond J. Laflamme, president (shown). LSI's reputation for delivering



customer-friendly service is well deserved. It employs 125.

Lied's Nursery Company Inc., Sussex, Wis.

Lied's was founded in 1945 by Delmar Lied, who at 83, remains its cornerstone. But son Tom, 62, long-time company president, has been its entrepreneurial spirit, building



the company to the \$10 million level. The next Lied in line for leadership is Tom's son. A key to this firm's success: "Understand your clients and your markets...then realize it's a moving target," says Tom Lied (shown).

Minor's Landscape Services, Inc., Fort Worth, Texas

This 20-year-old Texas firm has won awards for construction projects for American Airlines, and for its maintenance at the J.C. Penney World Headquarters, GTE North Headquarters and other north Texas landmarks. David Minor is president and CEO. He's also 1996 president of ALCA.



sonal workers. William Davids, president, says the firm sells itself "as a one-stop shopping service." A frequent award winner, Clarence Davids and Company tops \$9 million in sales this year.

Clean Cut, Inc., Austin, Texas

Clean Cut has established itself, in just 13 years, as one of the fastest-growing landscape (installations and maintenance) companies in Texas with branches in Houston, Dallas, San Antonio, Corpus Christi. Now Clean Cut is looking beyond the state. Dennis Cautel, CEO, and Rex Gore, president, have this firm in high gear.

Clearwater Landscaping Company, Inc., Sun Valley, Idaho

This company, founded in 1975 by Ed Sinnott, employs 60-80 people in peak season. CLC knows how

Northwest Landscape Industries, Tigard, Ore.

About 285 NLI employees provide commercial landscape and irrigation installation as well as ongoing maintenance to customers in the Pacific Northwest. Rich Akerman



(shown) and Jim Wathey founded this company in 1973, promising to deliver professional service and quality products. They do. NLI has earned 47

awards for maintenance and construction over the past 20 years.

Pro Care Horticultural Services, Indianapolis, Ind.

The smallest firm on our list with sales just over \$1.5 million, but a quality operation that lives up to its motto—"Expect and Accept Only the Best." Founder Mort Rolsky is still active but sons Mitch and Lowell drive this 23-year-old firm that specializes in upper-end commercial maintenance.

Redwood Landscaping, Santa Rosa, Calif.

Redwood serves a 6-county region of Northern California. Lebo Newman (shown) guides this exceptional 24-year-old company which



opened a Sacramento branch this summer. Lots of leadership here. Dave Penry, vice president, becomes president of California Landscape Contractor's Association

in 1997. Lebo and Redwood's experienced staff make good things happen both for its 100-plus employees—and for its clients.

Ruppert Landscape Company, Ashton, Md.

Ruppert provides services in five eastern states and in the District of Columbia and Georgia, too. "Ruppert's goal is to hire for life; employees must want to stay at Ruppert



and they will if they are being challenged and rewarded." With revenues in excess of \$35 million, the company continues to grow. Brothers Craig and Chris Ruppert started this company about 25 years ago.

Thornton Gardens, Maineville, Ohio

Thornton marks its 50th anniversary this year. This Cincinnati-area design/build and maintenance firm has the experience, the knowledge and the know-how to work with a developer to create a sense of community. At about \$3.5 million in revenues, there are larger companies but few in its class.

Yardmaster, Inc., Painesville, Ohio

Yardmaster has four offices in Ohio and dominates the Cleveland market. Kurt Kluznik (shown) started this firm in 1970. In 1976 Rick Col-



well became a partner. Yardmaster is well-known for its design/build capabilities with 8 landscape architects, while its maintenance division is probably the largest

in Ohio. With 175 employees it will do about \$6 million in '96.

LAWN CARE COMPANIES

Agro Lawn Systems, Inc., Northern Virginia

Agro Lawn provides high-quality chemical lawn care programs and seeding services. Tom and Jean

Spiers bought the company 1974. Since then they've concentrated on growing at a controlled, and profitable, pace. Today Agro Lawn employs about 30 people year-round, and about 45 during the season.

All Green Corp., Marietta, Ga.

All Green, with its 57 branches in 18 states purchased the 38 franchises of Nitro-Green, Fairfield, Calif. All Green's presence is now, literally, coast to coast. Ed Barant, chairman, and Paul Anderegg, president, formed All Green in 1987. Barant is the founder of TruGreen, and Anderegg its former vp of sales. Nitro-Green's Roger D. Albrecht is now the company's director of franchise development.

All-American Turf Beauty, Inc., Van Meter, Iowa

This company is the largest independent lawn care company in Iowa with three offices serving over 7,000 customers. Daryle L. Johnson (shown) and his family started the



company in April 1976, and the family has been active in turf and lawn care industry activities ever since. Johnson is a former PLCAA board member, and

he—particularly his grin—is one of the most recognizable figures in the Iowa turfgrass industry.

Atwood Lawn Care, Inc., Sterling Heights, Mich.

Tim Doppel bought this 26-year-old company, a company he had worked for, in 1984. Since then, he has freely devoted time and energy on behalf of the industry while building a company offering premium services to over 4,000 clients in the Detroit area. Doppel gives credit to a core of excellent, long-term employees.

Barefoot Inc., Worthington, Ohio

This company, founded in 1975 by Marvin Williams, a former employee of O.M. Scott & Sons Co., expects sales of about \$130 million

this season. Patrick J. Norton (shown) is President and CEO of Barefoot. He joined the firm in 1979 as director of finance, became general manager in



1981 and president in 1985. Barefoot is the second largest lawn care company in the United States and continues to grow, primarily through

acquisitions. At season's start, the company had 53 company locations and 46 franchise locations.

The Davey Tree Expert Company, Kent, Ohio

Davey was founded in 1880 by John Davey, the founder of tree surgery. In 1979 it became employee owned. About half its 5,800 peak-season employees own some of the company that provides professional tree and lawn care nationwide. "I think Davey's leadership ability comes from our technical expertise in research and technology, our employees, and our ability to please the customer," says Doug Cowan, president and CEO.

FirstService Corporation, Toronto, Canada

Four company names operate under the FirstService banner—Chemlawn (in Canada), Green Lawn Care, Sears Lawn Care, and American Green Lawn Care. Combined, they generated about \$25 million in revenue in 1995 and served 135,000 customers, mostly residential and mostly in Canada. But American Green Lawn Care is growing in New York State, and the company wants to build its South Florida business too. FirstService also offers lawn care franchises through Nutri-lawn Lawn Care.

J.C. Ehrlich Co., Reading, Pa.

In 1926 Julius C. Ehrlich started out, basically, in pest control. By the 1950s his company had added an ag division and, by the mid-1960s, vegetation management. Today about 150 full-time Ehrlich "Green Team" employees provide lawn and tree care services out of 12 of

THE LM 100

Ehrlich's 36 offices in Pennsylvania, Maryland, Delaware, New York and Virginia.

Lawn Care of Wisconsin, Inc., (dba Barefoot Grass), Madison, Wis.

Terry Kurth started his operation in 1978 with 275 accounts. Today his Madison location has about 5,000 customers and his Fox Valley location about 3,000. Kurth also has major interests in lawn care operations in central Illinois and Lexington, Ky. His philosophy for delivering service is simple but effective: "Under promise; over deliver."

The Lawn Co., Inc., South Dennis, Mass.

This company was started by Ed McGuire in 1979 as a part-time operation. That changed two seasons later when he signed up lots of customers on Cape Cod. The Lawn Company is one of the few remaining significant independents in that part of the U.S. Not too many years ago, three or four firms battled for market share there. McGuire's firm provides lawn and tree care services to about 14,000 properties in eastern Massachusetts.

Lawn Doctor, Inc., Holmdel, N.J.

Lawn Doctor signed up its first lawn care customers in 1964 when Tony Giordano and Robert Magda formed a company called Auto-Lawn. In 1967 they changed the name to Lawn Doctor, and it grew to become the largest lawn care franchiser in the nation, starting on the East Coast and spreading west. Lawn Doctor franchise holders now operate out of 320 locations in 33 states. Is it still growing? And how, says Ed Reid, national director of sales.

Lawn Masters, Hawthorne, N.Y.

Lawn Masters provides services to nine counties in the lower New York, Hudson Valley. William Carey joined the 27-year-old company in 1974 and assumed sole ownership in 1980. He opened a second branch in 1986 and in 1987, following a sizable acquisition, a third. With the upswing in the Northeast's



economy in recent years, Lawn Masters is on a growth track again and exceeds \$2 million in sales in 1996.

Carey (shown top left) is president; Cyndy Carey and Joseph Potrikus serve as vice presidents.

Lawn Ranger Inc., Spotswood, N.J.

Lawn Ranger is in its 17th year of business. It was founded by Norman Berman and Joel Levy who remain, respectively, president and secretary/treasurer. Lawn Ranger has 35 employees, many with 8-10 years experience. That's a big reason why the company's service is high quality, and its cancellation rate is low.

LawnLife Corporation, Salt Lake City, Utah

This company, founded 1977, is owned by the company's first two employees. One of this company's strengths is the ongoing training each of its 51 employees receives. LawnLife provides lawn care to 11,000 customers along the



Wasatch Front in Utah, and also offers landscape maintenance services, including snow removal. How's this for a great company motto?—"LawnLife knows Utah from the ground up."

Leisure Lawn, Dayton, Ohio

Leisure Lawn is a lawn care in-

dustry pioneer with company-owned operations in Ohio's major markets, and others in Chicago, Detroit, Indianapolis, St. Louis, Atlanta, and DC/Northern Virginia (and an allied company in Fort Wayne, Ind.), Leisure Lawn will generate revenues of about \$20 million this season.

NaturaLawn of America, Frederick, Md.

NaturaLawn, founded in 1987, continues to add franchise operations. Last year it grew by 25 percent, with similar growth expected in 1997, says company spokesman Randy Loeb. New franchises are being readied in Colorado, California, Texas, Virginia and Maryland, he says, which will give the company—which has four company locations—a presence in 20 states. He attributes the company's growth to its stated goal of being an alternative to traditional, chemical lawn care, and to its competitive pricing.

One Step Tree and Lawncare, North Chili, N.Y.

Robert E. Ottley's company, provides premium service to nearly 4,000 customers in the Rochester, N.Y., market. Ottley (shown) started



the company in 1976 and, through his willingness to work on behalf of lawn care issues, helped define professional lawn care in New York State.

Perma-Green Lawn Co., Boise, Idaho

Perma-Green has seven locations in Idaho, Utah, Nevada and Washington. Founded in 1977 by Jim and Karen Marria, it's now owned and operated by their son



Craig and Mike Spicer (shown) who serves as its president. With 115 employees, Perma-Green offers lawn care, tree care, landscape services, shrub

bed weed control and vegetation management.

Prograss, Inc., Wilsonville, Ore.

Prograss, now 18 years old, has added services such as tree care, mowing/maintenance and construction, but remains one of the top lawn care firms in the Pacific Northwest. With offices in Portland and Eugene, Ore., and in Seattle and Concord, Calif. (near Oakland), Prograss has over 10,000 lawn care customers.

Robertson Lawn Care, Springfield, Ill.

Jack Robertson (shown) can point to 20 straight years of uninterrupted growth. Robertson bought



this company just after graduating from Western Illinois University, and he and his small staff have been delighting Springfield-area customers with service ever

since. Few firms know how to "talk" to their customers like Robertson Lawn Care.

Senske Lawn & Tree Care, Kennewick, Wash.

Senske keeps growing after 50 years. This Spokane-area company chalked up sales of over \$5 million in 1995. Just over half came from lawn/tree care and weed control, and about 18 percent from services like mowing, pruning, and irrigation repair. More than 115 employees work out of three Senske branches.

Southern Lawns, Inc., Montgomery, Ala.

Southern serves about 7,000 customers from two offices in Alabama and one in Columbus, Ga. Southern Lawns began in 1978, says General Manager James Bartley, the company's first employee 18 years ago. Few companies tackle lawns with as many different grasses—St. Augustine, zoysia, bermuda and centipedegrass—as Southern Lawns.

**Spring-Green Corp.,
Plainfield, Ill.**

Spring-Green was started in 1977 by Rick Gretz and the late Bill Fischer, the 1985 PLCAA president.



They helped develop franchises in the Chicago area. Today there are about 100 Spring-Green locations, most in the Midwest but some in the East and in the

Pacific Northwest, too, says Tom Hofer (shown), a former franchise owner himself. He's been a part of the corporation since 1980.

**TruGreen-ChemLawn,
Memphis, Tenn.**

This is the world lawn care sales leader. In 1995 it reported serving 2.5 million customers and generating revenue of \$578 million through its 260 locations. Last year



David Slott took over as president and COO, replacing Don Karnes (shown), who became group president for Lawn Care and Pest Control Services in Consumer Ser-

vices of The ServiceMaster Company, Downers Grove, Ill. ServiceMaster acquired TruGreen from Waste Management in 1990 and a few years later bought ChemLawn from EcoLab, and successfully merged the two.

**The Weed Man,
Mississauga, Ontario**

The U.S. market looks appetizing to this long-time Canadian lawn care leader. A group of investors opened a Weed Man operation in Albany, Ore., with other U.S. markets being prepared. Des Rice started Weed Man in Canada in 1970 and began franchising in 1977. At last count there were 128 dealers throughout Canada. Weed Man sales should be about \$50 million this year. **LM**

Changing the Course.

ZENECA
Professional Products

LOOK FOR low seed availability through spring

by JERRY ROCHE / Editor-in-Chief

It will not be easy to find the exact seed you might want this fall, if reports from the turfseed industry are accurate.

"For a variety of reasons, the industry is no longer in a seed surplus situation on any specie of turfgrass," notes Art Wick of Lesco. "Added to the low inventories and low production acreage is the high price of alternative crops like wheat, which competes with turfgrass seed producers for new production acres.

"Added to this are the costs of eliminating open field burning, reduced availability of some pesticides critical to the clean production of grass seed, and unusual weather conditions in the Pacific Northwest."

With a late harvest, Wick expects a bot-

tleneck at the cleaning plants. "Expect potential delays," he further notes, "with some varieties."

Kentucky bluegrass yields are good—the best in 10 years, according to Turf Merchants' Steve Tubbs—and supply is good, but the crop burning restrictions affect the market deeply.

John Zajac at Zajac Performance Seeds says that common bluegrass fields are especially good. "Proprietaries are pretty much as expected," he notes.

Tubbs reports a good perennial ryegrass crop. "But demand [for perennial rye] is very strong, and there is no carryover," he says. Pickseed West's Dr. Jerry Pepin agrees: "There is a huge demand for the product, so you can expect significant price increases."

Tom Peters at Barenbrug USA believes "perennial rye should completely sell out."

In the tall fescue market, a short crop of Ky-31 and insufficient acres have "driven prices to a sold-out, high-priced situation," Tubbs notes. "1997 should end this shortage," adds Pepin.

Fine fescue acres have been dramatically reduced over the past three years due to the influx of Canadian creeper, which is significantly less expensive than American varieties.

Pepin says that there will exist a "good availability" of bentgrass varieties, even though "late heat stress reduced the yields somewhat."

Here is a complete rundown of the marketers' most requested cultivars:

KEY (AVAILABILITY):

A=expected surplus; B=adequate supply; C=limited supply.

KEY (PRICE):

H=higher prices than last season; S=stable prices, generally the same as last season; L=lower prices than last season.

CULTIVAR	MARKETER	AVAILABILITY	PRICE
<i>Kentucky Bluegrass</i>			
Adelphi	Advanta	B	S
Alpine	Pickseed West	B	S
America	Pickseed West	B	S
Aspen	Medalist America	B	S
Award	Jacklin	C	—
Barcelona	Barenbrug USA	B	S
Baronie	Barenbrug USA	B	S
Bartitia	Barenbrug USA	B	S
Caliber	Peterson	C	new
Cannon	Advanta	C	S
Canterbury	Cascade International	C	H
Challenger	Turf-Seed	B	S
Chateau	Fine Lawn Research	B	L
Classic	Peterson	B	S
Cynthia	Advanta	C	H

CULTIVAR	MARKETER	AVAILABILITY	PRICE
Dawn	Lesco	B	S
Dellwood	Zajac Performance	C	S
Dragon	Zajac Performance	C	S
Eclipse	Peterson	B	S
Fortuna	International Seeds	B	S
Gnome	Turf Merchants	A	L
Haga	Burlingham	B	S
Jefferson	Cascade International	C	H
Kelly	Medalist America	B	S
Liberty	Zajac Performance	B	L
Limousine	Roberts	B	H
Marquis	Roberts	B	H
Midnight	Turf-Seed	B	S
Nublu	Medalist America	B	S
NuGlade	Jacklin	C	—
Opal	Burlingham	C	S
Rugby	Roberts/Turf Merchants	C	H
Shamrock	Lesco	A	S
Sodnet	Turf Merchants	C	H
SR 2000	Seed Research	C	S
SR 2100	Seed Research	B	S
SR 2109	Seed Research	C	S
Total Eclipse	Jacklin	C	—

CULTIVAR	MARKETER	AVAILABILITY	PRICE
Touchdown	Pickseed West	B	S
Unique	Turf-Seed	B	S
Washington	Cascade /Burlingham	B	H/S
Wildwood	Lesco	A	S

Perennial Ryegrass

Accent	Medalist America	B	H
Advantage	Lesco	A	S
Advent	Jacklin	C	H
All*Star	Advanta	C	H
APM	Jacklin/Medalist America	C/B	H
Assure	Lesco	A	S
Brightstar	Turf-Seed	C	H
Calypso II	Roberts	B	H
Champion G.Q. blend	Seed Research	B	H
Chatham	Cascade International	C	H
Cutter	Pickseed West	B	H
Derby Supreme	International Seeds	C	H
Dimension	Advanta	C	H
Envy	Zajac Performance	C	H
Excel	Burlingham	B	H
Fiesta II	Pickseed West	B	H
Finelawn 240	Fine Lawn Research	C	H
Futura blends	Pickseed West	B	H
Gettysburg	Cascade International	B	H
Greenland	Barenbrug USA	B	H
Legacy	Lesco	A	S
Navajo	Turf-Seed	C	H
Omega 3	Zajac Performance	C	H
Pennant II	Burlingham	C	H
Pinnacle	Barenbrug USA	B	H
Precision	Advanta	C	H
Premier II	Barenbrug USA	C	H
Prizm	Zajac Performance	C	H
Quickstart	Turf-Seed	C	H
R-2	International Seeds	C	H
Riviera II	Roberts	C	H
Sherwood	Cascade International	C	H
SR 4010	Seed Research	B	H
SR 4200	Seed Research	B	H
Stallion Select	Fine Lawn Research	B	H
Stallion Supreme	Fine Lawn Research	C	H
Target	Medalist America	B	H
Tophat	International Seeds	C	H
Wizard	Burlingham	B	H

Turf-Type Tall Fescue

Amigo	Medalist America	C	H
Apache II	Turf-Seed	C	H
Arid	Jacklin	C	H
Barlexas	Barenbrug USA	C	H
Benton	Cascade International	C	H
Bravo	Lesco	B/C	S
Coyote	Zajac Performance	C	H
Crossfire II	Pickseed West	B	S

CULTIVAR	MARKETER	AVAILABILITY	PRICE
Duke	Cascade International	C	H
Era	International Seeds	C	H
Falcon II	Burlingham	B	H
Finelawn Petite	Fine Lawn Research	B	H
Finelawn 88	Fine Lawn Research	C	H
Finelawn 5GL	Fine Lawn Research	C	H
Gazelle	Zajac Performance	C	H
Guardian	Roberts	B	H
Jaguar 3	Zajac Performance	C	H
Hounddog 5	International Seeds	C	H
Lancer	Lesco	A	S
Leprechaun	Roberts	C	H
Montauk	Cascade International	C	H
Mustang II	Pickseed West	C	S
Phoenix	Barenbrug USA	C	H
Pixie	Jacklin/Medalist America	C	H
Regiment	Advanta	C	S
Renegade	Burlingham	C	H
Safari	Turf-Seed	C	H
Shortstop II	Pickseed West	C	S
Southern Choice	Burlingham	C	H
SR 8200	Seed Research	B	H
SR 8210	Seed Research	B	H
SR 8300	Seed Research	B	H
Tomahawk	Turf-Seed	C	H
Trailblazer II	Lesco	A	S
Tulsa	Advanta	C	S
Vegas	Barenbrug USA	C	H
Wrangler II	Medalist America	C	H

Fine Fescues

Aruba creeping red	Medalist America	B	S
Aurora	Turf-Seed	B	A
Bardure hard	Barenbrug USA	B	H
Bargena creeping red	Barenbrug USA	B	S
Bridgeport chewings	Barenbrug USA	B	S
Brittany chewings	Lesco	B	S
Camaro chewings	Fine Lawn Research	C	H
Cindy creeping red	International Seeds	B	H
Dawson	Advanta	B	H
Defiance hard	Lesco	C	S
Dover chewings	Medalist America	B	S
Eureka hard	Fine Lawn/Int'l. Seed	C	H/S
Flyer creeping red	Fine Lawn Research	C	H
Jasper creeping red	Pickseed West	B	H
K-2 chewings	Burlingham	C	H
Koket chewings	Burlingham	C	H
MX-86 sheeps	Jacklin	C	H
Longfellow chewings	International Seeds	C	H
Nordic hard	Zajac Performance	B	H
Raymond	Advanta	B	H
Rescue hard	Jacklin/Med. Am.	C	H
Salem creeping red	Cascade International	C	H
Scaldis	Advanta	B	H
Shade Mark	Lesco	B	S

CULTIVAR	MARKETER	AVAILABILITY	PRICE
creeping red			
Shademaster	Turf-Seed	C	H
Shadow	Turf-Seed	C	H
Southport chewings	Cascade International	B	H
Spartan hard	Pickseed West	C	H
SR 3100 hard	Seed Research	B	H
SR 3200 blue	Seed Research	B	H
SR 5100 chewings	Seed Research	B	H
Treasure chewings	Zajac Performance	C	H
Victory chewings	Pickseed West	C	H
Vista creeping red	Zajac Performance	B	H
Warwick hard	Cascade International	C	H
Bentgrass			
Bardot	Barenbrug USA	B	S
Cato	Pickseed West	B	L
C/C blend	Pickseed West	B	S
Cobra	International Seeds	B	S
Golf Star	Jacklin	C	S
18th Green	Zajac Performance	B	S
Lopez	Fine Lawn Research	B	S
Mariner	Pickseed West	C	S
Penn G-2	Lesco	A	S
Penncross	Tee-2-Green	B	S
Penneagle	Tee-2-Green	B	S
Pennlinks	Tee-2-Green	B	S
Princeville	Lesco	A	S
Providence	Seed Research	B	S
Putter	Jacklin/Medalist America	B	S
Regent	Barenbrug USA	B	S
SR 1020	Seed Research	B	S
SR 7100	Seed Research	B	S
Syn 92-1	Burlingham	*	*
Syn 92-5	Burlingham	*	*

CULTIVAR	MARKETER	AVAILABILITY	PRICE
Tracenta	Advanta	A	L
Trust dryland	Cascade International	C	**
Viper	International Seeds	B	S
Other Seeded Cultivars			
Baby Bloomers (wildflowers)	Turf-Seed	B	S
Barkeel prairie junegrass	Barenbrug USA	C	H
Bloomers (wildflowers)	Turf-Seed	B	S
Cheyenne bermuda	Seeds West	C	S
Cody buffalograss	Native Turf Group	B	L
Jackpot	Jacklin	C	S
Primavera bermuda	Seeds West/Seed Res.	C/B	S
Pyramid bermuda	International Seeds	C	S
Sabre II Poa trivialis	International Seeds	C	S
Sahara bermuda	Seeds West	C	S
Sonesta bermuda	Seeds West	C	S
Sultan bermuda	Seeds West	C	S
Sundevil bermuda	Jacklin	C	S
Sundevil II bermuda	Medalist America	C	H
Sunrise zoysia	Jacklin/Med.Am.	C	S/H
Sunstar bermuda	Lesco	B	S
Supina bluegrass	Fine Lawn Research	B	S
Tatanka buffalograss	Native Turf Group	C	L
Traveler zoysia	Seed Research	B	S
Yuma bermuda	Seeds West	C	S
Zen 300 zoysia	Fine Lawn Research	C	S
Zen 400 zoysia	Fine Lawn Research	C	S
*Available for turf trials and observation from Burlingham until their commercial release.			
**Free samples are being offered for overseeding on a limited basis by Cascade International.			

Turf for low maintenance: prof's calculations say so

"Contrary to what many people think, getting rid of mowed grass and replacing it with groundcovers, mulches and wildflowers will not reduce landscape maintenance," reports Dr. Don Williams of the University of Tennessee, Knoxville. "My extensive studies document that mowed grass does not deserve its 'high maintenance' label and, in fact, other forms of groundcover will almost always require more maintenance than lawns."

To calculate actual time and cost comparisons, Dr. Williams conducted a number of site-specific experiments, including one in which he timed students as they hand-weeded a 6,600 sq. ft. English ivy bed. His

results showed that one weeding required more time than it would take to mow the same area 20 times a year for 60 years.

Using his "maintenance time per unit hour" calculation method, Dr. Williams reports that at the low end of the productivity scale, one 19-inch push mower will cut 7 sq. ft. of turf per second while a 60-inch commercial mower would cover 30 sq. ft./second and highway rights-of-way mowers move at 70 sq. ft./sec.

Thus, a one-acre park could be cut in less than half an hour with a 60-inch mower while 100 acres of roadside would take 17.28 hours to mow with a large, tractor-powered unit. Even if mowers only work at

half efficiency, they mow 1 sq. ft./sec. over the course of a year.

"What other type of landscape maintenance can be done at one second per square foot per year?" he asks.

Williams also determined that using geotextiles and mulch would cost more than \$11,500 an acre for materials and labor. However, investing that \$11,500 in the bank at 6 percent interest would yield \$690 per year—more than enough to pay for 18 contracted mowings a year at \$38 per mowing.

"When it comes to low maintenance, lawns are hard to beat," the Tennessee turf prof concludes. □

OCTOBER IS
HUSQVARNA CHAIN
SAW SAFETY
AWARENESS MONTH


MEN IN TREES

WEAR SAFETY GEAR ON THE JOB, AS DO
CONSTRUCTION WORKERS AND LUMBERJACKS
AND LANDSCAPE CREWS AND
ANYONE ELSE WHO WANTS
PROTECTION FROM
HAZARDS.



Protect yourself with Husky's complete line of safety gear. Our chain-saw-resistant pants and chaps are UL classified and comply with OSHA logging regulations. We also feature ANSI-approved protective helmet systems and steel-toed, Kevlar-lined boots that comply with OSHA logging regulations; ANSI-approved, UV-protective glasses; leather gloves and much more. Call 1-800-HUSKY62 for the retailer nearest you. And take care of the most valuable piece of equipment of all: you.



 **Husqvarna**

Kevlar is a trademark of E.I. DuPont de Nemours and Company.

Considerations in pesticide selection

You must understand your pest problems, observe the environmental concerns where they're being used, and know the pesticide's characteristics to make the right choice.

by RICK L. BRANDENBURG, Ph.D. / North Carolina St. Univ.

Many types of equipment are available for sub-surface application of insecticides in turf-grass. This unit places liquid formulations below the soil surface using low-pressure sprays into small slits created by the Coulter wheels.

Pesticide selection can be frustrating. But it is nonetheless a very important process:

1) Pesticides are an essential tool for maintaining quality turf. In some parts of the country, pesticides are also a sizable portion of the overall maintenance budget.

2) Our society is concerned with potential environmental hazards from pesticide use.

Several criteria are important in making the right pesticide choice. Examples contained herein will be associated with insecticides, but many of the same rules hold true for weed and disease control products.

Cost and effectiveness

How quickly a product works and how long it lasts can often be two different, separate functions.

Effectiveness is often associated with how quickly a pesticide will kill the pest, but in the case of a persistent or recurring pest, residual action may be critical. For example, Dylox (trichlorfon) works quite quickly for controlling white grubs, but pro-

vides little residual control. For some pests, such as mole crickets, residual activity may be as important as initial control because mole cricket egg hatch and nymph emergence takes an extended period of time.

Cost is always important, but must be figured in light of residual activity. A less expensive product—that has short residual activity, but will have to be re-applied more times than a more expensive, longer-lived product—may not end up being less expensive.

Many factors enter into cost: overall effectiveness, need to re-treat, application equipment, labor, the time of year to apply, and the actual cost per 1000 sq. ft. or acre.

Formulations

Some formulations may be more expensive than others. But the real cost of a product becomes more obvious once you factor in other considerations. Are they easier or quicker to apply, are they more effective or safer, or more effective against a particular pest? Which one can you put out most easily, accurately and effectively?

As a general rule, granular formulations are not “activated” until irrigation or rainfall occurs, which is necessary to move the active ingredient into the soil. Sub-surface application equipment is becoming more popular and available, and various forms are available for both liquid and granular formulations of insecticides (see photo).

Selectivity

Most conventional insecticides have a relatively broad spectrum—that is, they kill most (if not all) of the insects, bad and good alike, found in the turf. A few insecticides—particularly the biological materials such as entomogenous nematodes, fungi and bacteria—are more selective.

Some turf managers prefer a label that covers a broad spectrum of pests. However, a single application will not necessarily get all 20 different insects listed on a label. Some insects may require a higher rate. All the insects that appear on a label are rarely active simultaneously, even at low levels. And often the application technique varies with the pest. (For example, a treatment for white grubs would need to be watered in immediately, while the same application for armyworms would need to dry on the foliage.)



INSECTICIDE PESTICIDE LEACHING POTENTIAL (PLP) RATINGS

Common name	Trade name	Rate	PLP Index	PLP Rating
acephate	Orthene	3.00	60	moderate
bendiocarb	Turcam	4.10	40	low
carbaryl	Sevimol	2.10	37	low
chlorpyrifos	Dursban	1.00	21	very low
cyfluthrin	Tempo	0.09	1	very low
diazinon	Diazinon	4.30	43	low
ethoprop	Mocap	4.90	57	moderate
fonofos	Crusade	3.90	42	low
isazofos	Triumph	2.00	50	low
isofenphos	Oftanol	1.90	46	low
methomyl	Lannate	1.90	51	moderate
propoxur	Baygon	8.10	71	moderate
trichlorfon	Proxol	8.16	67	moderate

NOTES

Rate in pounds of active ingredient per acre

PLP Index = (T1/2) x (application rate) x (fraction of pesticide reaching turf [0.5 for turf])/Koc

PLP Rating based on PLP value: very low<30, low=31-50, moderate=51-75, high=76-100

PLP Rating adopted from "Water Quality and Golf Course Superintendents," 1995. North Carolina Cooperative Extension Service Pub. No. WQWM-154.

Toxicity

Toxicity to people, pets, fish and birds is a prime consideration when selecting a pesticide. This label information should be considered prior to any pesticide use. It has direct effects on worker protection practices and may certainly influence where you can use it. Different formulations of the same product can also differ in their actual toxicity or hazard, even though the toxicity of the active ingredient is the same.

Several new synthetic pyrethroids have recently obtained labels for turf. Products like cyfluthrin (Tempo, Decathlon), lambda-cyhalothrin (Scimitar), bifenthrin (Talstar) and fluralinate (Mavrik) have longer-lasting residual activity than the old pyrethroids. These products have low use rates (often between 0.05 and 0.20 lbs. of active ingredient per acre), quick knockdown and kill, and relatively low mammalian toxicity (that includes humans!). However, they are very toxic to fish, so use near water must be avoided.

Toxicity must also be considered in the context of hazard. Something may be quite toxic, but is not really a hazard because of the way it is formulated or because it is used at a low rate.

Solubility

Concerns over groundwater contamination and run-off make product solubility a concern for many turf managers. However, the likelihood of a pesticide moving in the soil is influenced by factors besides solubility, like soil type and texture, annual and seasonal rainfall, thatch and slope. Numerous formulations have been devised to help determine pesticide leaching. These formulas can then be used to rank pesticides

(see above).

Persistence

The persistence of a pesticide can be both good and bad. When a pest is present for a long time, then persistence is good. When a product persists longer than is needed and has a potential for negative environmental consequences, then it's bad.

When selecting a pesticide, choose one with the residual activity and use the rate necessary to get the job done. There are no benefits, either economically or environmentally, to over kill.

Other factors

Rotation is always a concern, because there is the potential for a pest to develop resistance to a particular pesticide. Moreover, in the case of certain soil insecticides, there may be concerns over enhanced pesticide degradation from using the same product year after year.

Chinch bugs have developed resistance to some pesticides, and a phenomenon called enhanced degradation has occurred to isofenphos (Oftanol). Although we are still unclear about the benefits of pesticide rotation in some situations, it makes good

sense to occasionally rotate products if you are using high rates or treating for a pest that has the potential to develop resistance.

Biological/biorational pesticides are now more effective and cost-efficient than ever. They are, however, a little less forgiving than conventional pesticides. Appropriate timing, application techniques, environmental conditions and pest life stage are all very critical, since some biological or biological materials have narrower ranges for optimal activity. Before selecting such a product, be sure you understand what it takes to make it work.

Alkaline hydrolysis occurs when alkaline water causes a pesticide to break down more rapidly than it might under more neutral or acidic conditions. This may result in poor performance or limited residual activity. If you use alkaline water to mix and spray pesticides, consider using a buffer or acidifier. In the case of alkaline irrigation water, which will cause the same effects, buffering is not practical. However, you can select a pesticide that is not susceptible to alkaline hydrolysis. **LM**

CHIPPERS / SHREDDERS

...for the golf/landscape market can help you save the money you normally spend on disposing debris.

by JERRY ROCHE / Editor-in-Chief



Bandit

Not too many years ago, the "Don't Bag It" program started in Texas and expanded from coast to coast. Though the original program was meant to address turfgrass clippings, there is some wisdom in extending the concept to other landscape debris like tree prunings, broken branches, twigs and brush.

And the best way to "not bag" organic landscape debris is to chip or shred it up and return it to the landscape in the form of mulch.

Chippers/shredders, detailed elsewhere on these pages, are the perfect means for converting organic landscape debris into various types

and consistencies of mulch. They are true "garbage disposals" for the yard.

Not only does such a plan save you the money it would normally cost to cart the detritus to an approved dump site, but you can also make money on the other end (if you are a contractor) by charging clients for the mulching service.

Before purchasing a chipper/shredder, here are some factors you might want to consider:

- ▶ Make sure that you're buying a commercial-grade machine. Many homeowner-grade chippers and shredders are available through local retailers and dealers, but they are not built sturdily enough to stand up to the longer, harder hours you will be using it. The money you invest in a commercial unit at the front end will save you at the back end in machine life and downtime.

- ▶ Know the difference between a chipper and shredder. Chippers are required for woody branches; shredders are better for brush, leaves, twigs and stalks.

- ▶ Answer these three questions in your mind before visiting your local dealership: "How am I going to use it?," "How big are the yards I'm going to use it on?" and "Will I be chipping large pruned branches?"

That said, here are some special features to consider before buying:

- Know whether you want fixed hammers or flail knives; each has its advantage.
- Do not buy too big or too small a model. Engine size begins at about 4 hp and goes all the way up to 100+ hp. Select the right size for your operation.



Little Wonder



Troy-Bilt



S&R Prochip

The best overcoat you'll buy this winter

Protect your valuable plants with the best winter overcoat you can buy – Transfilm Antitranspirant.

- ❄ Overcoat trees and ornamentals to protect from winter dessication.
- ❄ Overcoat fall transplanted trees and shrubs for sure success.
- ❄ Overcoat fungicide applications on greens, tees and other highly managed turf sites.

"For some 15 years we have used Transfilm for winter protection of new evergreen transplants and specimen stock in vulnerable sites. Road salt and salt vapors coming from ice melt plus exposure to drying winter winds can create dissatisfied customers and problems for us. Transfilm reduces these risks. We view it as winter insurance."

Eric Moore, President
Moore Landscape
Glennview, IL

"During the construction of this course in 1989-90, our owner bought a nearby tree farm, a spade truck and enough Transfilm for 2,700 Scotch pines 6 to 15 feet tall. Also, over 700 deciduous trees were planted. We were told to expect losses of around 300 trees, but thanks in part to Transfilm, our replacements totaled less than a hundred."

Frank Moran, GCS
Beaver Run Golf Course
Grimes, IA



TRANSFILM[®]
antitranspirant

ALWAYS READ AND
FOLLOW LABEL DIRECTION.

G **pbi / GORDON**
CORPORATION

An Employee-Owned Company

> LM REPORTS

- Many available units come with blowers and/or vacuums. Such a machine could give you extra versatility that you might need in your jobs.

- Consider safety features: make sure that your choice comes with a power feed safety clutch release if you need it, or perhaps a folding safety door on the chipper chute.

Speaking of safety, always make sure proper training is available, either from the dealer or from the manufacturer. Then train your employees in the proper use of chipper/shredders (which can be very dangerous because of the rapidly-revolving hammers or knives), and make sure they are wearing the proper clothing and safety gear when operating the machines.

CHIPPERS AND SHREDDERS FOR THE GREEN INDUSTRY

ALAMO Circle No. 261 (210) 372-9531

FM Series consists of three models: FML for light to medium duty, FMM for medium duty, FMH for heavy duty. All can fell a tree up to 15 inches in diameter and mulch the limbs and trunk so all that remains is a fine 3/4-inch mulch. FML 100H can be mounted on Alamo Machete boom and used to turn compost piles or eliminate stacks of construction material waste.

BANDIT Circle No. 262 (800) 952-0178

Model 280XP has 18-inch diameter capacity. Large chipper opening (18x20 1/2 inches). Powerful hydraulic feed system, 55-inch diameter chipper disc. Gas and diesel power options to 120 hp. Heavy duty diesel engines up to 200 hp. with heavier



Alamo chipper components. Single or dual axles.

BCS AMERICA Circle No. 263 (800) 227-8791

Bio 100 model has 8 hp Briggs & Stratton engine. Accepts up to 1-inch brush leaves, small branches, other debris. Chips limbs up to 3 inches. Other features: wheelbarrow-type handles, variable screen sizes, durable construction.

BUSH HOG Circle No. 264 (205) 872-6261

Three models that will chip light brush to 5 inches and shred material up to 1 1/2 inch: CS-100P PTO (for category I, 3-pt. hitch 540 rpm tractors, 18-35 hp), CS-130T (highway towable model with 13 hp Honda engine) and the CS-180T (highway towable model with 18 hp Honda

cont. on page 63

ALL KINDS OF APPETITES. ALL DAY LONG.

PRO CHIP SERIES

Variable speed

Closely coupled feed system

Curbside feed system controls

Auto feed system reduces engine stress

Big job or little job, Gravely chippers are built with outstanding quality and durability. Perfect for the rental market, landscape contractor or professional arborist, they're designed to satisfy your needs.

See your nearest Gravely dealer today or write or call:
Gravely International, 150 South Stratford Rd., Suite 530, Winston-Salem, NC 27104
910-777-1122 • Telefax: 910-777-1594 © Gravely Intl., 1995.

Success Rides on a Gravely.

Circle No. 113 on Reader Inquiry Card

In the early days of golf course design, the going rate for an 18-hole layout was \$25. The designers would plot out the course with stakes, leave instructions for the greenkeeper on how to build and care for the finished product, and move on.

That's just one of the many interesting bits of information I learned while researching my segment of the "LM 100" (see page 12).

Toward the end of all the phoning, I was writing notes on envelopes, desk calendars, whatever was handy. The phone would ring, and all other available scraps were filled with barely legible notes from conversations with superintendents and athletic field managers.

And I wasn't going to keep a Joe Hahn or a Mike Trigg waiting as I searched for a new notebook, especially not after protracted sessions of telephone tag.

This was the kind of project that helped me see how little time is available for anything

other than the job. The more messages I left, and the more phone calls that were returned—during brief stops at the maintenance shop, inside of hectic schedules, or with a tournament under way—underscored the large work-load and duties that rest on the shoulders of the modern day turf manager.

To help in my search for some of the most visible golf courses, I referred to *The Golf Course*, by Geoffrey S. Cornish and Ronald E. Whitten. It's a nifty reference book, and it helped me realize the rich history of golf course design (it's also where I got that \$25 figure), and the accomplishments by people such as Donald Ross and Willie Park, Jr. These men churned out hundreds of designs, at a time when equipment technology was still in the Model-T stage!

Telephone tag: expect it with supers and groundsmen



Terry McIVER

TERRY McIVER
Managing Editor

GOLF/GROUNDS

PAGE 1G ▶

Football prep: know your field

PAGE 6G ▶

Ingenuity keeps Pinehurst going

PAGE 10G ▶

Green Team teens hard at work

PAGE 11G ▶

Building a field for St. Louis Rams

Fast forward to present day, and I see how the modern day superintendent must keep the turf healthy and green without compromising the original design.

Athletic field managers also nurture turf that is in constant use, for a variety of not-so-turf-friendly sports: football, soccer, moto-cross, tractor pulls and concerts.

Most with whom I spoke, from both industry segments, feel it's essential to be organized, with a positive attitude. You also have to get along with people.

A solid knowledge of turf science is helpful, too, and is what most interests people like Scott Niven at the Stanwich Club. Steve Glossinger of Oakland Hills would agree. He keeps his eye on the basics: greens, tees and fairways.

The work can be tough, the days long and the schedules hectic, but the rewards of lush, green turf, a job well done, and a dedicated crew are all worth the effort. **LM**

Comments? Write Terry at 7500 Old Oak, Cleveland, OH 44136; **phone him at** (216) 891-2709, **fax him at** (216) 891-2675 or **e-mail him at** 75553.502@compuserve.com.



ALL FORE[®] ONE...

The team approach is a proven way to attain success. All for one, and one for all. And to build the best team, you need a star; a single player from which to build a strong foundation. Fore[®] fungicide takes the offensive in a number of ways when it comes to controlling tough turf diseases.

First, Fore handles tough diseases like brown patch, pythium and slime mold, while offering the same level

of control as Daconil[®] and Chipco[®] 26019. In fact, Fore controls every major disease—fourteen in all—and has never shown a record of disease resistance. Those stats are hard to beat.

Next, Fore is a great team player. Studies have proven and time has shown that a tank mix of Fore plus Aliette[®] is the best treatment available to combat summer stress complex. Tank mix with Eagle[®] to get both contact and

Gray
Snow
Mold

SUMMER STRESS

RUST

algae

HELMINTHOSPORIUM

blown
patch

Fusarium
Blight

slime mold

COPPER
SPOT

PYTHIUM
BLIGHT

red thread

AND ONE FORE ALL.

systemic control and with Subdue for unbeatable knockdown of pythium. Plus, use Fore with Prostar® to get even wider disease protection.

Finally, Fore is now available in easy-to-use water soluble packs. Just drop a pack directly into the spray tank. The quickly dissolving packets make Fore easier than ever to handle, measure and mix.

When you need to win, season after season, Fore is

the foundation of good disease management you can't afford to be without.

ALWAYS READ AND FOLLOW LABEL DIRECTIONS.

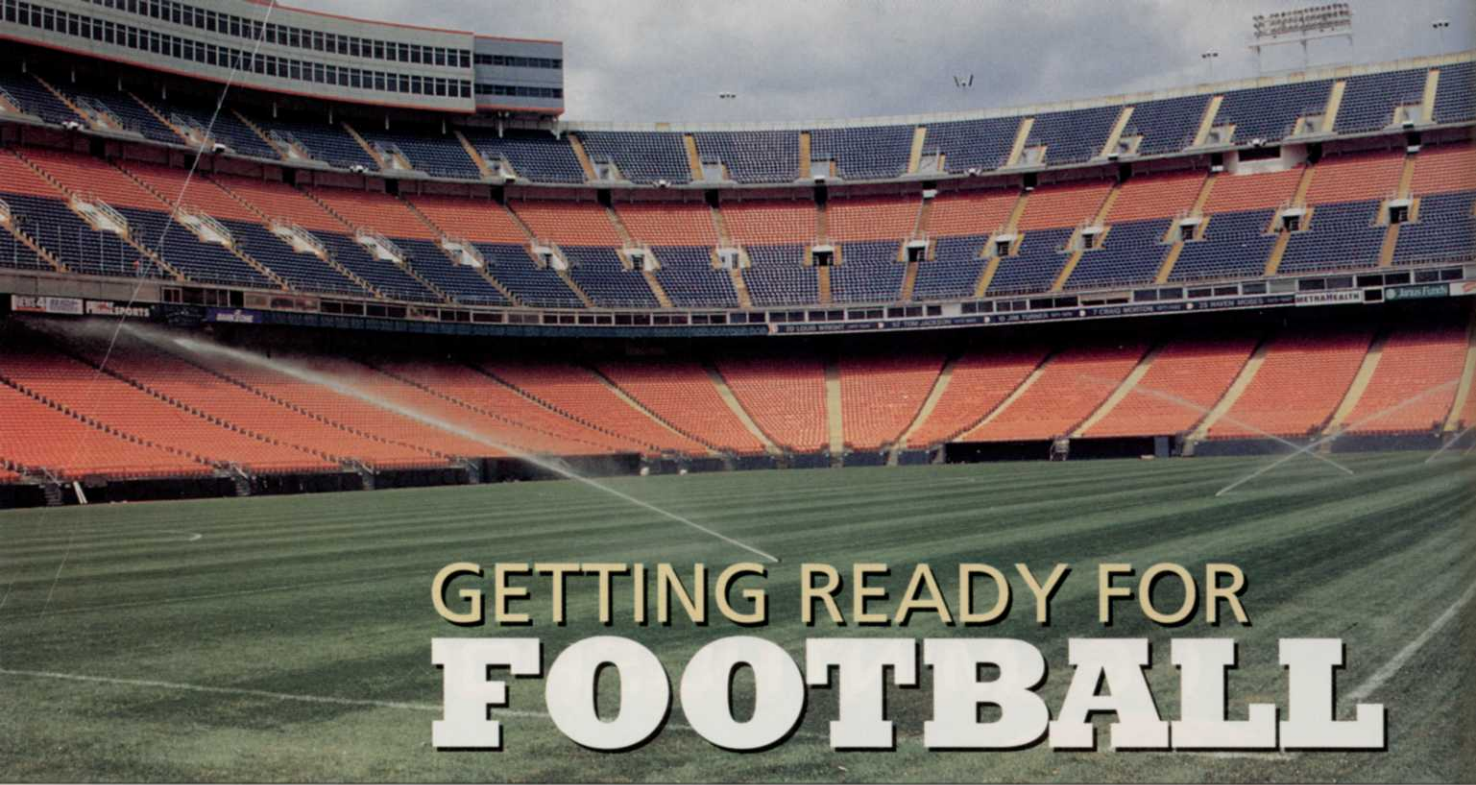
Fore® and Eagle® are registered trademarks of Rohm and Haas Company. Alliette® and Chipco® 26019 are trademarks of Rhone-Poulenc. Daconil® is a trademark of ISK Biosciences. Prostar® is a trademark of AgrEvo.

©1996 Rohm and Haas Company T-O-177 5/96



The foundation of good disease management.

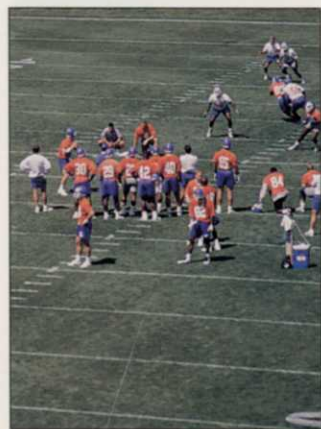




GETTING READY FOR FOOTBALL

Formula for success: (1) safety; (2) playability. Keep your priorities straight, and the field will follow.

by STEVE & SUZ TRUSTY



Safety and playability should top your list of field priorities. Assess past problems, and develop data on water movement on and from the field surface.

Football only starts in the fall from the fans' perspective.

For the sports turf manager, football field preparation and maintenance is a year-round job. Demands are increasing for both game and practice field time. Football facilities usually must share space with soccer, baseball, bands, concerts, and other events. Proper field preparation entails bringing turf to optimum levels so it can stand up to the stress and maintain season-long playability.

Steve Wightman, stadium turf manager for San Diego's Jack Murphy Stadium, says, "The biggest difference between sports turf management and other areas of turf care is that our prime concentration is always on athlete safety and field playability. The optimum agronomic conditions for the turf and aesthetic appeal of the field take second place."

Sports turf managers must know their own field conditions, have a good understanding of agronomic principles, keep up

with the latest advances in turf-related technology, observe other fields and exchange information with other turf professionals, and keep detailed records of their own field maintenance procedures, including timing, weather-related influences and results.

On top of that, maintenance procedures must be "worked into" the small windows of opportunity allowed by heavy field-use schedules.

Tom Lujan, stadium turf manager of Denver's Mile High Stadium, stresses that planning and communication are the keys to success. Coordinating the grounds care staff with field user groups allows essential procedures to be scheduled around activities.

And all this must happen within the constraints of available time, money, equipment and personnel.

Eight tips

1) Know your fields. Some sports turf managers have had the privilege of helping design and develop state-of-the-art

game and practice fields. Others have inherited decades-old established facilities. Whatever the situation, maintenance procedures must be based on your field conditions. The more you know about your fields, the more comprehensive your program can be.

2) Do some digging, literally. Take soil test samples from multiple sections of your game and practice fields and have these samples analyzed by a competent lab. Assess not only pH and nutrient levels, but also the soil profile breakdown.

3) Study construction, reconstruction and/or renovation plans, if they are available. Do some probing to verify for yourself whether subsurface materials, drainage and irrigation systems correspond with existing records. Develop an up-to-date plot plan of each field, noting dimensions, elevation changes, soil type and the depth of various layers, including any changes in soil profile within portions of the field, the sub-surface drainage and the ir-

rigation system.

4) **Develop data on water movement** on and from the field surface and the percolation rate of absorbed water during and after heavy rains and during and after normal irrigation.

5) **Study wind patterns, temperature and humidity** variations and sun and shade variations across the field during different seasons. In cold weather regions, track "normal" snow accumulation patterns and snow melt variations.

6) **Pull plugs of turf from multiple areas of each field.** Check density, color, crown condition and the length and development of the roots. Note turf variations between segments of the field and how these variations are related to the conditions already tracked. If your budget will allow it, send turf samples for tissue analysis to determine how effectively soil nutrients are being used.

7) **Identify problems from past seasons** and determine whether changes in the current maintenance programs will help alleviate those problems.

Because football is played "in the turf," often concentrating action in specific areas, compaction is a continual problem. Pre-football core aeration traditionally begins as early in the spring as other field use allows. Budgets, temperatures, grass types and irrigation capabilities govern when and how frequently core aeration can be used. Some stress can be alleviated with additional aerations only on the game field, or only between the hash marks of the football fields.

Topdressing is most effective when used in conjunction

with core aeration. When necessary, field soil profiles can be modified gradually by removing cores and topdressing with the desired media.

8) **Assess the grass types and varieties in use and analyze their performance under field use conditions.** Check out alternatives, compare performance at test sites and at other sports fields with conditions and programs similar to your own. New grasses generally are tested on a practice field, or portion of a practice field for at least a season before a complete change is made. These "experiments" usually start in the early spring.

Heavily damaged and thinning fields also will be overseeded, sprigged or sodded as early as possible, frequently following the first aeration of the spring or summer. Cool-season fields also may be overseeded with perennial ryegrass or a ryegrass/bluegrass combination just prior to the beginning of the football season, and weekly throughout the season. Players then "cleat in" the seed so it's in place for germination as conditions warrant.

Fertilization programs are adjusted according to specific turf needs, but generally, nitrogen levels will be kept sufficient to support sustained, steady growth while avoiding any flush of rapid, lush growth. Potassium levels will be increased to improve plant hardiness, both for the rigors of play and the approaching colder weather. Phosphorus levels may increase in conjunction with overseeding.

Turf color may be "perked up" a touch on the game field

with an application of a liquid nutrient "package" or chelated iron a few days before the season opener.

Mowing heights that have been moved up gradually during summer's more limited field use are gradually moved back down to game levels prior to the start of the season.

Mowing frequency which also may have been reduced during the summer returns to play schedules. Mowing must fit into the multiple pre-game practices and the irrigation and field painting schedules.

Irrigation timing and amounts are critical to seed germination and turf rooting. For seedlings, frequent, light irrigation is needed. On established turf, less frequent, longer

irrigation periods encourage deep rooting. On fields with thick, well-rooted turf, compaction can be reduced somewhat by keeping moisture levels toward the dry side during practices and play. But fields can't be so dry during use that the turf is stressed.

Cut the stress

Safety and playability should be tops on everyone's list. Work with field users and plan field use to move some practices to the outer sections of the game field, to a practice field, or even to the outfield section of the baseball field. □

—The writers are partners in *Trusty & Associates, Council Bluffs, Iowa.* Steve is Executive Director of the national *Sports Turf Managers Association.*

FREE GUIDE TO SPORTS TURF

This free guide to the selection and use of turfgrass is a handy reference for anyone involved in sports turf.

The booklet addresses every area of sports turf... from the fine, dense turf required for precision sports like tennis and croquet to the tough turf needed for rugged sports like football or racetracks.

Geographically arranged, it suggests the appropriate turfgrass species, where to use them and even proposes proper cutting heights and seeding rates.

A separate section covers Southern Winter Overseeding. And this new guide is yours for the asking.



Lofts Seed Inc.
Dept. LM
347 Elizabeth Ave.
Somerset, NJ 08873
(800) 526-3890 ext. 250

Circle 122

Ingenuity helps carry on Pinehurst's reputation



John Clark doesn't really 'steal' good ideas to keep Pinehurst beautiful. He says he just 'borrows' them.

by JERRY ROCHE / Editor-in-Chief

Pinehurst. When you're talking horticulture, the word "Pinehurst" ranks right up there with "Disney," "Pebble Beach" and "The White House."

Head horticulturist/grounds supervisor John M. Clark is no different than the many thousands of his colleagues at lesser-known institutions all across the country. His problems are just more numerous and more complicated. And they're not always solvable by throwing money at them.

"There are no open purses and no unlimited deep pockets," says Clark, a certified grounds manager (CGM) with the Professional Grounds Management Society. "That type of situation is a myth. We're like any other business: we have to watch each and every penny."

Because visitors to Pinehurst Resort & Country Club have come to expect eye-popping vistas, Clark must use his ingenuity to get the most "bang for his

buck," just like anyone else. And he's not afraid to borrow good ideas.

"Partial pre-finishing was an idea we got from Disney World," Clark relates. "Instead of going with cellpacks of 32 cells to a flat, we will start using 2½x2½-inch cubes in which annuals are grown. We pre-finish perennials in a 3½-inch pot. Starting next spring, when we take out pansies that are in full flower, instead of putting in a new plug, a pre-finish plant will minimize color loss. We want to get transition color in before anybody else. We can't afford to wait until the pansies go out."

The only difference between Pinehurst and other grounds operations is scale, Clark contends. He has 20 people working for him, and 10 additional are hired for four to five weeks, just to plant annuals.

"I admire people who don't have the huge scale we do," he notes. "They are folks who have to figure out innovative ways to do the job safely and efficiently with not as much equipment availability. I've been there, and I know it's a challenging job."

Pinehurst crews plant 100,000 annuals and hundreds of perennials every year. Having an assembly-line mentality has helped Clark cope.

"We use a ½-inch drill with a 'bulb bit' to speed up the plugging of annuals and perennials," he notes. "One person pops the hole, two people put the plugs of annuals in the holes and cover them up. We can average—with two groups of five people—5000 to 7000 annuals in the ground in one day, fertilized and mulched."

Grass is sometimes a small problem, too. Pinehurst has 13 acres of non-golf turf-type tall fescue, proprietary bermudagrass and common bermuda. But the only problem worth mentioning (except for mowing) is fungus on the fescue—mostly brown

cont. on page 8G

FOR MAXIMUM PROTECTION FROM STRESS...

MACRO-SORB® CAN MAKE THE DIFFERENCE!!!

Whether it's excessive cold or heat, drought or too much rain, pests and disease, less than optimum soil conditions, or just too many rounds of golf — you need healthy turf to withstand the stress caused by these and many other adverse conditions.

Macro-Sorb® is an amino acid based, nutraceutical plant biostimulant that provides maximum resistance to adverse conditions by maintaining the photosynthetic activity which normally slows down during periods of stress.

The action of the amino acids stimulates the natural processes of the plant causing improved nutrient absorption and increased availability of the managing micro nutrients. By providing the same L form amino acids a plant normally produces, Macro-Sorb® helps the plant retain the vital energy it needs to sustain growth while fighting the effects of adverse conditions.

"The summer of 1995 was one of the worst on record in the Mid-Atlantic region.

Twenty eight consecutive days over 90° during a period of thirty straight days without rain. Talk about stress!!!

We added Macro-Sorb® to our normal IPM program and experienced little or no turf loss — fairways, tees or greens. I'm convinced that Macro-Sorb® made the difference."

*Geoffrey R. Blind
Golf Course Superintendent
Hillendale Country Club
Phoenix, Maryland*



Macro-Sorb® — a true systemic... it's new... it's unique... and nothing else works quite like it!

Macro-Sorb® truly can make the difference.

nutramax
LABORATORIES, INC.

AGRICULTURAL DIVISION
Baltimore, Maryland 21236

Call 1-800-925-5187 for more information.

Circle No. 130 on Reader Inquiry Card

cont. from page 6G

patch because of the humidity.

No, the big problem is color in the landscape.

"The requests for and expectations of color have gone through the ceiling," says Clark, who has been at Pinehurst since 1987. "I'd say they've quadrupled in that time. So we're using more special fall and winter color, and we're working to improve our transition so we never look void of color.

"We have more than 8,000 sq. ft. of greenhouse space this year, with an additional 3,000 sq. ft. planned for next year. With that extra space, we can [test] the All-American selections and see if they work here."

Part of the key to successful color is successful planning, since the color is year-round and a large part of the budget.

"We plan our color six months ahead of time," Clark says. "The growers offer us a percentage discount for having our order booked by May 31st for fall and winter color, and by September 30th for spring and summer color."

Dream job

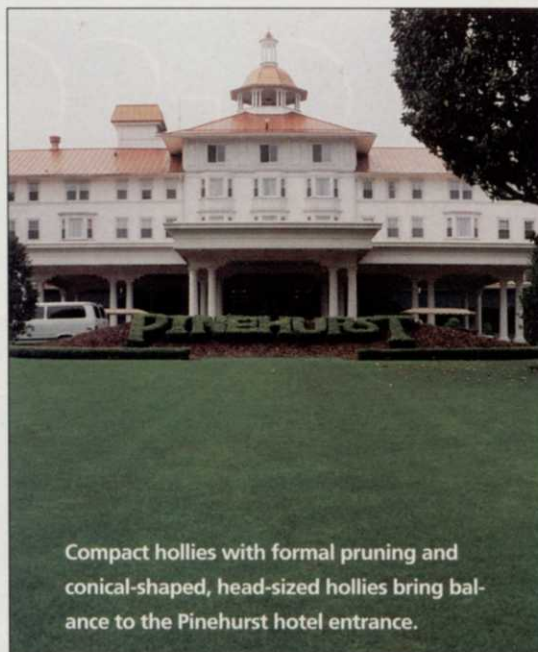
Despite the color concerns, there are many things to like about the job. For instance, the U.S. Department of Interior and National Park Service certified Pinehurst as a National Historic Landmark in June, so Clark now feels like preserving part of U.S. history and culture is part of the job description.

Frederick Olmsted was original Pinehurst designer of the resort and village. Monuments to him still remain, the towering, majestic oaks that dot the grounds.

"Everyone who works here carries on the tradition of hospitality and camaraderie that has made this area famous," Clark says.

"At the time I applied for the position, I thought it was a wonderful opportunity to allow me to incorporate some landscape ideas and designs I'd been pondering. The ideas really lent themselves to the formal landscape preservation of Pinehurst, too.

"I see my job as enhancing the history of the preserved landscape that's been here



Compact hollies with formal pruning and conical-shaped, head-sized hollies bring balance to the Pinehurst hotel entrance.

for more than 100 years—not recreating the landscape. It has been a dream job."

His predecessor, Lanny Garner, was the grounds manager who really brought the Southern "feel" back into the perspective of Pinehurst. Clark just added some personal "touches."

"My first project was to reformatize the front of the hotel area," he says. "It was a hodgepodge of shrubbery. The *Formosa azaleas* had grown absolutely huge. You couldn't see over them from the front porch, and you couldn't see the wonderful expanse of turf. So we brought rhyme and reason into the design by planting compact hollies with formal pruning and conical-shaped head-sized hollies."

Special projects

Making topiary and responding to the weather are two ongoing programs, though they're pretty much seasonal. Pinehurst displays "mock topiary" in the shape of what they call their "Putter boy" and "Tour boy," four flamingos and—in season—an Easter bunny. "They're wire forms covered with *vinca minor*. We also do Christmas tree shapes out of myrtle and we plant poinsettias, in season.

"In December, we clean up the natural areas, do small projects: tree pruning, moving and transplanting plant material. In January and February, we do ice and snow removal with our 'Ice Patrol.' The ice

storms here can absolutely wreak havoc. This past winter was as close to a total nightmare as I can remember. We lost six trees."

Clark especially remembers February of 1995 when high winds felled more than 75 trees on the resort grounds and golf courses and in the Pinehurst community. Because the year-round residents are so closely-knit to the resort, Director of Grounds and Golf Course Maintenance Brad Kocher took resort crews out onto the public driveways and lawns, and helped clean up debris.

"The chain saws and pick-ups were all coordinated by Brad Kocher and the other golf course superintendents—before the clean-up of the golf course and resort grounds," Clark says.

Behind the scenes

As with any successful venture, the people make the difference. Clark is surrounded with quality co-workers—and they're more co-workers than anything else because he gets his fingernails as dirty as anybody else on the payroll.

"We're specialists, but there's a lot of overlap," he claims. "I'm grounds superintendent, and Tim Kemper is the grounds assistant. Brad Kocher is director of grounds and golf course maintenance, Paul Jett is superintendent on Pinehurst No. 2, and manages the croquet and lawn bowling courts. We have an irrigation department and a vehicle maintenance department that maintains 120 vehicles.

"We have a lot of 'non-traditional' employees, too. Cynthia Alexander is our greenhouse foreperson. Michelle Buie is her assistant. We have a lot of minorities; interns from England, Australia and New Zealand; lots of retirees, including two who work in the greenhouse.

"We work our schedule around the retirees' hours, and people like Dr. Dick Nickerson—who is a retired tomato breeder for the Campbell's Soup Company—is an inspiration to us. This is a learning experience; there's a wealth of knowledge here." □

Your Golf Course Could Be Trying To Tell You Something.



It needs PROGRASS® Herbicide. PROGRASS is the surest way to get *Poa annua* (Annual bluegrass) out of your turf and keep it out.

By attacking *Poa annua* (and 12 other weeds) with both preemergence and postemergence control, PROGRASS lets you design a control program that fits your particular situation best:

complete renovation, gradual conversion or preventive maintenance. Properly managed, PROGRASS protects ryegrass, Kentucky bluegrass, creeping bentgrass, tall fescue, and even dormant Bermudagrass overseeded with rye, from *Poa annua* infestations.

Even if *Poa* has a grip on your course, it's never too late for PROGRASS. But it's never too soon, either.

Prograss EC
HERBICIDE



A company of Hoechst and NOR-AM

Young hands at work

A 'Green Team' composed of Lincoln, Neb., teenagers brightens city golf courses and parks.

by RON HALL / Senior Editor

Dick Neumann appreciates all the help he can get at the Highlands Golf Club in Lincoln, Neb. This year he's been really grateful.

The 27-hole municipal course he and his crew maintains struggled through the spring and early summer recovering from winter kill. Seven bentgrass greens, including the nursery green, suffered severe damage. Four others required intensive nursing.

The extra help comes from four seasonal workers. They're part of the Green Team, an employment program for 14- and 15-year-olds. The four youths at Highlands are part of a much larger project, but more about that later.

At Highlands, Green Team members tackle projects that Neumann's crew is usually too busy to do.

"Because our crew is spending so much extra effort on winter recovery, we really haven't been able to do anything on our landscape beds or the wildflower beds around the clubhouse until we got the Green Team kids," says Neumann.

Green Team members, because of their age, can't operate heavy equipment, but there's still plenty to do.

Last summer at Highlands, they spread mulch and worked in beds, planted trees and buffalograss plugs, helped compile a list of plants and wildlife for



Thanks to the Green Team, Highlands Golf Course "has never been cleaner," says Dick Neumann.



The Green Team plants wildflowers at the Woodmen Outdoor Classroom. Nhan Le, Julia Eckles, LaShawn Mody, Renee Snoch, Lihn Nguyen, Ryan King, Curtis King, Mike Satorie (leader) and Kelly Williams.

the Audubon Sanctuary Program, and cleaned the maintenance shop. "I don't think it's ever been cleaner," says Neumann.

One project in particular drew appreciative comments from Highlands' golfers.

Green Team workers stripped sod away from the bases of tee marker signs, tilled in organic material and planted wildflowers that had been tagged from the course's five acres of wildflowers.

"The program costs us very little, just the use of some of our tools and the cost of a supervisor," says Neumann. The key to its success, at least at Highlands, is finding the right supervisor to oversee each four-youth crew. The supervisor is also typically a student and seasonal worker.

Neumann says the program teaches the youths valuable work skills. About half represent minorities; about a quarter come from poverty households. Most turn out to be competent helpers, and some develop a genuine interest in the green industry and return from season to season.

Sheila Vrana, who helped start the Green Team program five years ago with Parks Dept. colleague Tammy Casey, says 108 Lincoln teenagers are participating this summer. Each receives minimum wage. The program's budget of \$27,500 comes from donations from businesses in Lincoln, Nebraska's capital city of about 200,000 in the state's southeast corner. The coordinator for the program is Kristi Bornemeier. □



Welcome to St. Looie

Local green industry experts teamed to give the professional football Rams a field that should make them feel right at home.



PHOTOS BY KEEVEN PHOTOGRAPHY

by RON HALL / Senior Editor

Creating a new field for a professional football team takes the coordinated efforts of a team of green industry pros. In St. Louis, which promised the sun and moon in luring the Rams from Los Angeles, that team included landscape contractor Munie Outdoor Services, sod supplier Emerald View Turf Farms, and Rams' groundskeeper Scott Parker. The NFL's "Sultan of Sod" George Toma personally oversaw all of their efforts.

While St. Louis is yet to deliver either the sun or the moon, it did come up with, perhaps, the best practice facility in the NFL.

The complex is located in the suburb of Earth City about a 25-minute drive north of downtown St. Louis and the city's new domed football stadium. The Rams' new headquarters consist of a 90,000 sq. ft. office building, with attached indoor practice area and training rooms.

The heart of the facility, though, is a 405-by-410-foot bermudagrass playing surface. It's the size of two football fields and can be lined east-west, or north-south. If needed,

Joe Munie (left) built the field; now Scott Parker, the Rams' groundskeeper (right), takes over. Parker is a St. Louis native and has worked several Super Bowls with George Toma.

the Rams will be able to use an adjacent, crowned tall fescue field. It's also new.

"When the Rams come back, they're not going to believe how good a field they're going to have to play on," says Scott Parker, the Rams' groundskeeper. He joined the club on its move a year ago.

Parker, a St. Louis native, learned a lot of his grounds skills from Toma, the nationally recognized groundsman formerly with the Kansas City Chiefs. Parker worked a couple of Super Bowls and a Pro Bowl with Toma, who, along with his son Chip, regularly advises and works with the National Football League concerning playing fields.

Says Parker, "With all the players and the money involved with this football team, they want the best field they can get."

Munie Outdoor Services of Belleville, Ill., built the practice fields. The company started last October and worked through a cold but relatively dry winter. The goal was



*Tolerance.
Persistence.
Success.*

When the heat is on, CATO Creeping Bentgrass goes deep after moisture. Bred for heat, its persistent root system provides excellent tolerance to heat and drought stress. Suitable for modern lower cutting heights, CATO's erect growth habit also means less stress for golfers, because a CATO green is true. (CATO's winning combination is great on tees and fairways, too!) Enjoy success. Check with your distributor or call (800) 547-4108.



PICKSEED WEST, Inc.
P.O. Box 888 • Tangent, OR 97589

to build the practice field with the same care and precision as a putting green.

"I took it upon myself to run this project because I knew what had to be done," says owner Joe Munie. "I wanted it to come out perfect, and we got pretty close."

After grading the field (Munie used a laser in the process, as he also did in setting Toro sprinkler heads), Munie crews covered four inches of pea gravel with 14 inches of sand/peat/topsoil rootzone mix. Unlike a putting green which is often just sand and peat, the mix contains 5 percent topsoil for stability. Drainage was installed in a herringbone-pattern on 20-foot centers running to 15- and 18-inch collector pipes.

In July, Emerald View Turf Farms installed the 18,403 square yards of fine-textured bermudagrass, a variety known as Baby Bermuda. Emerald View is the licensed grower for the grass in Missouri, Illinois and part of Kansas.

"Baby Bermuda is a very aggressive little



Tom Keeven of Emerald View Turf Farms says the Baby Bermudagrass put down three inches of roots within a week of being installed in July.

grass. It has fine texture and it can actually be brought down to putting green height," says Tom Keeven, who runs the family sod operation with brothers Ed and Jim.

"Around here I think it's going to make a great grass for athletic fields, especially those that have summer and fall play."

Because it is a relatively new grass, at least in the Midwest, sod for the Rams' site was trucked from Texas, 25 loads. Then it was laid in rolls, 42 inches wide, 32 sq. yds. to the roll.

"In seven to eight days in that sand, the rootzone was already down at least three inches. It was phenomenal," says Keeven.

With sod in place and rapidly knitting, Munie's crew rolled the field in two directions, sprayed Bovamura on it and a couple of days later topdressed it.

"We've got to start aerifying it and getting the water to perk down, but actually the water's going through it pretty fast right now," says Munie.

When Toma walked the practice field and presented Munie with a sweatshirt with his thanks scribbled across it, the veteran landscape contractor was pleased and relieved. **LM**

FLORATINE



"I have seen an increase in root development and heat & stress tolerance (on bent/poa). Poa roots mean I still have a job. I'm convinced that **Floratine** products are the way to go. They give me the winning edge."

Bob Tillema, Jr., Supt.
Riverside Golf Course
Riverside, CA
(Mike Farmen, Distributor)



"I manage the oldest bentgrass greens in one of the hottest, most humid areas of the U.S. **Astron** and **Perk Up** help to maintain good greens despite poor drainage and heavy play."

Kenny Herzog, CGCS
Big Creek Golf Club
Millington, TN
(Scott Chilson, Distributor)



"I've used **Floratine** for the past 3 years. These products have given me a deep, dense root system & healthier topical growth. During grow-in (we were able) to open earlier than anticipated."

Richard Broome, CGCS
Harbor Pines Golf Course & Estates
Egg Harbor Township, NJ
(Mel Fifer, Distributor)

Keepers of the Green

Floratine Products Group • 144 Mid South Cove • Collierville, TN 38017 • (901) 853-2898

A SUPPLEMENT TO:

THE VOICE OF THE GREEN INDUSTRY

LANDSCAPE *management*



- *Taking the plunge*
- *Buying the right pick-up*
- *Plowing equipment*
- *De-icing materials*
- *Supplemental products*

GUIDE TO PROFITABLE

Snow & Ice *removal*





Akzo Nobel Salt keeps your parking spaces open.

Winter can be wicked. If you're in property and grounds maintenance, keeping parking lots, sidewalks, roadways, and other areas clear of snow and ice is a top priority. Because businesses have to stay open.

Salt, of course, is the most cost-effective way to go. Research shows that *salting reduces accidents*. No question about it. Abrasives and other materials just can't compare.

Who do you call when it's time to stock up on winter deicing supplies? Akzo Nobel Salt, your *local resource*.

Thanks to the expertise of the world's largest deicing company, we'll get the salt to you when and where you need it. Count on us to come through, even when it's so cold your green thumb's blue.

Contact us for a complete line of deicing products, including effective, economical Bulk Ice-Control Salt, from the country's most reliable distribution network. Plus packaged products like Diamond Crystal® Halite salt crystals for general application, Diamond Crystal JiffyMelt® melting crystals for fast, low-temperature melting near sensitive vegetation, corrosion-fighting LoCorr® deicer for use in parking garages, on bridges, or other structures, and other custom-blended deicing materials.



Salt Fact. Studies* show that 88.3% of all injury accidents during winter storms can be avoided through deicing.

Call 1-800-752-SALT for more information.

*The Marquette Report, Marquette University, 1992.



AKZO NOBEL

Akzo Nobel Salt Reduces Accidents.

© 1996 Akzo Nobel Salt Inc.

Circle No. 109 on Reader Inquiry Card

Snow jobs don't have to be so painful

If you live north of the Mason-Dixon Line, snow removal is just part of life. And even in the South, it can occasionally be a nuisance. Across the middle of the U.S., the unpredictability of snow is a "catch-22" no-win situation, where you can be faced with the frustration of whether or not to even buy snow removal equipment.

But just as soon as the budget-minded professional—who has saved money by *not* purchasing snow equipment—is faced with the once-in-a-decade blizzard, he or she can feel "a penny wise and a pound foolish."

Even in the North where the question is only when (not if) it will snow, having the right equipment to handle the various kinds of snow can be a challenge.

Powder snow or thick, wet snow; sleet or snow mixed with rain that freezes on impact all present different problems. Let's start with equipment.

Unpredictable?

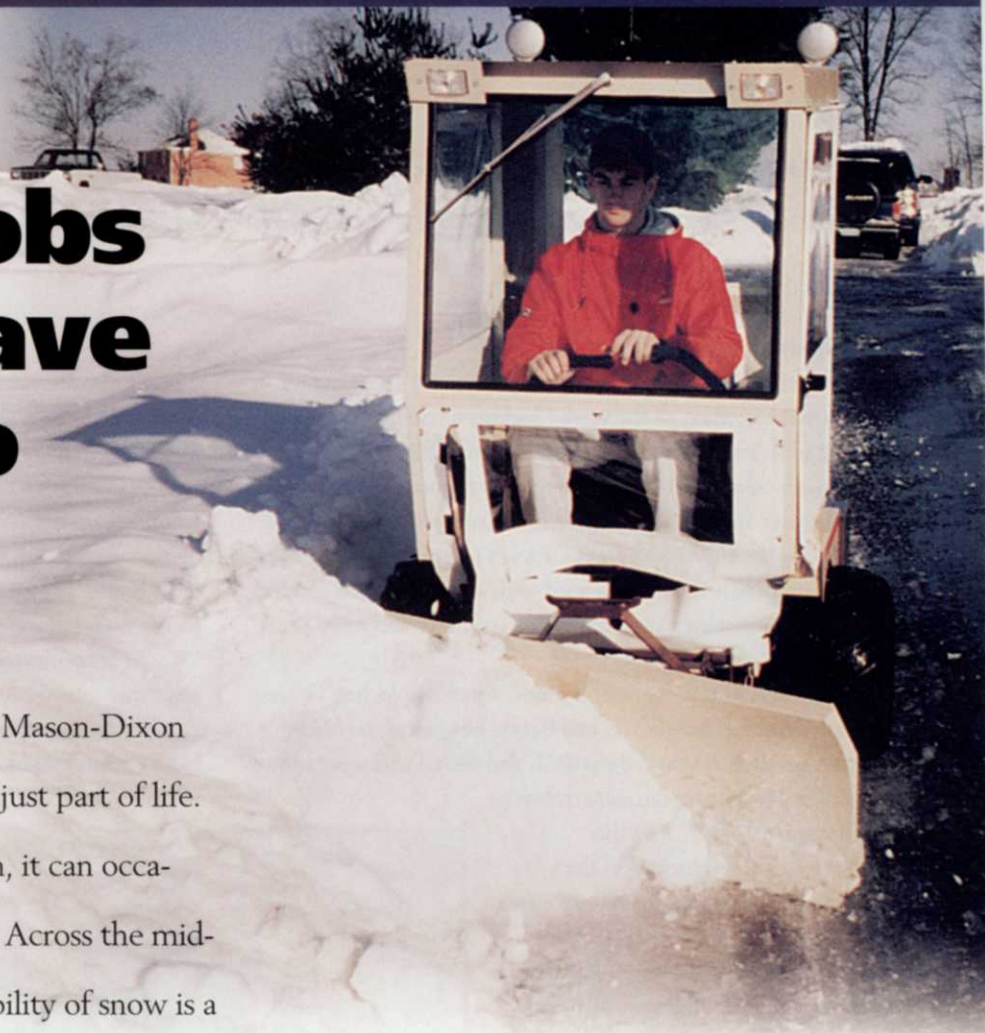
Being prepared for snow removal has its rewards for maintenance shops and contractors alike. But if you're a grounds/landscape contractor, the added dimension of offering clients snow removal services during the winter is an ideal way to strengthen those relationships. It can also help smooth out cash flow during traditionally slow months.

However, buying snow equipment can be prohibitive if you don't choose versatile grounds maintenance systems that offer a wide range of year-round attachments, which most contractors and

in-house grounds managers recommend.

Mark Moyer of Kirksville, Mo., is right in the middle of the "unpredictable snow" belt. His ability to offer year-round service—including snow removal—has both strengthened his relationships with clients and added significantly to his bottom line.

"My approach to everything has changed since I saw my first demonstration of a zero-radius mower. The Grasshopper system, for example, is really a grounds maintenance system, not just a mower. The system's attachments are what allow me



TIP #1:

Choose versatile equipment that can be used not only in the snow, but also in your primary seasonal business.

to work year-round.

"As soon as I bought my first zero-radius unit, I quit my job and started accepting all the work I had been turning down, including snow removal jobs. My income jumped immediately."

Moyer's equipment choices were rotary broom, dozer blade, snowthrower and enclosed cab for his three mowers.

"Having the right equipment for a job just makes sense," Moyer says. "I compare it with eating soup with a spoon instead of a fork. The right equipment makes the job easier, faster and more profitable."

Moyer says that for light fluffy snow up to five inches, he uses the broom. If the snow is wet and heavy, he goes to the blade, which also handles heavy, deep slush and sleet. For deeper snows and drifts, Moyer uses the snowthrower.

"If it is really deep, I set the snowthrower a few inches off the ground and cut a path," he notes. "Once you have a path, then it's a piece of cake. Zero-radius maneuverability lets me get into spots other guys just can't reach with bigger or less maneuverable equipment and is a lot faster than the smaller hand-pushed snow blowers. I don't even own a shovel."

Moyer's clients include banks, 24-hour restaurants, churches, private residences, the multi-purpose building at the fairgrounds and doctors' offices.

Predictable!

Dave Combe of Salt Lake City, on the other hand, contracts snow removal for a wide variety of residences, condos, apartment complexes and commercial clients.

"Of course, we have Western blades and another V-blade for our three trucks. They take care of the big parking lots and streets. But then we go back in with our 721D Grasshopper with the snowthrower attachment and that gives us another three feet. It throws the snow over the berm and finishes the job."

Combe also uses a dozer blade and broom.

"We charge \$20 a push (per residential driveway) and we can knock off one in about 10 minutes," he observes. "We have about 80 driveways that we take care of regularly, in addition to the lots and other commercial customers."

Combe recommends low-pressure tires without chains, which

give you traction even on inclined driveways.

"We also start clearing even while it's still snowing if it's going to be a really deep snow. That helps us keep ahead of it, and the people seem to appreciate it, too."

Warren Brown, who is in charge of snow removal at John Knox Village in Lee's Summit, Mo. (the nation's largest retirement community), uses 60 hand-shovelers to clear sidewalks in eight hours. They use dozer blade-equipped mowers and John Deere walk-behind snow blowers for the 25 miles of sidewalks.

Streets are cleared with two one-ton trucks with sand spreaders and three four-wheel-drive Ford Broncos with 8-foot blades. Two Ford tractors equipped with rear blades also help clear streets, and New Holland skid loaders are used for parking areas.

Tom Hays of Alexandria, Minn., clears snow an average of 12 times a year, including drifts of up to four feet. He appreciates movable deflector chutes.

"They can be easily turned around with your feet to keep the snow blowing in the same direction whether you are going down or coming back," Hays relates. "It sounds like a little thing, but when you are out there moving around in deep snow, being able to direct the snow discharge without stopping is important."

City maintenance

Marc Evens, parks crew leader for Kaysville City, Utah, has to get around a honeycomb of walkways and sidewalks when cleaning up around the two-block city office campus.

"I can't imagine how long it would take with conventional hand-pushed snow removal equipment," says Evens, "but the zero-radius units are ideal for that kind of job. If the snow is 8 to 10 inches or more, we set the snowthrowers high and make a couple of passes. There is no depth they can't handle if you either go slow the first pass or just set it high for the first pass and then repeat at a lower setting.

"Our snowthrowers are also ideal for keeping the cemetery clear because they don't scalp the grass under the snow. And their zero-radius ability makes removing snow around traditional markers or flat markers quick and efficient."



DESIGNED FOR PROFESSIONAL USE

Unique features are what make Fisher snowplows the choice of the professional plower!

The Fisher Minute Mount® System sets the industry standard for detachable mounting design. Permanently mounted connecting pins and simple drive-in attachments allow for the quickest removal and reattachment of any plow on the market.

With the Fisher trip-edge blade design, only the lower edge of the blade trips back when

an object is struck. Because the blade remains upright, plowed snow in front of the blade stays put – allowing you to plow and stack more snow quickly and easily.

No one offers you more hydraulic options than Fisher. Traditional belt-drive, the new Electric Clutch/Solenoid Valve system or the Solenoid Electric Hydraulic Pak are all available.

Fisher. For nearly 50 years the finest snowplow you can buy for your 4x4!



FISHER ENGINEERING • P.O. Box 529 • ROCKLAND, MAINE 04841
Web Site <http://www.fisherplows.com>

Circle No. 116 on Reader Inquiry Card

Be serious about snow business

by TERRY McIVER / Managing Editor



John Allin of the Allin Companies, Erie, Pa. is serious about snow plowing. He runs a 60-truck operation composed of his own trucks and his subcontractors' equipment.

He has eliminated most of his snow competition by hiring them to work for him in the winter!

Allin knows the competition is going to be there, primarily from other seasonal businesses.

"Snowplowing is not exclusive to the landscaping business," he says. "It's seasonal, and companies that work during the summer also put the trucks they have to work during the winter."

Landscapers who offer snow removal face competition from a variety of sources including:

- roofing contractors,
- excavation contractors,
- masonry companies, and
- virtually any service business with pick-up trucks.

Allin has made the competition work...for him!

He has more than 45 subcontractors, 20 of whom are

self-employed in seasonal work for other businesses. "We also use three pieces of equipment from a local excavation contractor," he explains.

"That kind of competition is out there," says Allin, when talking of some of the unforeseen surprises that occur during a season. "It's just a different type of competition.

"Excavation people have the capital already invested in the equipment, and need to figure out how to use it for plowing.

"Snow plowing is an industry in and of itself. We're a 60-truck operation going against one- or two-truck operations. We have a decided advantage."

Allin has 12 residential accounts, most of whom are owners of commercial sites he plows. In the commercial market, says Allin, you have to have things businesses demand:

- 1) liability insurance
- 2) dependability: you

show up.

Allin and his crews see 18-inch snowfalls on a regular basis, which is why he calls it "a major business.

"If you're not making money by plowing snow, you're doing it wrong," insists Allin. "Approach snow plowing as a business, not as another add-on service."

Allin is serious about the need snow removal professionals have for useful information, which is why he and others who are heavily involved in plowing have formed the Snow and Ice Management Association.

Parks, too

Mike Trigg, superintendent of parks for the Waukegan, Ill. parks district, deals with "the A to Z of snow removal."

His fleet of four vehicles and miscellaneous retrofits handle the wet stuff on pathways, sidewalks, around buildings and recreational facilities, including the grounds

TIP #2:

Be dependable. Customers don't want excuses, they want action. And keep the promises you make in your contract.

around an outdoor ice rink, seven days a week.

"A lot of the time those operations are open till 10 or midnight," says Trigg, which adds to scheduling challenges.

"We also share snow removal for Park Place, a community senior center."

Trigg stocks up on de-icers in November. Thanksgiving is the deadline. Everything is

ready to go by then.

"We have a two-yard spreader unit on trucks. We set up an agreement with the city that we load at public work site. That eliminates pallets. We reimburse the city at the end of the season. We ended up buying them a semi load of rock salt. I didn't use that much, but it was a cooperative agreement."

Trigg says four tons of salt is an average winter's supply. He also uses de-icer on walkways.

"Truck maintenance increases in the winter," admits Trigg. "We have to maintain the transmissions. Trucks are up to 10 years old, so we have mechanics do a detailed inspection, and frequent fluid changes."

Plow damage to pathways is always a concern, and reducing damage requires care while plowing.

Major accounts

Phil Cavotta of Cavotta Landscaping, Cleveland, Ohio, keeps a snow crew on his major account (the 180-acre Cleveland Clinic) around the clock.

"It's a massive undertaking," admits Cavotta, as he counts down the duties it involves.

"We've got driveways. We've got 1.6 million sq. ft. of surface lots that all have to be salted and plowed. We've got 400,000 sq. ft. of garage roofs that we have to plow with a special rubber-edged blade because of the expansion joints on the roofs. And on those roofs, we can only use sand and gravel—no salt."

Because the crew is on-site 24 hours a day, when the snow gets heavy, Cavotta sets up rest areas with coffee and cots where crew members can take



Cavotta: snow removal 'a demanding service.'

breaks on an alternate basis.

Equipment includes:

- 2 five-ton trucks with 10-foot road plows;
- two one-ton dump trucks with plows;
- one-ton pickups with plows;
- two-yard front-end loaders that do the heavy work;
- all equipped with salt spreaders.

Cavotta begins a two-week assessment of his snow removal equipment in August. For the most advanced warning of coming snow storms, he subscribes to a satellite weather service.

"Snow removal jobs are longer hours, and require more attention," says Cavotta. "It's a very demanding service, because you're always fighting the elements. I'd much rather landscape than plow snow."

CHECK LIST: CAN YOU HANDLE IT?

Green industry consultant Ed Wandtke of Wandtke & Associates, Columbus, Ohio, says snow removal can be profitable if you:

- ▶ know the customers' requirements and expectations;
- ▶ know the level of service you are able to provide;
- ▶ know how much work will have to be sub-contracted.

"I often see green industry companies making promises to customers that they cannot keep," says Wandtke. "These companies have over-extended themselves, and could lose those valuable customers."

Here's Wandtke's list of questions you have to answer:

- 1) What snow removal equipment do I have?
- 2) How many qualified operators do I have access to?
- 3) What timeline do my customers demand for snow removal?
- 4) What type of back-up equipment does my company have for major storms?
- 5) Considering typical snow conditions, to what geographical area should I provide these services?
- 6) How much money is needed to make snow plowing a profitable business?



Snow removal equipment: eliminate any surprises

by RON HALL / Senior Editor

One of your goals as a snow removal contractor is to eliminate as many surprises as you can before you begin moving snow. This is particularly true when it comes to your equipment.

After all, you can't use weather as an excuse when you're in the snow removal business. It's not like being a day late in mowing a property or building a stone walkway. When it snows, you have to provide service. Now.

But things do go wrong with equipment, even for the most conscientious service provider. One contractor, in fact, says that even in the best snow operations, only 90 percent of everything goes well.

Preparing equipment for snow removal begins well in

advance of the first autumn or winter storm. It starts with matching equipment with the services that you provide.

One of the first mistakes some contractors make is that they don't purchase the right truck for snow removal.

"You should consult a dealer or a snow plow distributor to make sure that you get the truck spec'd properly, that you get a truck with a heavy enough front axle, that you get the proper charging system, that you get the proper transmission cooler, and you get the so-called snow plow preparation package," advises Don Anderson of Scherer Truck Equipment in Auburn Hills, Mich. "You have to make sure that the truck is able to be outfitted with a plow."

Anderson points out that certain extended-cab pickups, because of federal motor vehicle safety standards, can't be outfitted with plows. "That can be a real surprise to a guy who buys a \$30,000 truck," says Scherer.

Rob Harris of Knapheide Truck Equipment Co. in Kansas City adds that it's also important that the proper size plow is fitted to each truck. This information is readily available from snow equipment manufacturers. Or, consult with a knowledgeable dealer or distributor; they'll be glad to help.

Maintenance

Larry Wright of Wright's Landscape Services whose company provides snow removal in the "down river" area

Tip #3:

If you don't have a full-time mechanic on staff, have a good list of people you can rely on in emergencies.

of Detroit, recognizes the importance of matching the proper equipment with jobs—and of maintaining his equipment, too.

Two areas in his trucks—mostly Ford F350s and F450s and several larger trucks like F700s—receive special consideration: transmissions and electrical systems.

"We make sure that all of our trucks go into the transmission shop every fall, before winter, and the transmission fluid is drained, and they check all the filters and evaluate the condition of the transmissions," says Wright. (After 20 years of professional snow removal, Wright strongly favors automatic transmissions, even in larger trucks. "The fatigue on a driver is real tough with a stick shift. On a small truck, I wouldn't even think about using a stick shift," he says.)

"Electrical problems are insidious because you don't see them coming," says Wright. For instance, an electrical short can play havoc with a vehicle's lights. Hint: make sure that when an installer puts a dump body on a bare chassis and cab that he uses weather-tight sealed connections for splicing into the wiring harness.

As far as heavy duty items like plows, Wright says regular inspections will usually turn up cracks and evidences of fatigue before they fail. He urges his operators to periodically look over their equipment.

"If you're big enough to have a full-time mechanic on your staff, that's fantastic," he adds. "If not, you should have a pretty good list of people you can rely on for emergency service on your equipment. Whether it's somebody who can come out and do some welding, or a mechanic. Having someone with a strong electrical background who can trace those types of problems quickly is important, too."

Wright says snow removal equipment has improved quite a bit in the 20 years he's been in business. He started out using four-speed Jeeps, and he remembers some contractors still using plows that they had to shove by hand into the angle that they desired. Now, of course, electronic controls from inside the cab make blade operation a push-button affair.

Also very handy, he says, is the quick-attach plow mounting systems. (Western Products' UniMount System and Fisher Engineering's Minute Mount are examples.) This allows a contractor to remove the plow mounting assembly, including frame, lights, and pump very easily.

Even with these improvements, it's still essential that you prepare your trucks and equipment now to avoid those mid-

winter surprises. Remember, if your equipment isn't working, you aren't making money.

Spreaders

You also need the proper spreading equipment for any de-icers you will be applying.

"Someone riding in the back of the truck with a shovel is a waste of time, money and material," says Bob Guy of Akzo Nobel Salt.

Some smaller spreaders use a crank or run off the truck's electrical system. Other, bigger, spreaders run off the truck's primary drive and give a much more accurate dispersal.

"I'm partial to several types of polyethylene hopper spreaders that mount on the back of a pick-up," says Guy. "You can put a couple hundred pounds of de-icer straight from the bag into the hopper."

If you don't calibrate your equipment frequently and use too much material, it's hard on the plant life, it's hard on the concrete, and it's hard on the cars. Highway departments calibrate spreaders once a month, Guy notes. Landscapers should calibrate as often as possible, and check to make sure that there are no blockages before every snowfall.

Train, train, train

In the Minneapolis area, Henning, Rhode & Associates provides snow removal for a sizable number of townhouses, condos and some commercial property, too. But George Rhode says that his company wouldn't put even an experienced employee into one of its 35 trucks without proper training, much of it hands-on.

"They usually ride with an experienced person first," says Rhode. "Then they get turned loose, but with supervision from somebody else that's close by, maybe on the other side of the parking lot or on a nearby driveway."

This training also includes three or four hours by one of the company's three mechanics about how snow removal equipment works, with some instruction on diagnosing minor equipment problems that can be remedied on the street.

"When it snows, we usually put everything out there. We're going at it hard right from the beginning, so that if something goes wrong, we're not behind," says Rhode.

Snow removal services help contractor stay productive year round.

"Being able to clear snow is a real added value I offer my clients. I have a snowthrower, dozer blade and rotary broom, and my system lets me change attachments fast, without tools. I'm a real believer in zero-radius maneuverability. It lets me get into spots other guys just can't reach with bigger or less maneuverable equipment. And it is a lot faster than the smaller hand-pushed snow blowers."

— Mark Moyer, Kirksville, MO



PTO-driven snowthrower delivers no-clog performance, moves snow 20 to 30 feet away.

Let it Snow. Let it Throw.

When it snows . . .



PTO-driven rotary brooms leave a clean, dry path. Shown with winter enclosure and optional heater.



Multipurpose dozer blades remove heavy snow, slush or sleet.



V-snow plow clears walkways.

Call or write for the name of your nearest dealer and a "hands on" demonstration.

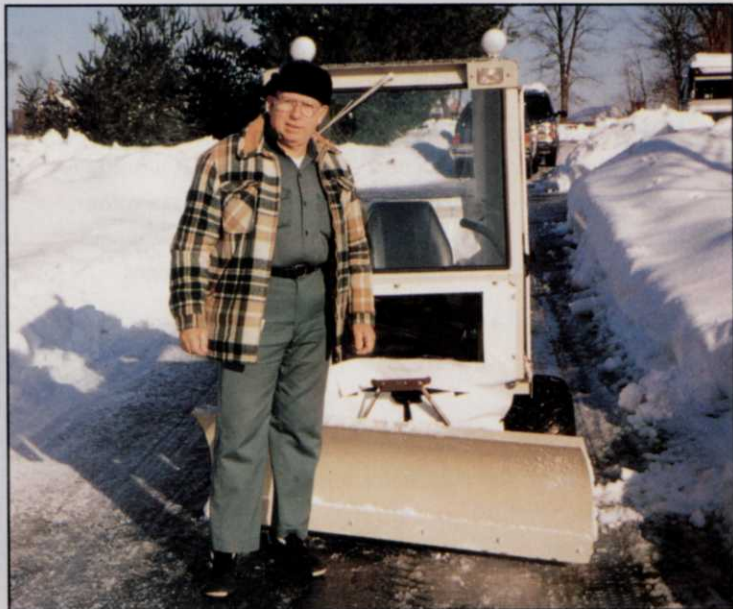
First to Finish...Built to Last

GRASS HOPPER
YOUR NEXT MOWER

Grasshopper passes the test in the worst storm of the decade.

"More than 25 inches of snow fell. Even though 1-2 inches fell each hour, we were able to keep the driveways in our area clear with our Grasshopper. The cab enclosure allowed us to stay warm for long periods of time – even with a minus 20° F wind chill index."

— Charles McIntire, Elkton, MD



Let it Mow.

When it shines . . .

Your Grasshopper turns into a high-efficiency zero-radius mower that lets you trim while you mow. Built for comfort, productivity and endurance, your Grasshopper will give you dependable service all year long, season after season.

Switch attachments in minutes without tools.

Grasshopper's Quik-D-Tatch® mounting system* easily connects a deck or attachment to the power unit and eliminates the alignment hassles often associated with switching attachments and deck sizes.

Other productivity tools include:

- Quik-D-Tatch Vac® Collection Systems
- Dethatcher • AERA-vator™ • Wand Vac™
- ROPS • Sunshade Canopy

Let it pick up leaves, mulch and aerate. Grasshopper lets you handle more jobs with the same machine.



GRASSHOPPER is number one in productivity. The exclusive Combo Mulching™ Deck* with full-flotation option, lets you mulch, discharge or bag with the same deck for superior results in varying conditions.

*patent pending

A sample contract for snow plowing

The following is a sample contract that can be used with commercial/industrial clients.

Beware: it is only a sample,

covering some of the basic contingencies that historically have been forced upon contractors by fickle clients and bad weather conditions.

You may not be comfortable with some provisions. Your clients may not be comfortable with some provisions. So tailor this sample to fit

your individual situation. And, after devising your own version of this contract, please consult your attorney.

SNOW PLOWING CONTRACT

To: _____ Date: _____

Time Limit: This quotation is firm for _____ days.

Contact Person: _____ Project: _____

Location: _____

We propose to furnish labor and equipment to plow snow for the following areas:

(Describe areas by sketch and/or monuments)

(Areas not covered by proposal)

This bid is based upon a season price of \$_____. The season shall commence _____, 19____, and shall terminate _____, 19_____.

Snow plowing is to commence within a reasonable time after the accumulation reaches a minimum of ____ inches, but not before it ceases to fall. Snow depths in excess of ____ inches will be plowed at an additional charge of \$_____ per inch. Snow depths shall be determined by the official report of the National Bureau and General Weather Service.

If any equipment other than a snow plow, snow blower and snow shovel is required to clear snow from the area to be plowed (i.e. front end loader, dump truck, etc.), an hourly rate of \$_____ per man shall be charged to the customer, along with any other costs incurred, including rental fees for such equipment. Work involving the use of extra equipment as described above shall be performed within a reasonable period of time upon completion of the contractor's regularly scheduled route.

If the customer so elects that his/her place of business should be plowed before business hours, and a snowfall necessitates an additional plowing, the customer will be charged \$_____ for the addi-

tional plowing. If the customer elects to have additional plowings, please initial here: _____.

Drifted snow in excess of _____ inches will be plowed at the additional charge of \$_____ per time.

Due to variables of temperature, compaction, winds, drifting, piling, etc., it is impossible to guarantee removal to the bare pavement.

It is the duty of the customer to afford access to the subject premises at all times, and the contractor shall not be responsible for failure to perform plowing services when access is denied or unavailable. Furthermore, the contractor shall not be responsible for any delay in rendering services occasioned by the customer's failure to grant access to the designated premises.

Reports of damages must be reported to the contractor within twenty-four (24) hours. Failure to report the damages constitutes a waiver, and the contractor is released from liability.

This written contract may be cancelled by either party with thirty (30) days advance written notice to the other party. Delinquent payments will be due on their due date. Failure to pay on the due date will relieve the contractor from any further liability to plow.

Unpaid balances will be assessed at a charge at the rate of one and

one-half percent (1.5%) per month on the unpaid balance.

The contractor shall not be held responsible or liable for any accidents resulting in injuries due to falls on the customer's property due to weather conditions for any except employees of the contractor.

The contractor will not be responsible for sod damaged by salty snow from streets or by snow piled next to roadways. Also, the contractor cannot be held responsible for scratches or scrapes in asphalt or asphalt curbs. The contractor cannot assume liability for any salt or calcium chloride damage to concrete or wood.

It is the duty of the customer to clear the designated areas of all movable obstacles including, but not limited to, automobiles, trailers, trash dumpsters, etc. Furthermore, any object which remains will be left in place and plowed around, and contractor shall be held harmless for any damage resulting to such obstacles unless the damage shall result from the grossly negligent or intentional conduct of the contractor, its employees, agents or servants.

DISCLAIMER:

The owner of the property is presumed to know his property boundaries. The owner will clearly stake or instruct the contractor to stake the areas to be plowed. In the event the areas staked are erroneous, the owner agrees to defend and hold harmless the contractor for any and all trespasses that may result from the owner's failure to properly stake his property. The owners agrees to pay the contractor's attorney fees in defense of the trespass claim.

The season snow plowing price does not include salt or calcium chloride application. Failure to salt or apply calcium chloride may result in unusually slippery conditions which may cause injury to persons or property. Salt will be applied at an additional charge of \$_____ per ton. Calcium chloride will be applied at an additional charge of \$_____ per ton.

If customer wishes salt and calcium chloride to be applied after each snowfall, please initial this box. The amount of salt and calcium chloride to be applied will be at the contractor's discretion.

If customer does not want salt applications, please initial this box.

If customer does not want calcium chloride applications, please initial this box.

The customer acknowledges that the real property is adequately insured for torf claims.

The customer agrees to defend and hold the contractor harmless from any and all liability, including attorney fees, which the contractor may accrue resulting from the contractor's work on the customer's property.

TERMS AND CONDITIONS:

This written agreement contains all conditions and describes all work to be done. This agreement supersedes all previous agreements and any verbal commitments made prior to the date of this agreement.

Unless specifically stated, sidewalk snow removal is not part of quoted rate. Quoted rate does not include front-end loader services.

Accounts that are past due will not be plowed until the account is brought up to date. The customer understands and accepts the fact that delays in payments made to the contractor may result in appropriate legal action being taken to collect monies owed.

If court litigation is begun, the customer agrees to pay the contractor's reasonable attorney fees.

This contract shall be binding inure to the benefit of the parties and their heirs, executors, administrators and assigns.

The customer understands that plowing (or salting) of a particular location may continue to prevail even after plowing (or application of salt). The customer understands that the contractor assumes no liability for this naturally occurring condition. The customer agrees to defend and hold harmless the contractor for any and all trespasses or suits that may arise as a result of this naturally occurring condition.

If sidewalk snow removal is selected as an option: The customer understands that sidewalk crews may not work safely if temperature and wind conditions combine to make wind-chill factors below 0 degrees Fahrenheit. The customer understands that the contractor reserves the right to stop working in these severe conditions so as not to force unsafe working conditions upon its employees.

This contract may be paid in three (3) installments. The first installment shall be fifty (50) percent of the contract price and is due on or before _____, 19____. The second installment of twenty-five (25) percent is due _____, 19____. The third and final installment is due _____, 19____. Failure to make timely installments terminates the contract and relieves the contractor from any further liability to plow the snow.

CUSTOMER ACCEPTANCE AND WORK

AUTHORIZATION:

The above quotation is accepted as written, and you are hereby authorized to proceed with the work:

By _____ Date: _____

APPROVAL:

This proposal will not be binding upon the contractor until the signed acceptance has been received by the contractor with a minimum payment of fifty percent (50%) of the contract price.

By: _____

Title: _____

Dated: _____

Thank you for using our service!

What kind of pick-up?

by JERRY ROCHE / Editor-in-Chief

Once you've decided to plow snow for a living (or been delegated it by your superiors), the biggest, most important purchase that faces you is the pick-up truck.

Snow plowing demands more from a pick-up than almost any other activity. Constant—almost abusive—changing gears, sometimes rapidly, with extra weight on the front (snow and the plow) and sometimes on the back (a load of de-icing material and/or spreader) means you need heavy duty equipment.

Here are some things you'll want to consider before purchasing a pick-up

truck that will be used to plow snow:

► **Is it a 4x4?** If you're going to be plowing snow, forget buying a 4x2. You need four-wheel drive. Period.

► **Does it come with a "snow plow prep package?"** Many brands of pick-ups can be purchased with such options as heavy duty front torsion bars (to support the weight of the plow), a 100-ampere alternator (for running electronic plow controls, standard and optional lights and heater, all at once), a heavy duty radiator, a heavy duty oil cooler and/or a transmission cooler.

"There are a lot

of what we call 'high-duty cycles' involved in plowing snow," says Ken Mussman of GMC Trucks. "Landscapers can order our snow-plowing VYU option for our ½-ton, ¾-ton and one-ton Sierra pick-ups for \$118. The important thing is to specifically order the snow plow prep package."

► **What kind of torque does the vehicle produce?**

Horsepower is fine, but a high-torquing engine "will allow you to not have to get a running start to plow a bank of snow," says GMC's Duane Paige. "Horsepower will allow you to go faster when you've started moving, but torque provides the power to push heavy objects."

Most vehicles will have torque ratings of 250-380 foot/lbs.

GMC's Vortec V-8 engine gets 410 foot/lbs. of torque, which is more than a standard V-10 engine, according to Mussman.

However, it is also important that you also buy a truck "with a high numerical axle ratio to get the power to the wheels," adds Ford's Tom Baughman. Ford makes the popular F-Series of pick-ups for snow-plowing.

► **Does it have limited slip differential, non-flotation tires and the same front and rear track width?**

"Limited slip rear differential is a major factor in getting out of situations where the plow might get trapped," says Baughman. "Also, non-flotation tires are the ones that are not very wide so they get down to the pavement. They



THE LEADER IN SNOW & ICE CONTROL!

If your job is snow and ice control, we've got you covered!

Western offers a complete line of hopper spreaders – in 12 ga. steel or 16 ga. 304 stainless steel – along with several models of versatile, affordable tailgate spreaders.

The PRO-FLO 2™ tailgate spreader, for example, is made



of high-strength polyethylene and powder coated steel, and includes a belt conveyor to assure positive feed of all materials, including wet sand.

Western snowplows and spreaders – the choice of snow and ice control professionals for over 45 years!



WESTERN PRODUCTS 7777 N. 73rd Street Milwaukee, WI 53223

World Wide Web <http://www.westernplows.com>

Tip #4:

What to look for: four-wheel drive, high torque and a snow plow 'package,' at the very minimum.

should also have a relatively aggressive tread pattern for biting into the pavement once they get to it. And the front and rear track must be the same so the tires will roll in the same rut and you don't lose power by making the front and rear tires both cut a path through the snow."

► Does it come with interior amenities?

"In the Sierra, you can run everything at once," says GMC's Paige. "You don't have to unplug something to do something else. There are three power ports to accommodate a cigarette lighter, a cellular phone or mobile radio and even a portable computer."

A sliding rear window helps in situations where you'll be backing up and the window might be frosted. Good ventilation will help keep you cool (yes, it'll get surprisingly warm under your jacket if you're working the truck hard). As a matter of fact, Ford has a heater/defroster with a halfway stop that allows you to use both at the same time, at enough power that your front window is defrosted and your feet keep toasty.

In the long run, vinyl seats and mats will pay off because it will get wet inside, and any moisture that is retained can quickly ruin the cab.

► What are heavy duty maintenance requirements?

With most pick-ups that are being used for heavy jobs like snow plowing, you will need to perform standard maintenance at narrower intervals. GMC and Ford, for instance, publish two maintenance schedules in each owner's manual: one for everyday light driving and one for heavy duty driving that puts added stress on components.

► **Is expert plow installation available?** Because of the relationship between the airbag (which is normally adjusted to deploy when the truck hits something) and the plow (which normally "hits something" hundreds of times a day), the airbag's trip mechanism must be adjusted so it doesn't blow up in your face everytime you push a load of snow.

"When we develop our vehicles, we engineer them for snow plowing," says Ford's Baughman. "The F Series is engineered to be as friendly as possible with respect to airbag deployment. We did computer modelling and designed 'transparent' snow plow brackets to make the magic of the airbags work."

► **Does the vehicle come with safety equipment, either optional or standard?** Besides four-wheel drive and airbags, you'll want four-wheel anti-lock brakes, running lights—and good back-up lamps for conditions where the back windows might be frosted up.



Four-wheel anti-lock brakes will allow you to hit the brakes on slippery pavement without spinning and yet you'll still be able to steer the vehicle in the desired direction. Four-wheel anti-lock brakes also brake the vehicle quicker than rear-wheel anti-lock brakes—and much quicker than disc brakes.

Running lights come in handy during early-morning hours when the sun hasn't quite peeked over the horizon. There is a danger that the driver may become so involved with his plowing duties that he becomes unaware of other vehicles around him. Special running lights will notify other vehicles of a plowing operation in progress, especially in those hours when other vehicles might be harder to see. "Many of the trucks we sell are white, and snow is white," says Mussmann. "In those situations, it's a good idea to have extra lights."

► **Finally, what about other goodies?** Here are some to consider:

- A block heater like the kind Ford builds into the engine housing. The owner simply unwinds an electrical power cord, plugs it in at night, and when the engine starts in the morning it doesn't take as long to warm up.
- Automatic transmission "so you can pay attention to all the things you have to do," notes Baughman. Because plowing snow is hard work, even from the cab of a pick-up, you'll also probably avoid a lot of sore muscles by the end of the day with an automatic tranny.
- Enough rear payload to carry de-icer and a spreader in the bed. Don't forget, however, that you'll be using the same truck during the summer and might be carrying heavier objects then.
- Most of all—bottom line—the main thing to remember before you buy your snow plowing pick-up truck is best voiced by GMC's Paige:

"The truck you buy should be a smart business investment."



Pour on performance, profits with de-icing salt

by ROBERT GUY / Highway Field Sales Manager, Akzo Nobel Salt

It's that time of year again. September not only marks the children's return to school, but also signals the time to begin planning for the business that occupies the winter months: de-icing.

An understanding of how the various de-icing products work, coupled with knowledge of proper application techniques, will provide for safe stepping in winter, a green landscape in spring—and satisfied customers all year round.

The four halide salts used as de-icers are:

- magnesium chloride,
 - calcium chloride,
 - sodium chloride ("salt")
- and
- potassium chloride ("potash").

They all have the same chemical-melting capacity. (If you took a pound of each, and kept pouring ice on them until they stopped melting the ice, they'd all melt about the

same amount.) The differences are in the melting rates, which are related to the chemical activity of the individual products.

Magnesium chloride provides a very fast melting action and a high penetration rate. However, the melting action does not last very long. Magnesium chloride is so active that it will drain moisture from the air until it dilutes itself so much that the water will freeze again.

Calcium chloride has a somewhat faster melting action compared to sodium chloride. It, too, however, draws moisture from the air in a manner similar to magnesium chloride, but at a lesser rate.

Sodium chloride provides a long-lasting melting action as a result of the product's chemistry and mixture of fine and coarse crystals.

Potassium chloride's melt-

ing action is quite slow and therefore not the best choice for de-icing.

Which is best?

Salt (sodium chloride) is the most common melter used today. While other melters have different performance characteristics, salt melts the most ice and snow per dollar. A cost comparison of the four de-icing products reveals that potassim, calcium and magnesium chlorides are 4, 7 and 14 times costlier, respectively, than sodium chloride.

Salt is used as a de-icer because it lowers the freezing point of water. The melting action of salt forms a brine layer below the surface of the snowpack. The brine layer prevents water from bonding to the pavement or walkway.

How much?

The amount of de-icer needed to achieve a desired

Tip #5:

Install salt-tolerant plants around the edges of landscapes where you plan to be spreading de-icing materials.

pavement condition is a function of temperature and weather conditions.

When the temperature drops, two things happen to the ability of any de-icing product to melt ice and snow:

- 1) the total amount of ice a de-icer can melt decreases as the temperature falls, and
- 2) the speed at which the de-icer melts also decreases,

resulting in a longer period of time required to melt the same amount of ice per pound of de-icer applied.

The keys to the effective use of any de-icer, including salt, are to apply the proper amount based on the weather conditions and to allow sufficient time for the melter to work. This is particularly important at lower temperatures.

The effective temperature range for many common melters is often a point of discussion among snow-fighting professionals. Frequently, a set temperature is given for each de-icer; however, most de-icers continue to work well in the low-temperature range. Allowing adequate working time—usually 20 to 30 minutes—for the de-icer to perform can significantly reduce the amount of melter used overall. Pouring the salt on, five applications five minutes apart, is very wasteful and very expensive.

Another salt application procedure in the experimental

stages is "pre-salting." The idea behind pre-salting is to apply de-icing salt to the surface area prior to the winter storm. An application of de-icing salt 20 minutes before a snowfall delays the initial application of salt during the snowfall and can ultimately eliminate the final application of salt, thereby reducing product and labor costs.

Akzo Nobel has 95 depots across the country. It also offers valuable information on salt storage, application and estimation through a series of seminars. For more information, phone toll-free (800) 752-SALT.

Application tips

Different conditions call for different approaches to de-icing salt applications. Salt industry manufacturers, working with snow-fighting professionals, have formulated the following guidelines for various weather conditions.

Temperature: near 30° F.

Snow and sleet: Apply .40 lb. of de-icing salt per 100 sq. ft. surface area. If snow accumulates, plow and salt at the same time.

Freezing rain: Apply 0.20 lb. per sq. ft. of surface area.

Temperature: below 30° F.

Snow and sleet, surface starting to get slushy: Apply 0.25 to 0.67 lb. of de-icing salt per 100 sq. ft. surface area. If snowfall builds up, plow and repeat de-icing procedure.

Snow turning to freezing rain: Apply 0.25 to 0.30 lb. per sq. ft. of surface area.

Temperature: below 20° F.

Dry snow: Plow only; wait to apply salt. Apply de-icer to wet or icy areas.

Snow and sleet, wet road surface: Apply 0.45 to 0.67 lb. per sq. ft. of surface area. If snow or sleet accumulates, plow and salt simultaneously. If temperatures rise, reduce salt amount to 0.45 lb. per 100 sq. ft. of surface area. Allow salt to act before plowing.

Temperature: below 10° F.

Snow, sleet, with packed snow or ice: Apply 0.67 lb. of de-icing salt per 100 sq. ft. of surface area. When snow or ice turns to slush, start plowing. Continue applying salt and plowing until you have safe surface.

SALT-TOLERANT SPECIES

Plant type	Excellent	Good
Cool-season turf	tall fescue	perennial rye
	creeping bent	colonial bent
Deciduous trees	Norway maple	shagbark hickory
	horsechestnut	Russian olive
	tree of heaven	white ash
	honeylocust	largetooth aspen
	cottonwood	Lombardy poplar
	black locust	trembling aspen
		choke cherry
Deciduous shrubs		pear
		mountain ash
		red oak
	Siberian peashrub	burning bush
sea buckthorn	honeysuckle	
staghorn sumac	Japanese tree lilac	
	common lilac	
Conifers	blue spruce	red cedar
	jack pine	juniper
	mugo pine	
	Austrian pine	

De-icers have different uses

Akzo Nobel is America's largest supplier of salt products for highway safety. Marketed under the "Diamond Crystal" brand name, the product mix includes Halite, Calcium Chloride and JiffyMelt.



Halite de-ices walks and driveways, and helps to keep them ice-free well below freezing. Sodium chloride crystals will not chemically attack concrete or harm vegetation when used as recommended, Akzo Nobel notes.

Calcium Chloride is the most ecologically safe way to melt ice on walkways and driveways, according to Akzo Nobel. Runoff will not harm plants or the water table, and the product will not contribute to concrete spalling.

JiffyMelt is a specially formulated de-icing blend of calcium, potassium and sodium chlorides to minimize damage to vegetation and paved surfaces, without sacrificing the ice-melting capacity of rock salt.

For more information, phone (717) 587-9465 or

Circle 296

Snowplows, spreaders for commercial users

Fisher Engineering snowplows feature trip-edge blade design and three hydraulic options.

When a Fisher blade strikes an obstacle, the lower edge trips back, compressing the springs on the backside. When the obstacle is cleared, spring tension is released, returning the edge to its normal position. Because the blade remains upright when it hits an obstacle, plowed snow out in front of the blade stays put.

In addition to the traditional belt-driven, cable-operated hydraulic system, the Electric Clutch/Solenoid valve system is reliable, "on-demand" like an electric clutch and fast. (A third option, the Fisher Electric Hydraulic Pak, is also available.)

For more information, phone (207) 594-4446 or

Circle No.297



Four plows meet every requirement

Western Products has four lines of snowplows to meet the requirements of every type of plowing need: Sport/Utility, Standard, Pro-Plow and the Heavyweights lines.

The newest addition, the Poly plows, feature improved snow rolling action.

Western also sells hopper-type, bed-mounted and tailgate spreaders. The newest tailgate model, the Pro-Flo2, can be filled to 1,200 lbs. It has a belt conveyor to assure positive feed of all materials, including wet sand.

For more information, phone (414) 354-2310 or

Circle No.298

'No-clog' snowthrower, dozer blades do it all

Grasshopper offers a line of snowthrower attachments and dozer blades for its full line of zero-radius mowers.

The Grasshopper snowthrower attachment is available in 48- and 60-inch widths. Both sizes deliver "no-clog" performance, even in deep or heavy, wet snows, Grasshopper says.

A discharge spout rotates a full 180 degrees to deliver snow up to 20 feet. The attachment features heavy-gauge welded steel, a high-speed 12-inch diameter auger with heavy-duty 3/16-inch flighting and a built-in heavy-duty scraper blade. A cold-weather enclosure, with optional 16,000-BTU heater, is also available.

The 48- and 60-inch multi-purpose angle dozer blades can be used to move snow or dirt, sand and gravel. The 60-inch V-Snow plow is perfect for sidewalks, Grasshopper claims.

For more information, phone (316) 345-8621 or

Circle 299



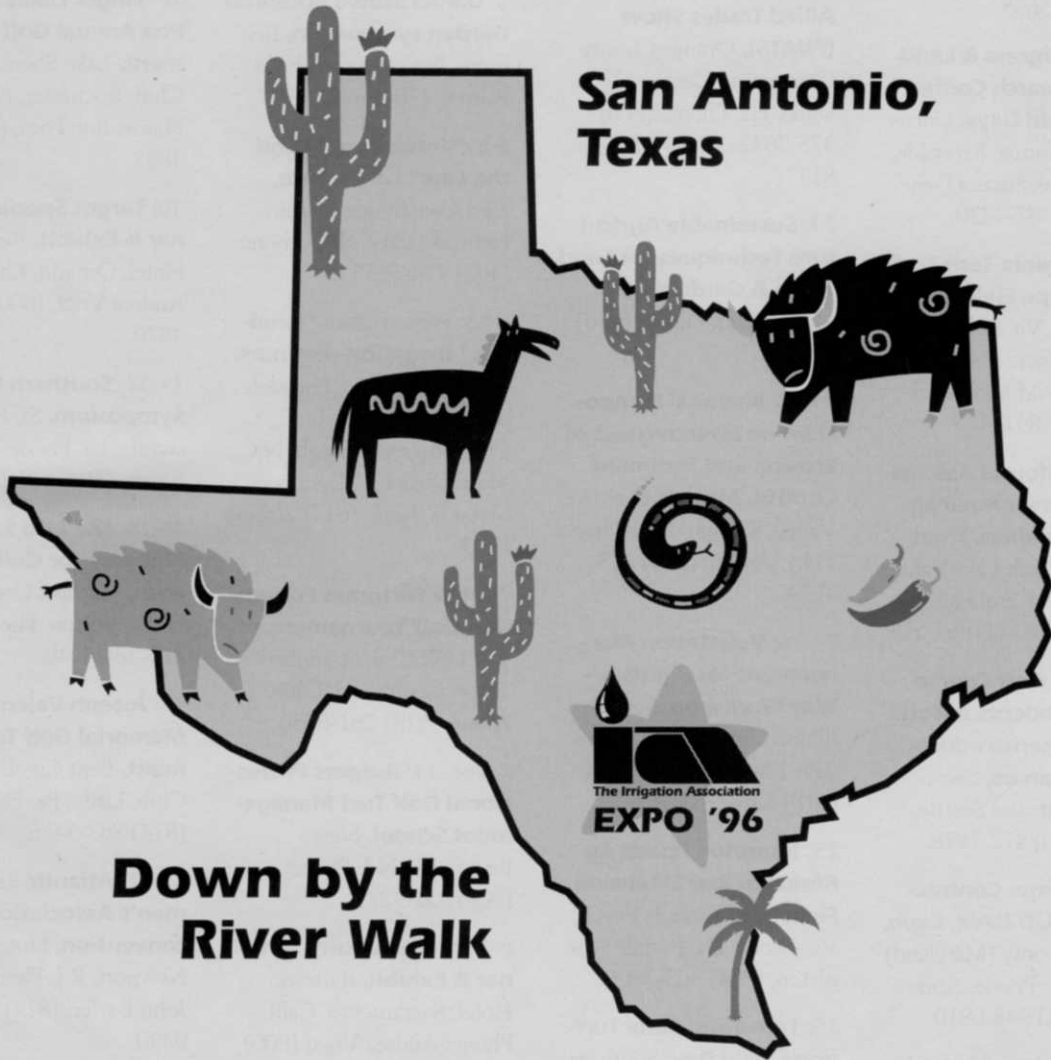
The Irrigation Association's 17th Annual International Irrigation Exposition

November 3-5, 1996

ASAE's Technical Conference

November 4-6, 1996

Cosponsored by TTIA & TAIA



**San Antonio,
Texas**

**Down by the
River Walk**

For more info on our 17th Annual International Exposition & ASAE Technical Conference, please return this form to the IA.

The Irrigation Association
8260 Willow Oaks Corp. Dr., Suite 120
Fairfax, Virginia 22031 USA
(703) 573-3551 • FAX (703) 573-1913

Name _____
Company _____
Address _____
City _____ State _____ Zip _____
Country _____
Phone _____ Fax _____

Events

SEPTEMBER

16-18: Pacific Northwest Chapter ISA training conference, Yakima (Wash.) Convention Center. Phone: (206) 784-1945.

17: "Building with Trees" seminar, Dallas. Phone: (402) 474-5655.

17-18: Turfgrass & Landscape Research Conference & Field Days, University of California, Riverside, Calif. Phone: Susana Denney, (909) 787-4430.

17-19: Virginia Tech Turf & Landscape Field Days, Blacksburg, Va. Phone: Dr. Dave Chalmers (540) 231-9738 or David McKissack (540) 231-5897.

17-19: California Association of Nurserymen annual convention, Hyatt Regency, North Lake Tahoe, Nev. Phone: Carol Hutchings, (916) 567-0200.

17, 18, 19: Golf Course Superintendents Association of America educational seminars, Sacramento, Calif. and Seattle. Phone: (800) 472-7878.

18: Landscape Contractors of Md./D.C./Va. Expo, Howard County (Maryland) Fairgrounds. Phone: Anne Trone, (301) 948-0810.

18-21: Galabau 96 (trade fair for landscaping, sports, rec areas, playing fields, golf courses), Nürnberg, Germany. Phone: Kathy Donnelly, (508) 371-2203.

19: "Winning Fields" seminar, Doubleday Field,

Cooperstown, N.Y. Phone: (800) 873-8873.

19: Yoder Brothers Fall Field Days, Leamington, Ontario, Canada. Phone: (800) 232-9557 or (330) 745-0617.

19-22: Florida Nursery & Allied Trades Show (FNATS), Orange County Convention Center, Orlando, Fla. Phone: (800) 375-3642 or (407) 345-8137.

21: Sustainable Agriculture Techniques for Landscape & Gardening, Marin, Calif. Phone: (916) 756-6967.

23-25: National Symposium on Effectiveness of Erosion and Sediment Control, Marriott-Crabtree Valley, Raleigh, N.C. Phone: Toby Vinson, (919) 733-4574.

24-25: Vegetation Management for Rights-of-Way Workshop, Southern Illinois University, Carbondale. Phone: Sandy Rhodes, (618) 536-7751.

25: Hampton Roads Ag Research and Extension Field Day, Virginia Beach, Va. Phone: Dr. Bonnie Appleton, (804) 363-3906.

26: Transition Zone Turfgrass Field Day, Southern Illinois University, Carbondale. Phone: Sandy Rhodes, (618) 536-7751.

26: Target Specialty Seminar & Exhibit, Doubletree Hotel, Ventura, Calif. Phone: Andrea Vogt, (800) 352-3870.

26: Yoder Brothers Fall Field Days, Hightstown, N.J. Phone: (800) 232-9557.

OCTOBER

3: Yoder Brothers Fall Field Days, Pendleton, S.C. Phone: (800) 232-9557.

5: Daniel Stowe Botanical Garden symposium, Belmont, N.C. Phone: Sheila Palmer, (704) 825-4490.

6-8: "Trees, People and the Law" conference, Lied Conference Center, Nebraska City, Neb. Phone: (402) 474-5655.

6-15: Flowtronex "Final-Net" irrigation seminars, Columbus, Ohio; Philadelphia, Washington, D.C.; Charlotte and Raleigh, N.C.; Myrtle Beach, S.C. Phone: Melinda Swan, (614) 262-1443.

7: Ohio Turfgrass Foundation Golf Tournament, The Golf Club at Yankee Trace, Centerville, Ohio. Phone: (614) 261-6750.

7-Dec. 13: Rutgers Professional Golf Turf Management School, New Brunswick, N.J. Phone: (908) 932-9271.

8: Target Specialty Seminar & Exhibit, Radisson Hotel, Sacramento, Calif. Phone: Andrea Vogt, (800) 352-3870.

8-10: West Texas Turfgrass Conference and Trade Show, Western Texas College, Snyder. Phone: Pam Deeds, (806) 354-8447.

8, 9, 11: Golf Course Superintendents Association of America educational seminars, Oklahoma City, Okla., Billings, Mont. and Honolulu. Phone: (800) 472-7878.

10: Finger Lakes AGCS Poa Annual Golf Tournament, Lake Shore Country Club, Rochester, N.Y. Phone: Bob Foos, (716) 621-4833.

10: Target Specialty Seminar & Exhibit, Red Lion Hotel, Ontario, Calif. Phone: Andrea Vogt, (800) 352-3870.

11-12: Southern Garden Symposium, St. Francisville, La. Phone: Larry Smart, (504) 635-6303.

13-15: The Info Superhighway for Golf conference, Marriott Copley Place Hotel, Boston. Phone: (888) 275-3643 x40.

14: Joseph Valentine Memorial Golf Tournament, Bent Creek Country Club, Lititz, Pa. Phone: (814) 863-3475.

15-17: Atlantic Seeds-men's Association annual convention, Hotel Viking, Newport, R.I. Phone: Dr. John Baylor, (814) 237-0330.

16: Sustainable Agriculture Techniques for Turf & Golf Course Management, Seal Beach, Calif. Phone: (916) 756-6967.

LM

LANDSCAPE Bookstore



Turfgrass Management
Fourth Edition
 by A. J. Turgeon
 406 pages, hardcover
 Item #LSMB815
\$78.00



Turfgrass: Science and Culture
 by James Beard
 685 pages, hardcover
 Item #LSMB630
\$88.00



Diseases of Turfgrasses
Third Edition
 by Houston B. Couch
 434 page, hardcover
 Item #LSMB816
\$84.50



Turf Management for Golf Courses
 by James Beard
 642 pages, hardcover
 Item #LSMB615
\$96.00



Human Resource Management for Golf Course Superintendents
 by Robert Milligan & Yom Maloney
 184 pages, hardcover
 Item #LSMB824
\$34.95



Turf Managers' Handbook
 by W.H. Daniel & R.P. Freeborg
 437 pages, hardcover
 Item #LSMB110
\$39.95



Managing Turfgrass Pests
 by Thomas L. Watschke, Peter H. Demoenen & David J. Shetlar
 361 pages, hardcover
 Item #LSMB766
\$69.95



Golf Course Management and Construction
 by James C. Balogh & William J. Walker
 976 pages, hardcover
 Item #LSMB617 **\$79.95**



Management of Turfgrass Diseases
 by J. M. Vargas, Jr.
 294 pages, hardcover
 Item #LSMB764
\$65.95



Turfgrass Science and Management
 by Robert D. Emmons
 451 pages, hardcover
 Item #LSMB805
\$51.95



Turfgrass Management Information Directory
 edited by Keith Karnok
 115 pages, softcover
 Item #LSMB820
\$19.95



Lawns: Basic Factors, Construction and Maintenance of Fine Turf Areas **Third Edition**
 by Jonas Vengris & William A. Torello
 195 pages, softcover
 Item #LSMB811 **\$15.50**



Controlling Turfgrass Pests
 by Shurtluff, Fermanian & Randell
 449 pages, hardcover
 Item #LSMB220
\$74.00



Weed Science Principles and Applications **Third Edition**
 by Floyd M. Ashton and Thomas J. Monaco
 466 pages, hardcover
 Item #LSMB823
\$79.95



Floyd Perry's Pictorial Guide to Quality Groundskeeping "Covering All the Bases"
 500 pages, hardcover
 Item #LSM817 **\$36.60**



Nursery and Landscape Weed Control Manual **Second Edition**
 by Robert P. Rice, Jr.
 290, pages, softcover
 Item #LSMB814
\$29.95



Superintendent's Handbook of Financial Management
 by Raymond S. Schmidgall
 150 pages, hardcover
 Item #LSMB825
\$34.95



Floyd Perry's Pictorial Guide to Quality Groundskeeping "There Ain't No Rules"
 500 pages, hardcover
 Item #LSM818 **\$36.60**

Call 1-800-598-6008 • Outside the U.S. call 218-723-9180

ADVANSTAR MARKETING SERVICES • Customer Service Dept. • 131 W. 1st St. • Duluth, MN 55802

Prices subject to change.

Residents of CA, CT, GA, IL, MN, NJ, NY, OH and TX must add sales tax.

CODE: 949629

SUPPLIERS CORNER

Turf managers who buy natural organic **Milorganite** fertilizer this fall will help support turfgrass research. According to Milorganite's Larry Lennert, the company will donate \$10 for each ton of Milorganite purchased to the buyer's favorite turfgrass research organization. "Milorganite and its distributors have long sup-

ported turf research at the national level through the O.J. Noer Research Foundation," Lennert says. "This program enables customers to support research at the local level." Milorganite is celebrating its 70th year of serving professional turf managers with natural organic fertilizer.

Jacklin Seed received the 1996 Idaho Governor's Export Marketing Award for Service from Lt. Gov. Butch Otter at the World Trade Day in Boise this summer. Jacklin now exports 35 percent of its seed to more than 50 countries around the world. Elsewhere at Jacklin, Hagen Ledebor is new manager of Grower Services

Operations in Oregon. He will be responsible for managing all aspects of contracting and placing Jacklin varieties in the Willamette Valley.

Info center

VIDEOS AND LITERATURE FOR THE GREEN INDUSTRY

AERATION INS & OUTS...Millcreek Manufacturing is offering a sales kit for landscapers and lawn care operators interested in expanding their business with turf aeration. The kit consists of a booklet explaining aeration basics and providing helpful sales tips, a master sales flyer and a professionally designed newspaper ad. To order your *free* aeration kit, phone (800) 879-6507 and tell them you saw it in *LANDSCAPE MANAGEMENT*.

USING PGRs..."The Professional's Guide to Turf and Ornamental Plant Growth Regulation" is available *free* from PBI/Gordon Corp. This new application guide provides 24 pages of information with more than 50 full-color pictures. Info concerning factors to consider before, during and after PGR treatments, regardless of product, is provided. For your copy: phone (816) 421-4070 and tell them you saw it here.

BIG HORT CATALOG...has 100 new titles for 1996. Contact the American Nurseryman Publishing Co., Book Department, 77 West Washington St., Suite 2100, Chicago, IL 60602-2904; (800) 621-5727. In metro Chicago: (312) 782-5505.

GOLF DESIGN..."An Environmental Approach to Golf Course Development" is a 48-page brochure with 12 case studies. Designed for developers and municipal groups that handle permitting. \$10 per copy from the American Society of Golf Course Architects, 221 N. LaSalle St., Chicago, IL 60601; (312) 372-7090.

BUSINESS BONUS...Vander Kooi & Assoc. Inc has a catalog of books, tapes, videos and seminars. This longtime consultant to the construction industry, including landscape construction, offers a range of business titles. Contact Vander Kooi & Assoc., Inc., P.O. Box 621759, Littleton, CO 80162; (303) 697-6467; fax (303) 697-6815.

LIVING SCULPTURES..."Quick and Easy Topiary and Green Sculpture" has more than 300 color photographs and drawings to illustrate techniques for growing and shaping plants. \$18.95. Contact Storey Communications, Inc., P.O. Box 445, Pownal, VT 0526; (800) 441-5700.

A ROSE IS A ROSE...Get the lowdown in "Roses for the North: Performance of Shrub and Old Garden Roses at the Minnesota Landscape Arboretum." \$11.95 per copy from the University of Minnesota, 405 Coffey Hall, 1420 Eckles Ave., St. Paul, MN 55108-6068. Phone (800) 876-8636 or (612) 624-4900; fax (612) 625-2207; e-mail: news@mes.umn.edu

Encore Manufacturing's dealer base showed growth of 12 percent this year, according to company president Dick Tegtmeier. Sales were buoyed by the introduction of the Z42 dual-market riding mower for commercial users and consumers alike.

United Horticultural Supply added a Southern Division, completing its coverage of the United States to the professional turf, lawn care, nursery and specialty horticultural markets. John Walther is manager of the new division (N.M., Texas, La., Ark., Miss.).

Roger Bechle and Bart Fox join **American Cyanamid** as territory managers for turf, ornamental and pest control products. Bechle will handle the Northeast while Fox will service the Southwest.

Ransomes is new official supplier to the PGA European Tour and European Senior Tour, which includes the British Open Golf Championship and the Volvo PGA Championship. The company's products will be recommended for use at all tour stops for the next three years.

Plant Health Care acquired Industrial Services International, maker of Terra-Sorb water polymer gel products. James J. Quinn, previously president of ISI, is now a vice president for PHC, a leading

supplier of plant health care-related products and services to the horticulture, forestry and land restoration industries. PHS will warehouse and package Terra-Sorb at its Pittsburgh manufacturing facility.

Agway Inc. of Syracuse, N.Y. intends to sell the assets of its subsidiary, **Roberts Seed** of Tangent, Ore., to **Pickseed West** of Tangent, Ore. "The two companies not only share common trade objectives, but have developed close industry ties over the years," a press release says. "The combined entity will result in one of the largest seed companies in the Pacific Northwest."

Jacobsen is celebrating 75 years as a manufacturer of professional golf and turf maintenance equipment. "There's a new spirit at our company," says president Phil Trailies, "a bright, new spirit of enthusiasm and commitment to the products we build and to the golf and turf professionals we serve." According to the company, Jacobsen products are found on more than 75 percent of all the golf courses on Earth.

Two months ago, Vice President Al Gore and members of the Green Chemistry Partnership presented **Monsanto** with the President's Green Chemistry Award for new synthesis technology. Monsanto received the award because it developed a new "zero-waste" chemical process to make disodium iminodiacetate (DSIDA), a key chemical intermediate in the production of Roundup herbicide.

Gary Neyman is new product group manager for **Lebanon Turf Products**. He will be responsible for the sales and marketing of Country Club, Country Club-2, Nx-Pro and IsoTek professional turf products.

The **J.R. Simplot Co.** and **Best Professional Turf Products/Apex Professional Horticulture Products** have selected Swanson Russell Associates as their marketing communications agency of record. **LM**

REPRINTS

Reprints of *Landscape Management* articles, advertisements, news items or special announcements are available through Advanstar Marketing Services. Customized to meet your specific needs, reprints are highly effective when you use them to:

- ♦ Develop direct-mail campaigns
- ♦ Provide product/service literature
- ♦ Create trade show distribution materials
- ♦ Present information at conferences and seminars
- ♦ Train and educate key personnel, new hires
- ♦ Enhance press kits
- ♦ Compile reference materials
- ♦ Track trends and emerging technologies

ARTICLES
NEWS ITEMS
ADVERTISEMENTS

LANDSCAPE MANAGEMENT

ADVANSTAR MARKETING SERVICES
1-800-736-3665
216-891-2744
FAX: 216-891-2727
7500 OLD OAK BLVD.
CLEVELAND, OH 44130

Wide mulcherizer decks claim to be operator, environmentally friendly

Jacobsen's new Mulcherizer mulching decks for Turfcats out-front rotary mowers are both operator and environmentally friendly.

In a single pass, the Mulcherizer

cuts and re-cuts clippings, then forces them back down into the turf. The clippings are spread uniformly, without windrowing, Jacobsen says. A dual-action flap also

combs and distributes clippings evenly into the turf. The Mulcherizer deck is available in 60- and 72-inch cutting widths.

For more information, phone (414) 637-6711 and tell them you saw a product release in LANDSCAPE MANAGEMENT, OF

Circle 280



Get more bounce into low-level work

J. D. safety work pants can offer additional protection from knee injuries associated with turf maintenance with their patented, built-in foam knee pads.

The pads provide cushioned protection between knees and hard, wet work surfaces. Abrasive resistant, 100 percent waterproof sheathing prevents wetness while repairing irrigation and sod, and sitting on wet surfaces and equipment. Durable and comfortable, they are a favorite of superintendents and mechanics throughout the U.S., Shawnmark Industries says.

For more information, phone (401) 295-1673 and mention LANDSCAPE MANAGEMENT, or

Circle 281

Business Starts Here

AT THE

Greatest Show on Turf

December 10 - 12, 1996
Atlanta, Georgia

Call 770/975-4123

Georgia
Turfgrass
Conference
& Show

Mower/mulcher technology leap uses counter-rotating blades

Bush Hog's new counter-rotating blades are the heart of the mower-/mulcher technology recently developed by the company.

The change reduces mowing and clipping handling time and labor costs by half while creating a better appearance than that delivered by more traditional machines.

"After successfully proving the concept in an agricultural application, it became apparent this new concept could be refined to provide performance that would surpass any mulching device currently available for turf and landscape

applications," says Robert O. Moore, vice president of sales.

For more about the new Bush Hog mower/mulcher, call (205) 872-6261 and mention LANDSCAPE MANAGEMENT, or

Circle 282



Herbicide receives interim registration in California market

Gallery 75 Dry Flowable pre-emergence herbicide from DowElanco has received interim registration for professional uses in California.

An interim registration is granted to products that have from one to three data requirements remaining to be submitted to the state's EPA pesticide regulation department.

Gallery controls weeds in ornamental plants, non-fruit bearing trees and vines, and golf course fairways and roughs. Non-cropland uses in California are limited to roadsides, highway guard rails, median strips, sign posts and delineators.

For more information, phone (800) 352-6776 and mention LANDSCAPE MANAGEMENT, or

Circle 283



A World With Trees...where the trees you plant create cool, quiet neighborhoods

Trees Make a World of Difference™

Trees Make a World of Difference. Between drab, barren yards, and cozy, sheltered homes. Between hot, sun-baked streets, and cool, shaded neighborhoods where bird songs fill the air.

Trees Make a World of Difference. Between smoggy air and noisy traffic, and clean air and quiet places to enjoy.


By planting trees, you can increase the value of your property up to 15% or more. At the same time, you'll make a personal, positive contribution to a better environment.

The trees you plant will remove carbon dioxide from the air, produce oxygen, and give wildlife a home. And trees help conserve energy. They can lower your heating bills 10-20%, and cut cooling costs 15-35%.



A World Without Trees

Find out how trees can make a world of difference for you, and your neighborhood. For your free brochure write: Trees For America, The National Arbor Day Foundation, Nebraska City, NE 68410.

 **The National Arbor Day Foundation**

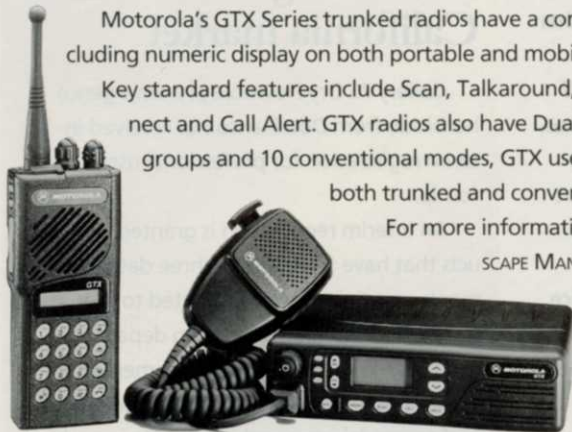
Trunked radios have multiple features

Motorola's GTX Series trunked radios have a combination of multi-feature advantages, including numeric display on both portable and mobile modems.

Key standard features include Scan, Talkaround, Private Conversation, Telephone Interconnect and Call Alert. GTX radios also have Dual Mode capability. With 10 systems/8 talk groups and 10 conventional modes, GTX users can enjoy the convenience of selecting both trunked and conventional repeater operation.

For more information, call (708) 576-1000 and mention LANDSCAPE MANAGEMENT, OR

Circle 284



Help for turf aeration sales

Millcreek Manufacturing Company announces the release of a free sales kit for landscapers and lawn maintenance professionals interested in expanding their business with turf aeration. The kit contains a booklet which explains core aeration basics and provides helpful sales tips for marketing aeration services to homeowners as well as to schools and municipalities for sports turf applications. The kit also contains a master sales flyer, which landscapers can customize by imprinting their own name and phone number, then duplicate in larger quantities.

A professionally-designed newspaper ad is also included, which can be likewise customized with the landscaper's name and phone number and used for local newspaper advertising.

For more information, call (800) 879-6507 and tell them you saw it in LANDSCAPE MANAGEMENT, OR

Circle 285



4WD clutch one of many perks on versatile front mower

The Kubota F3060 front mower is equipped with a hefty 30 hp, liquid-cooled, 4-cylinder diesel engine. Designed to deliver maximum mowing performance, the F3060 features new Dual-Acting Overrunning 4-wheel drive with 4WD clutch to prevent turf scuffing, hydrostatic transmission and hydraulic independent PTO. The F3060 is available with either a 60- or 72-inch side-discharge mower. The tilt-up

mowers are designed for easy service and feature a cutting height from one to four inches. A tilt steering wheel, power steering, deluxe high-back seat with armrest and an easy-to-read instrument panel ensure maximum operator comfort and convenience.

For more information, call (310) 370-3370 and tell them you saw it in LANDSCAPE MANAGEMENT, OR

Circle 286



Diskette builds retaining wall skills

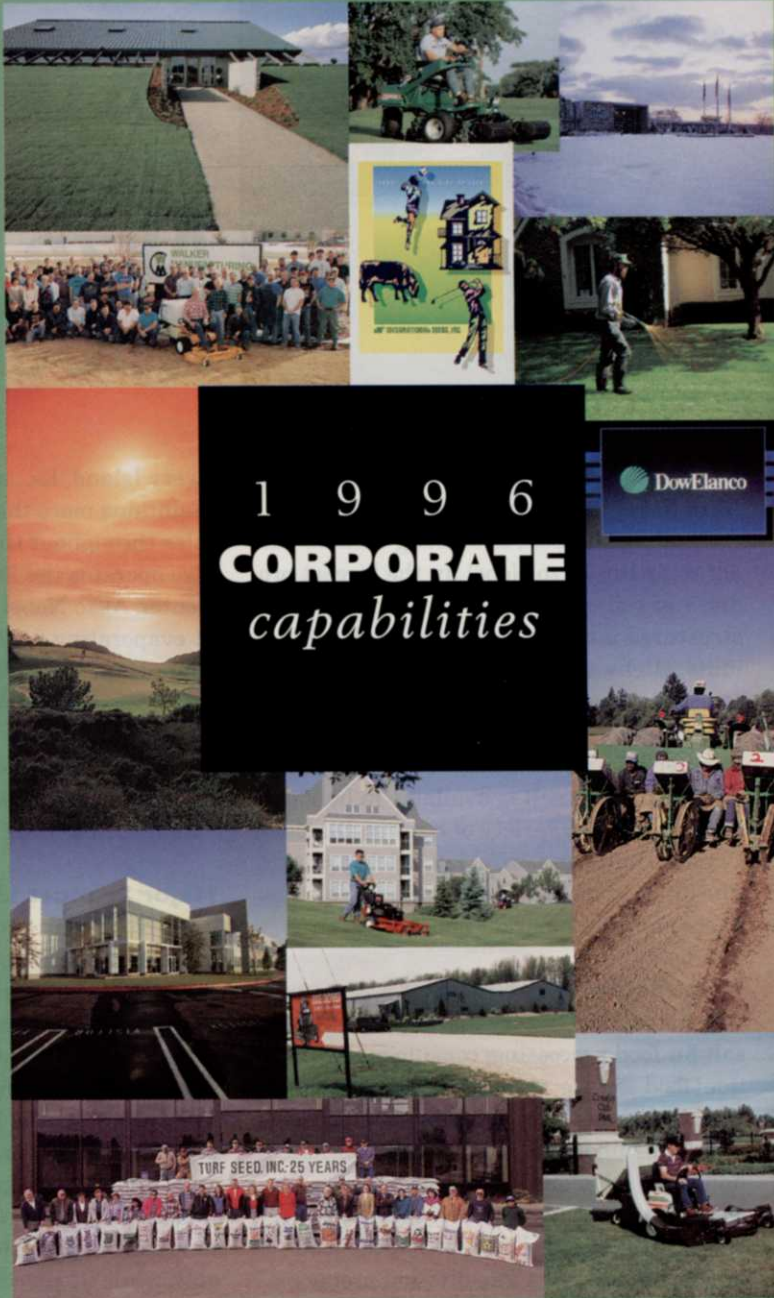
Versa-Lok Retaining Wall Systems recently released version 5.0 of its popular Construction Details Diskette. Electronic drawings stored on the 3.5-inch diskette include cross sections, plan views and isometric wall details. Guide specs are also provided on the diskette.

Illustrations include curves, corners, steps, capping and pinning details, as well as other segmental retaining wall elements. All details were created using AutoCAD R12 software. A DXF format is also available.

The diskette is available at no charge from Versa-Lok. For more information, call (800) 770-4525 and tell them you saw it in LANDSCAPE MANAGEMENT, OR

Circle 287

L A N D S C A P E



M A N A G E M E N T



Akzo Nobel Salt

Product Focus:

Akzo Nobel Salt is the largest producer of rock salt in the U.S., and, along with its parent company, Akzo Nobel nv, the largest producer of salt of all kinds. The company is structured into two operating sub-business units: Highway/Chemical and Industrial/Grocery. The Highway/Chemical unit manufactures rock salt for professional, commercial and residential snow and ice control. Deicing salt is available in bulk and is packaged in a variety of sizes as Diamond Crystal Halite and JiffyMelt deicing salts. The division also produces specialty blends to accommodate market needs.

Manufacturing Facilities:

The Industrial/Grocery unit manufactures salt for food processing; consumer consumption; food service; residential, commercial and municipal water softening; and agriculture. Consumer salt products are marketed under the Diamond Crystal brand name while the company's exclusive Alberger Natural Flake Salt is utilized in the food processing industry. The division produces more than 400 products including: Diamond Crystal and Salt Sense table salts; Diamond Crystal Popcorn, Kosher and Canning and Pickling salts; Diamond Crystal Sun Gems water softener kits; and Champions Choice agricultural salt products.

Tech Support / Training:

The company operates rock salt mines at

Avery Island, La., and Cleveland, Ohio, and maintains more than 90 deicing salt stockpiles throughout the country. The company also operates the Retsof (N.Y.) Distribution Center. Akzo Nobel Salt manufactures salt at evaporating facilities in Akron, Ohio; St. Clair, Mich.; and Watkins Glen, N.Y., and produces solar salt at facilities located at Great Salt Lake in Utah and Bonaire in the Netherlands Antilles. The company also maintains salt packaging facilities in 11 locations across the country.

Major Product Lines:

Akzo Nobel Salt is dedicated to providing customers with superior customer service and, for the last three years, the company's customers have been surveyed by Watson Wyatt Worldwide to determine how well customer service objectives are being met. The survey results indicate a consistently high level of customer satisfaction for 1994, 1995 and 1996. A total of 84 percent of customers responding to the survey commented that their expectations are being met favorably, while 94 percent said the company is performing as well as or better than the competition. Akzo Nobel Salt intends to continue surveying customers in an effort to strive for continuous improvement.

Akzo Nobel Salt

Abington Exec. Park
P.O. Box 352
Clarks Summit, PA 18411
(717) 587-5131

Staff:

Harry A. Burns III,
president/CEO

G. Richard Thompson,
senior vice president, chief
administrative officer

William H. Ayers,
vice president, sales and
marketing industrial/grocery

Jerry Erzen, vice president,
production industrial/grocery

J. Roger Dickerson,
vice president, managing total
quality

Robert H. Jones,
vice president, sales and
marketing highway/chemical

Alan R. Peslak, vice president,
finance

Robert J. Steele,
vice president, production
highway/chemical

American Cyanamid Company

Product Focus:

The Specialty Products Department of American Cyanamid Company's Agricultural Products Division researches and develops special-use chemical products and markets them throughout the United States. The department's herbicides, plant growth regulators and insecticides are used in forestry, professional turf management, consumer lawn and garden, industrial vegetation management, horticultural and greenhouse industries, professional pest control and public health markets.

American Cyanamid is committed to the development of products that are effective, convenient and respectful of the environment. Along with others in the turfgrass and golf course industries, the company believes it has a responsibility to protect the environment, improve the aesthetics of America's communities and provide enhanced recreational opportunities for all. The company is committed to helping secure a superior habitat for people and wildlife through the manufacture and marketing of environmentally-sensitive products.

Description of manufacturing facilities:

American Cyanamid has a number of manufacturing facilities worldwide. Many of the company's products are manufactured at a 2,000-acre complex in Hannibal, Missouri. In addition to using state-of-the-art technology, this plant is a model for safety and environmental responsibility, emphasizing strong programs in recycling and reuse in all production areas to minimize waste.

The plant's integrated environmental systems provide management control levels that are designed to meet or exceed industry standards for air, water, solid and hazardous wastes. Pollution prevention and waste reduction efforts are an important part of on-



going programs in all production areas. Cyanamid manufacturing plants also participate in the Chemical Manufacturers Association's Responsible Care Program.

Description of technical support, sales, training and/or customer service:

The Specialty Products Department is fully-supported by a dedicated staff of research, sales, marketing, technical, service, logistic telemarketing and support professionals. The sales force is among the best-trained in the industry. Cyanamid's Technical Service Group in Princeton, New Jersey supports sales representatives in their effort to keep lawn care operators, golf course superintendent and custom applicators informed about the performance and environmental aspects of Cyanamid products.

Major product lines:

American Cyanamid produces and markets leadership products such as pendimethalin technical, the most widely used preemergent herbicide for turfgrass weed control in the United States. Pendulum herbicide, for pre-emergent control of annual grasses and many broadleaf weeds in turfgrass and for over-the-top control in more than 260 labeled ornamental plants, available in 60 WDG and 3.3 EC formulations; Image herbicide, available to professional applicators for postemergent use on hard-to-control weeds like nutsedge in warm-season turf. Cycocel plant growth regulator, used by greenhouse horticulturists, primarily on poinsettias, azaleas and geraniums; and Amdro fire ant insecticide, America's leading fire ant bait.

American Cyanamid Company

Specialty Products
Department
One Cyanamid Plaza
Wayne, New Jersey 07470
(800) 545-9525

Fax number:
(201) 831-3858

(American Cyanamid will be moving to new offices in Parsippany, New Jersey by the end of 1996.)



Dixie Chopper

Product Focus:

To design and manufacture commercial zero turning radius riding mowers providing price, performance and reliability to the commercial lawn cutter. Basically, to provide a machine that can be used all day everyday and "doesn't break when you use it."

Manufacturing facilities:

61,000 sq. ft. of manufacturing and assembly—from 2,000 sq. ft. in 1980. State-of-the-art, computer numerically controlled (CNC) machining capabilities and robotic welder.

Approximately 50 assembly and manufacturing employees and 15 in-house sales and support.

Tech Support / Training:

Unequaled tech support—i.e. your mower breaks and the local dealer can't fix it—we'll come fix it ourselves. Twenty independent manufacturers reps nationwide calling on independent outdoor power equipment dealers.

Major Product Lines:

Dixie Chopper Zero Turning Radius mowers—13 different models to cover any application. Models range in price from \$5995 to \$12,000 with 42-, 50-, 60-, and 72-inch cut and 20, 22, 25 and 40 horsepower.

Magic Circle Corporation

6302 E. County Road 100
North
Coatesville, IN 46121
(317) 246-6845

Fax number:
(317) 246-6146

E-mail address:
mcircle@
indy.tdsnet.com

Staff:

Arthur L. Evans,
president/CEO
Warren Evans,
sales manager



DowElanco

Product Focus:

DowElanco products manage pests that destroy personal, public and corporate properties; food, timber resources and clothing fiber. Products are manufactured and refined to meet customer needs through innovative research and service excellence. DowElanco is committed to continuous improvement, cost consciousness and total waste elimination in all phases of product production. Its scientists are dedicated to discovering and developing new technologies that can be integrated with conventional technologies to provide the greatest benefits to customers.

Description of Manufacturing Facility/Facilities:

Corporate headquarters is located on a 325-acre site in Indianapolis, Indiana. The Research and Development Building contains more than 612,000 sq. ft. and 15 individual greenhouses which contain more than 62,000 sq. ft. Together, they comprise the world's largest single plant-breeding and agricultural research center under one roof. Approximately 400 scientists and other employees work in the Research and Development Building and approximately 1,000 employees work at the corporate headquarters, with 3,000 people working for DowElanco worldwide.

Description of Technical Support, Sales, Training and/or Customer Service:

DowElanco is dedicated to global leadership in consistently satisfying customer needs by providing improved solutions in crop production and specialty products. Because DowElanco discovers, develops, manufactures and markets value-added products and consistently meets customers' needs, DowElanco is viewed as a long-term business partner. In fact, DowElanco has more than 20 sales and technical service professionals devoted solely to servicing the turf and ornamental business.

Major Product Lines:

DowElanco manufactures a variety of products for insect, weed and fungal pests for agriculture, lawn care operators, pest management companies, nurseries, golf course superintendents, consumers, and rights-of-way and utilities. Major products include Dursban insecticide; Team, Gallery, Surflan, Confront and Snapshot herbicides; and Rubigan fungicide.

DowElanco

9330 Zionsville Rd.
Indianapolis, IN 46268-1054
(800) 352-6776

Fax number:

(800) 905-7326

Date founded:

1989 (joint venture of the Agricultural Products Department of the Dow Chemical Co. and the Plant Science Business of Eli Lilly & Co.)

President/CEO:

John L. Hagaman



Echo, Inc.

Product Focus:

Response to customer needs.
Innovation.
Perfection of hand-held equipment for

green industry professionals. Those are the driving forces behind Echo, Inc.

The Echo attitude is illustrated by its history with two of its many product lines: the power blower and string trimmer. Echo has offered both products since the 1970s, and pioneered the hand-held blower and the ultra-light (under 15 cc) string trimmer.

Professionals obviously respect Echo products. In a recent reader survey by Landscape Management, Echo was the name brand most preferred by green industry professionals in blowers and trimmers, and was second in chain saws.

Manufacturing Facilities:

Echo products sold in North America—and in more than 40 other countries—come largely from Lake Zurich, Ill., in northwest suburban Chicago. Opened in 1986, the plant has more than 400,000 sq. ft. and employs more than 500 people. The plant's one millionth power blower whooshed off the assembly line in 1992.

The Lake Zurich facility integrates engineering, manufacturing and assembly, along with administration. A state-of-the-art test lab was recently added to assure Echo's compliance with emission standards set by California, other states and the Federal government.

Tech support/Training:

Echo meets customer needs through a system of 19 North American distributors and about 6,000 dealers. The distributors understand the needs in their region, while the

dealers are best able to work one-on-one with end users to select and service the end users.

Dealers who handle Echo do so by choice. Each independent Echo dealer must regularly attend service training schools and meet high standards for technical skill, parts inventory and product support to continue selling Echo products.

Standing behind these dealers and their customers is a large staff of technical experts and engineers at Lake Zurich and the distributors to assure that each person who owns or uses an Echo tool is more than satisfied.

Major Product Lines:

There are more than 80 individual Echo models in a broad array of product families. Echo's ignition systems—ProFire and SAIS2—combine with easy-pull starters and advanced carburetors to give all Echo users easy-starting, strong-running, low-maintenance equipment.

String trimmers range from 21.2 cc to 37.4 cc, with models to suit anyone from the homeowner who trims grass to the professional logger who clears underbrush.

Power blower line ranges from the 8.5 pound hand-held PB-1000 up to the backpack style PB-6000, which offers air speed delivery at 195 mph and 405 cubic feet per minute.

The Echo blower has evolved into the innovative Shred 'N' Vac, a vacuum that reduces litter as much as 12-to-1, and converts into a power blower.

Echo meets the needs of chain saw users with one of the industry's longest and finest product lines.

Construction crews rely on the CSG-6700 cutoff saw to speed the work.

As a final step to serving customers, Echo also provides an extensive array of personal protective equipment to help assure that users can keep enjoying their Echo products for years to come.

Echo, Inc.
400 Oakwood Rd.
Lake Zurich, IL 60047
(847) 540-8400
fax number:
(847) 540-8413

The Grasshopper Company



Product Focus:

Grasshopper products are designed for easy operation, maximum comfort, durability, productivity and versatility. A Quik-D-Tatch Mounting System (patent pending) lets you change deck sizes or add attachments in minutes without tools. Combo Mulching Deck converts to mulch, bag or discharge with the same deck.

Manufacturing facilities:

The family-owned manufacturing facility was founded in 1958.

Grasshopper employs skilled workers and high-tech equipment including computer-aided design system, CNC fabrication and machining; soon to exceed 200,000 sq. ft. of manufacturing, testing and warehouse space in Moundridge, Kansas.

Technical Support / Training:

Grasshopper products are retailed and serviced by an extensive dealer network throughout the world. Sales personnel with in-depth product knowledge and factory-trained service technicians receive ongoing technical support in sales and service from the factory.

Major product lines:

Grasshopper zero-radius outfront riding rotary mowers with engine choices from 14 to 28-hp, liquid-cooled or air-cooled, gas or diesel.

Year-round attachments include high-efficiency Quik-D-Tatch Vac collection systems; heavy-duty, solid-tine AERA-vator; dozer blades, rotary brooms; snowthrowers and tine-rake dethatchers.

Options available include ROPS, sunshade canopy and winter enclosure.

One Grasshopper Trail

P.O. Box 637
Moundridge, KS 67107
(316) 345-8621

Fax number:
(316) 345-2301

Web address:
<http://www.grasshopper-mower.com>

E-mail address:
grasshp2midusa.net



International Seeds

Product focus:

International Seeds, Inc., is a leading wholesale breeder, producer and marketer of improved cool- and warm-season turfgrass varieties. Its staff works exclusively with selected seed growers and a worldwide distributor network to provide value-added products and service of the highest quality.

Available today to golf course professionals, architects and contractors are varieties that require less fertilizers, provide natural insect resistance and supply superior quality turf. In addition, International's staff can provide valuable species information to augment the "signature look" or design of your choice.

International Seeds' turf products are recognized around the world for their quality and have been used at many of the world's most prestigious golf and sporting events.

International Seeds' turf products are recognized around the world for their quality and have been used at many of the world's most prestigious golf and sporting events.

Description of research facilities:

International Seeds maintains a fully equipped, 57-acre research and breeding station from which has come some of today's best-known and most widely used grass seed varieties.

By owning its own facility, International Seeds is better able to respond to the needs of its customers. Its staff researchers are able to take immediate advantage of advances in breeding technology.

The International Seeds research facility is also the location of various turf trials, including the National Turfgrass Evaluation Program.

Staff researchers also work closely with research scientists from major land grant universities and at trial sites throughout North America, South America, Asia, Europe, Africa and Oceania.

Description of technical support, sales, training and/or customer service:

International Seeds' sales and marketing staff, as well as its distributor network, is composed of highly experienced professionals prepared to assist customers as needed either by telephone, in person or through a variety of written literature.

These resources are in place to assist customers in the proper selection of cool- and warm-season turfgrasses throughout the world for turf area construction, renovation and restoration.

The International Seeds team knows that assisting customers in the proper selection of a turfgrass can have a major impact on the ultimate turf performance and maintenance expense profile.

In the era of environmental stewardship, assisting our customer with proper turfgrass selections contributes positively to habitat enhancement, wildlife and water conservation, waste management and energy efficiency.

Major product lines:

Cool-season turfgrasses: Top Hat, R2, Essence, Gator, Derby Supreme, Regal, Ph.D. (perennial ryegrasses); Viper, Cobra, CEO (creeping bentgrasses); Sabre II, Sabre (*Poa trivialis*); Longfellow, Enjoy (chewings fescues); Cindy (strong creeping red fescue); Eureka, Valda (hard fescues).

Houndog 5, Era, Houndog (turf-type tall fescues); Fortuna, Cardiff, Merit (Kentucky bluegrasses).

Cool-season turfgrass mixtures, permanent turf and overseeding: Ph.D. with Sabre; Dixie Green Overseeding Blend; Showboat Custom Ryegrass Blend; Anvil Fine Fescue Mixture; Major League Turfgrass Mixture (sun, sun & shade, shade or utility).

Warm-Season turfgrasses: Mirage, Pyramid (bermudagrasses); Sunrise (zoysiagrass).

International Seeds

P.O. Box 168, Halsey, OR
97348
(541) 369-2251

Customer Toll-Free:

(800) 445-2251

Fax number:

(541) 369-2640

E-Mail address:

intlseed@intlseed.com

Date founded:

1972

Staff:

Rich Underwood, president
Brad Dozler, vice president,
sales
Craig Edminster, director of
research

Receive FREE information on products and services advertised in this issue.

LANDSCAPE
management

SEPTEMBER 1996

*This card is void
after December 15, 1996*

NAME _____
TITLE _____
FIRM _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____
PHONE (____) _____ FAX (____) _____

I would like to receive (continue receiving)

LANDSCAPE MANAGEMENT each month: Yes no

Signature: _____ Date: _____

1. MY PRIMARY BUSINESS AT THIS LOCATION IS: (check only ONE in either A, B or C)

A. LANDSCAPING/GROUND CARE AT ONE OF THE FOLLOWING TYPES OF FACILITIES:

- | | |
|---|--|
| 01 <input type="checkbox"/> 05 Golf Courses | 08 <input type="checkbox"/> 40 Private/Public Estates & Museums |
| 02 <input type="checkbox"/> 10 Sport Complexes | 09 <input type="checkbox"/> 45 Condominiums/Apartments/Housing Developments/Hotels/Resorts |
| 03 <input type="checkbox"/> 15 Parks | 10 <input type="checkbox"/> 50 Cemeteries/Memorial Gardens |
| 04 <input type="checkbox"/> 20 Rights-Of-Way, Maintenance for
Highways Railroads & Utilities | 11 <input type="checkbox"/> 55 Hospital/Health Care Institutions |
| 05 <input type="checkbox"/> 25 Schools, Colleges & Universities | 12 <input type="checkbox"/> 60 Military Installations & Prisons |
| 06 <input type="checkbox"/> 30 Industrial & Office Parks/Plants | 13 <input type="checkbox"/> 65 Airports |
| 07 <input type="checkbox"/> 35 Shopping Centers, Plazas & Malls | 14 <input type="checkbox"/> 70 Multiple Government/Municipal Facilities |
| | 15 <input type="checkbox"/> Other (please specify) _____ |

B. CONTRACTORS/SERVICE COMPANIES/CONSULTANTS:

- | | |
|--|---|
| 16 <input type="checkbox"/> 105 Landscape Contractors (Installation & Maintenance) | 20 <input type="checkbox"/> 125 Landscape Architects |
| 17 <input type="checkbox"/> 110 Lawn Care Service Companies | 21 <input type="checkbox"/> 130 Land Reclamation & Erosion Control |
| 18 <input type="checkbox"/> 112 Custom Chemical Applicators (Ground & Air) | 22 <input type="checkbox"/> 135 Extension Agents/Consultants for Horticulture |
| 19 <input type="checkbox"/> 120 Tree Service Companies/Arborists | 23 <input type="checkbox"/> 140 Irrigation Contractors |
| | 24 <input type="checkbox"/> Other Contractor or Service _____ |

C. SUPPLIERS:

- 25 210 Sod Growers, Turf Seed Growers & Nurseries
26 215 Dealers, Distributors, Formulators & Brokers
27 220 Manufacturers

2. WHICH OF THE FOLLOWING BEST DESCRIBES YOUR TITLE? (check ONE only)

- 28 10 EXECUTIVE/ADMINISTRATOR: President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Director of Physical Plant
29 20 MANAGER/SUPERINTENDENT: Arborist, Architect, Landscape/Ground Manager, Superintendent, Foreman, Supervisor
30 30 GOVERNMENT OFFICIAL: Government Commissioner, Agent, Other Government Official
31 40 SPECIALIST: Forester, Consultant, Agronomist, Pilot, Instructor, Researcher, Horticulturist, Certified Specialist
32 50 OTHER TITLED AND NON-TITLED PERSONNEL: (please specify) _____

3. SERVICES PERFORMED: (check ALL that apply)

- | | |
|--|---|
| 33 <input type="checkbox"/> A Mowing | 41 <input type="checkbox"/> I Landscape/Golf Design |
| 34 <input type="checkbox"/> B Turf Insect Control | 42 <input type="checkbox"/> J Turf Weed Control |
| 35 <input type="checkbox"/> C Tree Care | 43 <input type="checkbox"/> K Paving, Deck & Patio Installation |
| 36 <input type="checkbox"/> D Turf Aeration | 44 <input type="checkbox"/> L Pond/Lake Care |
| 37 <input type="checkbox"/> E Irrigation Services | 45 <input type="checkbox"/> M Landscape Installation |
| 38 <input type="checkbox"/> F Turf Fertilization | 46 <input type="checkbox"/> N Snow Removal |
| 39 <input type="checkbox"/> G Turf Disease Control | 47 <input type="checkbox"/> O Other (please specify) _____ |
| 40 <input type="checkbox"/> H Ornamental Care | |

4. WHAT IS YOUR ANNUAL BUDGET FOR EQUIPMENT,
CHEMICALS, SUPPLIES? (please check one)

- 48 1 Less than \$50,000 51 4 \$250,001-500,000
49 2 \$50,000-\$100,000 52 5 More than \$500,000
50 3 \$100,001-\$250,000

101	119	137	155	173	191	209	227	245	263	281	299
102	120	138	156	174	192	210	228	246	264	282	300
103	121	139	157	175	193	211	229	247	265	283	301
104	122	140	158	176	194	212	230	248	266	284	302
105	123	141	159	177	195	213	231	249	267	285	303
106	124	142	160	178	196	214	232	250	268	286	304
107	125	143	161	179	197	215	233	251	269	287	305
108	126	144	162	180	198	216	234	252	270	288	306
109	127	145	163	181	199	217	235	253	271	289	307
110	128	146	164	182	200	218	236	254	272	290	308
111	129	147	165	183	201	219	237	255	273	291	309
112	130	148	166	184	202	220	238	256	274	292	310
113	131	149	167	185	203	221	239	257	275	293	311
114	132	150	168	186	204	222	240	258	276	294	312
115	133	151	169	187	205	223	241	259	277	295	313
116	134	152	170	188	206	224	242	260	278	296	314
117	135	153	171	189	207	225	243	261	279	297	315
118	136	154	172	190	208	226	244	262	280	298	316



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO 950 PITTSFIELD MA

POSTAGE WILL BE PAID BY ADDRESSEE

LANDSCAPE
management

ADVANSTAR COMMUNICATIONS INC
PO BOX 5054
PITTSFIELD MA 01203-9697



Receive FREE information on products and services advertised in this issue.



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO 950 PITTSFIELD MA

POSTAGE WILL BE PAID BY ADDRESSEE

LANDSCAPE management

ADVANSTAR COMMUNICATIONS INC
PO BOX 5054
PITTSFIELD MA 01203-9697



LANDSCAPE management

SEPTEMBER 1996

This card is void
after December 15, 1996

NAME _____
TITLE _____
FIRM _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____
PHONE (____) _____ FAX (____) _____

HAVE A SALES REP CALL ME 18 (A)

I would like to receive (continue receiving)

LANDSCAPE MANAGEMENT each month: Yes no

Signature: _____ Date: _____

1. MY PRIMARY BUSINESS AT THIS LOCATION IS: (check only ONE in either A, B or C)

A. LANDSCAPING/GROUND CARE AT ONE OF THE FOLLOWING TYPES OF FACILITIES:

- | | |
|--|--|
| 01 <input type="checkbox"/> 05 Golf Courses | 08 <input type="checkbox"/> 40 Private/Public Estates & Museums |
| 02 <input type="checkbox"/> 10 Sport Complexes | 09 <input type="checkbox"/> 45 Condominiums/Apartments/Housing Developments/Hotels/Resorts |
| 03 <input type="checkbox"/> 15 Parks | 10 <input type="checkbox"/> 50 Cemeteries/Memorial Gardens |
| 04 <input type="checkbox"/> 20 Rights-Of-Way, Maintenance for Highways Railroads & Utilities | 11 <input type="checkbox"/> 55 Hospital/Health Care Institutions |
| 05 <input type="checkbox"/> 25 Schools, Colleges & Universities | 12 <input type="checkbox"/> 60 Military Installations & Prisons |
| 06 <input type="checkbox"/> 30 Industrial & Office Parks/Plants | 13 <input type="checkbox"/> 65 Airports |
| 07 <input type="checkbox"/> 35 Shopping Centers, Plazas & Malls | 14 <input type="checkbox"/> 70 Multiple Government/Municipal Facilities |
| | 15 <input type="checkbox"/> Other (please specify) _____ |

B. CONTRACTORS/SERVICE COMPANIES/CONSULTANTS:

- | | |
|--|---|
| 16 <input type="checkbox"/> 105 Landscape Contractors (Installation & Maintenance) | 20 <input type="checkbox"/> 125 Landscape Architects |
| 17 <input type="checkbox"/> 110 Lawn Care Service Companies | 21 <input type="checkbox"/> 130 Land Reclamation & Erosion Control |
| 18 <input type="checkbox"/> 112 Custom Chemical Applicators (Ground & Air) | 22 <input type="checkbox"/> 135 Extension Agents/Consultants for Horticulture |
| 19 <input type="checkbox"/> 120 Tree Service Companies/Arborists | 23 <input type="checkbox"/> 140 Irrigation Contractors |
| | 24 <input type="checkbox"/> Other Contractor or Service _____ |

C. SUPPLIERS:

- 25 210 Sod Growers, Turf Seed Growers & Nurseries
26 215 Dealers, Distributors, Formulators & Brokers
27 220 Manufacturers

2. WHICH OF THE FOLLOWING BEST DESCRIBES YOUR TITLE? (check ONE only)

- 28 10 EXECUTIVE/ADMINISTRATOR: President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Director of Physical Plant
29 20 MANAGER/SUPERINTENDENT: Arborist, Architect, Landscape/Ground Manager, Superintendent, Foreman, Supervisor
30 30 GOVERNMENT OFFICIAL: Government Commissioner, Agent, Other Government Official
31 40 SPECIALIST: Forester, Consultant, Agronomist, Pilot, Instructor, Researcher, Horticulturist, Certified Specialist
32 50 OTHER TITLED AND NON-TITLED PERSONNEL: (please specify) _____

3. SERVICES PERFORMED: (check ALL that apply)

- | | |
|--|---|
| 33 <input type="checkbox"/> A Mowing | 41 <input type="checkbox"/> I Landscape/Golf Design |
| 34 <input type="checkbox"/> B Turf Insect Control | 42 <input type="checkbox"/> J Turf Weed Control |
| 35 <input type="checkbox"/> C Tree Care | 43 <input type="checkbox"/> K Paving, Deck & Patio Installation |
| 36 <input type="checkbox"/> D Turf Aeration | 44 <input type="checkbox"/> L Pond/Lake Care |
| 37 <input type="checkbox"/> E Irrigation Services | 45 <input type="checkbox"/> M Landscape Installation |
| 38 <input type="checkbox"/> F Turf Fertilization | 46 <input type="checkbox"/> N Snow Removal |
| 39 <input type="checkbox"/> G Turf Disease Control | 47 <input type="checkbox"/> O Other (please specify) _____ |
| 40 <input type="checkbox"/> H Ornamental Care | |

4. WHAT IS YOUR ANNUAL BUDGET FOR EQUIPMENT, CHEMICALS, SUPPLIES? (please check one)

- 48 1 Less than \$50,000
49 2 \$50,000-\$100,000
50 3 \$100,001-\$250,000
51 4 \$250,001-500,000
52 5 More than \$500,000

- | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 101 | 119 | 137 | 155 | 173 | 191 | 209 | 227 | 245 | 263 | 281 | 299 |
| 102 | 120 | 138 | 156 | 174 | 192 | 210 | 228 | 246 | 264 | 282 | 300 |
| 103 | 121 | 139 | 157 | 175 | 193 | 211 | 229 | 247 | 265 | 283 | 301 |
| 104 | 122 | 140 | 158 | 176 | 194 | 212 | 230 | 248 | 266 | 284 | 302 |
| 105 | 123 | 141 | 159 | 177 | 195 | 213 | 231 | 249 | 267 | 285 | 303 |
| 106 | 124 | 142 | 160 | 178 | 196 | 214 | 232 | 250 | 268 | 286 | 304 |
| 107 | 125 | 143 | 161 | 179 | 197 | 215 | 233 | 251 | 269 | 287 | 305 |
| 108 | 126 | 144 | 162 | 180 | 198 | 216 | 234 | 252 | 270 | 288 | 306 |
| 109 | 127 | 145 | 163 | 181 | 199 | 217 | 235 | 253 | 271 | 289 | 307 |
| 110 | 128 | 146 | 164 | 182 | 200 | 218 | 236 | 254 | 272 | 290 | 308 |
| 111 | 129 | 147 | 165 | 183 | 201 | 219 | 237 | 255 | 273 | 291 | 309 |
| 112 | 130 | 148 | 166 | 184 | 202 | 220 | 238 | 256 | 274 | 292 | 310 |
| 113 | 131 | 149 | 167 | 185 | 203 | 221 | 239 | 257 | 275 | 293 | 311 |
| 114 | 132 | 150 | 168 | 186 | 204 | 222 | 240 | 258 | 276 | 294 | 312 |
| 115 | 133 | 151 | 169 | 187 | 205 | 223 | 241 | 259 | 277 | 295 | 313 |
| 116 | 134 | 152 | 170 | 188 | 206 | 224 | 242 | 260 | 278 | 296 | 314 |
| 117 | 135 | 153 | 171 | 189 | 207 | 225 | 243 | 261 | 279 | 297 | 315 |
| 118 | 136 | 154 | 172 | 190 | 208 | 226 | 244 | 262 | 280 | 298 | 316 |

Kubota

Product focus:

Incorporated in California in 1972, Kubota Tractor Corporation (KTC) has since become a leading U.S. marketer and distributor of under-40 hp compact tractors by consistently marketing high-quality products that meet the needs of today's customers. Kubota Tractor Corporation markets a complete line of tractors from 12.5 to 91 PTO horsepower, along with a complete line of performance-matched implements, compact construction equipment, pumps and generators, consumer lawn and garden equipment, and commercial turf products.

Description of manufacturing facility/facilities:

KTC is affiliated with the Kubota Corporation of Osaka, Japan, which introduced the first Kubota tractor to the United States in 1968. Kubota Corporation has affiliates and subsidiaries that manufacture and/or market in 11 countries around the world, and Kubota Corporation products are sold in more than 130 countries. In the United States, Kubota Tractor Corporation, Kubota Credit Corporation (KCC) and Kubota Manufacturing of America (KMA) support authorized Kubota dealers and customers. Kubota Manufacturing of America is located in Gainesville, Ga. Production started in 1989, making loaders for Kubota B- and L-Series tractors. Backhoe production began in 1990. And, in 1995, the new T-Series lawn tractor, the first Kubota tractor manufactured in the United States, started rolling off the assembly line.

Based in Torrance, Calif., KTC has facilities throughout the United States. Division offices are located in Columbus, Ohio; Atlanta, Ga.; Dallas, Texas; and Stockton, Calif. The Engine Division is located in Schaumburg, Ill. Nearly 1,200 dealers comprise Kubota Tractor Corporation's coast-to-coast network.

Description of technical support, sales, training and/or customer service:

Kubota Tractor Corporation supplements



its high-quality, dependable products with the service, parts, training and financing necessary to ensure customer satisfaction. Service personnel in the dealerships are provided with annual training on new products, and additional in-shop service training is available through printed materials and video-based programs. Kubota also provides dealers with a computerized parts ordering system which links dealerships to an inventory of more than 60,000 part numbers strategically located in four warehouses across the country. Kubota Credit Corporation offers flexible programs such as low A.P.R. financing, equity financing, tailored customer repayment plans, rental purchase plans and leasing options.

Major product lines:

Kubota's residential and commercial mowing equipment consists of the newly introduced F-60 Series front mower, T-Series lawn tractors, G-Series garden tractors and GF-Series front mowers, along with a variety of implements. Designed to deliver top performance, Kubota's tractor and implement line-up features the B-Series tractors, Grand L Series and L-Series products, M-Series tractors and the newest edition to the M-Series family, the M-Series Turf Special. Kubota's compact construction equipment line boasts the powerful KX-Series excavators, newly introduced R20-Series wheel loaders, L35 tractor-loader-backhoe and an impressive array of related implements and attachments. Ideal for a range of indoor and outdoor construction and emergency-power applications, Kubota offers customers an extensive line of gas and diesel generators and pumps.

Kubota Tractor Corp.

3401 Del Amo Blvd.
Torrance, CA 90503
(310) 370-3370

Staff:

Mr. S. Majima, president
Mr. Robin Killian, senior vice president of sales
Mr. Michael Heitman, director of marketing



PBI/Gordon Corp.

PBI/Gordon Corp.

P.O. Box 014090
Kansas City, MO 64101-0900
Telephone: (816) 421-4070
Fax: (816) 474-0462

Date founded:

1947

Staff:

President/CEO:

Richard E. Martin

Vice Presidents:

Jim Armbruster,
regulatory affairs

Richard D. Benjamin,
operations

William R. Brocker,
marketing

Donald A. Chew,
finance

Al Mullican,
professional sales

John VanHaften,
research & development

Don Wilson,
consumer sales

Product Focus:

Gordon's Trimec Broadleaf Herbicides were the first products formulated specifically for the professional turf management industry, and have set the standard for premium broadleaf weed control. The company's research staff and formulation chemists at Gordon's laboratories have excelled in developing new uses and improved products from existing chemistries, making them more compatible with the needs of the ultimate user.

Description of Manufacturing Facility/Facilities:

Formed through the merger of Gordon Chemical Co. and Private Brands, Inc. (hence, the "PBI"), private label manufacturing has been an important facet of the company's operations since 1947. The company's two Midwest plants produce liquid, powdered and granular products. Professional product development and manufacturing is not a secondary operation for PBI/Gordon—it's our only business.

Description of Technical Support, Sales, Training and/or Customer Service:

Gordon's customer service and technical personnel are always ready to help a user obtain optimum results from the company's products. Strategically located in the Midwest, our distribution center is capable of physically handling orders of any size with same or next-day service.

Major Product Lines:

Unlike many companies that serve the turf and ornamental industry but have a primary focus on the agricultural market, PBI/Gordon's primary product line is Gordon's Professional Turf and Ornamental Products. The company's marketing, research, formulation and manufacturing systems are focused on finding, testing and producing the highest quality turf products available.

Ransomes America Corporation



Product Focus:

Ransomes America Corporation manufactures a full range of Ransomes, Cushman and Ryan turf and professional lawn care equipment. The products are available internationally through an extensive network of dealers and distributors.

The product line includes: the Ransomes E-Plex, the industry's first all-electric greens mower; the Ransomes Bob-Cat ZT 200 series of zero-turning radius rotary mowers; Ryan LA IV, LA V and LA 28 aerators, and the industry-leading Cushman Turf Truckster.

Manufacturing Facilities:

Ransomes America corporation has manufacturing facilities in Lincoln, Neb. (headquarters), Johnson Creek, Wisc., and Edgewater, Fla. Parent company Ransomes plc is based in Ipswich, England.

Tech Support/Training:

Ransomes America Corporation offers yearly sales and product training to its dealers and distributors on all products. Service training schools are held at the company's Lincoln headquarters for dealer service technicians. Customer service and technical support is available at (402) 474-8570. Company territory managers are the primary sales contact for dealers and distributors.

Major Product Lines:

Ransomes riding and walk-behind mowers (reel and rotary); Cushman utility vehicles and fifth-wheel implements; Ryan aerators, overseeders, power rakes and sod cutters. Also, Cushman Groom Master bunker rake/sports field groomer.

Ransomes America Corporation
P.O. Box 82409
Lincoln, NE 68501-2409
(800) 228-4444
Fax number:
(402) 474-8522



STIHL Territory

Home of the Next Generation of Top-Rated Tools



Virginia Beach, Virginia is the U.S. headquarters for STIHL Incorporated and the home of the new STIHL Professional Series. STIHL produces this newest family of lawn and garden equipment, powered by a unique STIHL engine, exclusively at STIHL Incorporated for worldwide distribution.

STIHL's new lawn care products, now powered by a STIHL engine, advance a 70-year leadership tradition. A tradition of providing top performance products with the highest quality and the best overall value available anywhere.

Fully half of the products manufactured each year by STIHL Incorporated are lawn and garden tools. The 600 men and women of STIHL's quality award winning Virginia Beach plant manufacture over thirty different trimmers, blowers,

edgers and chain saws including the acclaimed 017.

It's easy to find yourself in STIHL Territory. STIHL products are on the job wherever lightweight, versatile tools with dependable power and durable construction are important considerations.

Cutting grass or concrete, blowing leaves or pressure washing patios, shaping hedges or eliminating the deadwood, STIHL power tools are at work.

Professional arborists, landscapers, grounds keepers, foresters, contractors, rescue workers, home owners with multi-acre spreads and town home dwellers alike, trust STIHL for value and reliability.

Trust your power tool needs to STIHL and its independent sales and servicing dealers.



For more information or for the name of your nearest STIHL retailer, please call 1-800 GO STIHL (1-800-467-8445).

STIHL®

Number One Worldwide

Tee-2-Green

Product Focus:

Tee-2-Green is a registered trademark of Tee-2-Green Corp., founded in 1973 to market Penncross creeping bentgrass produced by the Penncross Creeping Bentgrass Association, in agreement with Penn State University. The growers association and Tee-2-Green have maintained the high production standards set forth in 1955 by Professor Bert Musser, then assisted by Dr. Joe Duich. As Dr. Duich later released Penneagle and PennLinks, the varieties became the "Penn Pals," and set high standards for tees, fairways and putting greens worldwide.

The Penn "A" and "G" series, plus Seaside II, developed by Dr. Duich, were introduced in 1995 and are the new generation of creeping bents. The "A" and "G" series are finer and denser than other commercial varieties, and demand close mowing. Seaside II is salt tolerant and was developed exclusively for fairway use.

Manufacturing Facility:

All of the Penn bentgrass varieties are grown and certified in Oregon and meet higher standards than any other creeping bentgrass produced anywhere in the world. Seed is conditioned in the individual grower's cleaner, and stored in one of Tee-2-Green's warehouses. Shipments are carefully palletized and shrink-wrapped to avoid contamination. Pure Seed Testing, Inc., West and East facilities maintain ongoing research and evaluation of all the "Penn Pals" varieties. Demand for the new generation of Penn bents results in increased planting. The above photo shows planting in a Penn A-1 production field.

Technical Support, Education:

Tee-2-Green supports distributors and golf course superintendents through advertising, tech sheets and publications, plus trade show and seminar participation. Technical representatives Russ Hayworth in Arizona and Rick Elyea in Ohio work with golf course architects and distributors to help spec the right bentgrass for their courses.



Tee-2-Green supports education through scholarships for Penn State University turfgrass students, and through The Annual Musser Golf Tournament which awards scholarships to graduate students involved in turfgrass research.

Major Product Lines:

Tee-2-Green markets only premium bentgrasses for turf maintenance professionals.

Penncross, introduced in 1955, remains the best-selling bentgrass year after year.

Penneagle, introduced in 1979, is an excellent choice for fairways, and consistently tops fairway trials.

PennLinks, introduced in 1986, rapidly became the new choice for true putting.

Pennway: Economical fairway and winter overseeding blend

PennTrio: Certified creeping bentgrass blend with 1/3 each Penncross, Penneagle and PennLinks

Penn A-1, Penn A-2, Penn A-4, Penn G-1, Penn G-2 and Penn G-6, the new "Penn Pals," are typically lower growing and well-adapted to a cutting height of 1/4-inch. They are dense, fine leafed and have an upright growth habit.

Seaside II is salt tolerant, and was developed exclusively for fairway use.

Tee-2-Green

P.O. Box 250
Hubbard, OR 97032
(800) 547-0255,
(503) 651-2130

Fax number:

(503) 651-2351

Date founded:

1973

Staff:

Bill L. Rose, president
Charlotte Flowers, general manager
Dr. Joe Duich, consultant
Russ Hayworth, consultant
Rick Elyea, consultant



The Toro Company

Product Focus:

The Toro Company offers one of the broadest lines of outdoor power equipment available for landscape professionals worldwide. Toro listens to contractor needs and translates them into innovative products designed to achieve the highest level of productivity. A Toro product signifies superior engineering, guaranteed service and a commitment to operator safety.

Description of Manufacturing Facility:

Toro's Tomah, Wisc. manufacturing plant, the main manufacturing facility for commercial products, has achieved the prestigious ISO 9002 certification for international quality consistency. This certification is tangible proof that Toro has a documented system and the long-term commitment to provide the level of process consistency and quality that customers expect.

Description of Technical Support:

Toro is supported by an exclusive network of highly-trained and knowledgeable distributors and dealers. This distribution network offers superb parts availability and convenient after-sale services. Every Toro product comes with owners and parts manuals. Also available are instructional videos for training employees in operating procedures and safety precautions.

Major Product Lines:

Toro offers a wide variety of product lines including: ProLine hydro- and gear-drive mid-size mowers, Z Master zero radius tractors, Groundsmaster outfront riding rotary mowers, Workman utility vehicles, as well as debris management and aeration equipment. All backed by Toro's exclusive technologies that increase productivity, operator safety and versatility.

The Toro Company

8111 Lyndale Ave. S.
Bloomington, MN 55420-
1196

(612) 888-8801

Fax number:

(612) 887-8258



Turf Merchants, Inc.

Product Focus:

TMI sources from private breeding programs the latest in improved turfgrass seeds. Our major focus is on improved turfgrasses for the professional markets of golf, landscaping and landscape architecture. These include creeping bentgrasses, turf-type tall fescues, perennial ryegrasses, and Kentucky bluegrasses. TMI also offers domestically-produced warm-season grasses such as bermudagrass and zoysiagrass. From its own conventional breeding program, to university sources such as Rutgers University and Texas A&M, TMI is looking forward to offering the latest technologically advanced varieties available anywhere.

Manufacturing Facilities:

Turf Merchants, Inc. is located in the heart of Oregon: southern Willamette Valley, where over 65 percent of the world's supply of grass seed is grown.

Natural rainfall and expertise in production make the quality of Oregon grass seed the best in the world. TMI operates from three satellite warehouses located strategically around the valley with points north, south and west. This makes customer response an industry standard, with promptness and accuracy in shipments that are unparalleled. TMI has the ability to blend,

process and ship simultaneously from any of these locations where over 30 million pounds of seed are processed each year.

Tech Support / Training:

TMI has a variety of technical support through extensive trial systems, product literature and data bases. Results from turf trials in dozens of locations make the process of selling a simplified matter when comparative data is essential. Color slides of the production process and research add an additional dimension to the support available.

Major Product Lines:

Turf-type perennial ryegrasses including Affinity, Manhattan 3, Rodeo II, Allaire II, Patriot II, Evening Shade, Nomad (spreading type), Pennfine II, and VIP II.

Turf-type tall fescues include Bonsai 3, Twilight II, Taurus, Turf Gem II, Adventure II, Micro, Earthsave, Avanti II.

Kentucky bluegrasses are Gnome, Cobalt, Sodnet, Rugby, Viva and Trueblue.

Creeping bentgrasses are Backspin and Trueline.

Zen zoysiagrass and Del Sol bermudagrass round out the warm-season lines.

Turf Merchants Inc.

33390 Tangent Loop
Tangent, OR 97389
(541) 926-8649

Fax number:
(541) 926-4435

Staff:
Steven P. Tubbs, president
Nancy Aerni, vice president
John Cochran, vice president
Frank Gill, vice president
Robin Mankle, secretary/
treasurer



Turf-Seed, Inc.

Technical Support, Education:

Turf-Seed sets the pace in providing information to distributors and consumers through technical publications, Turf-Seed Trends newsletter, variety and blend tech sheets, vis-a-vis trade show and seminar participation, plus the first and largest independent field day in the United States. This annual event, now in its 15th year, is held alternately at the Pure Seed Testing West 110-acre research farm near Hubbard, Oregon, or Pure Seed Testing near Rolesville, North Carolina. The Oregon event, held the third Thursday in June during even-numbered years, focuses on cool-season grasses, while the North Carolina event is Friday preceding ASTA, and features tall fescue, bermudagrass and zoysia, and addresses humidity-induced disease pressures. For information, call (503) 651-2130.

Major Product Lines:

Perennial regrass: Alliance Brand blend; BrightStar, Catalina, Charger, Citation III, Manhattan 3, Navajo, QuickStart, Sunrye (246). Tall fescue: Confederate blend, MowLess blend, Triathalawn blend; Apache II, Coronado, Eldorado, Monarch, Olympic II, Safari, Silverado, Tomahawk, 5LMR Galaxy Brand blend. Kentucky bluegrass: Blacksburg, BlueStar, Challenger, Columbia, Livingston, Marquis, Midnight, Unique, Voyager. Poa trivialis: Winterplay. Fine fescue: Aurora, Discovery hard fescues; Shademaster II creeping red fescue; Seabreeze slender creeper; Shadow, Tiffany chewings fescue; Bighorn sheeps fescue. Creeping bentgrass: PennTrio blend, Pennway blend; Penncross, Penneagle, PennLinks, Penn A-4, Penn G-6, Seaside II. Wildflowers: Bloomers wildflower mixture, Baby Bloomers wildflower mixture, DeBlooms annual wildflower mixture.

Product Focus:

Turf-Seed, Inc. was founded in 1970 by Bill Rose, president, to market only premium quality turfgrass cultivars and blends, foragegrass cultivar and mixtures, plus wildflower mixtures through an established distributor network. Golf courses, sod production farms, athletic field managers, parks departments and homeowners rely on Turf-Seed's Research/Production/Marketing (RPM) program. Turf-Seed's industry-wide reputation for top-performing proprietary varieties developed by Pure Seed Testing, Inc., production by Roselawn Seed and select contract growers, plus systematic marketing managed by Tom Stanley complete the RPM cycle.

Manufacturing Facility:

Turf-Seed, Inc. is located near Hubbard, Oregon, in the center of the fertile Willamette Valley, "grass seed capital of the world." Most of the production comes from this region, with its ideal growing conditions. Crops are cleaned by growers or nearby seed conditioning plants where blue tags are attached, and delivered to the Turf-Seed warehouses. Blends and mixtures are made at this Turf-Seed facility on two blending lines. Turf-Seed's corporate offices are attached to the warehouse for efficient marketing communication and shipping coordination. Employees enjoy breaks and lunch on the grassed picnic area in the back.

Turf-Seed Inc.

P.O. Box 250
Hubbard, OR 97032
(800) 247-6910
(503) 651-2130

Fax number:

(503) 651-2351

Date founded:

1970

Staff:

Bill L. Rose, president
Gordon Zielinski, executive vice president
Darcy Loscutt, general manager
Tom Stanley, marketing director
Duane Klundt, customer service
Russ Hayworth, southwest marketing
Vanessa Jensen, southeast marketing
Rick Elyea, golf course consulting



Walker Manufacturing

Product Focus:

Walker Manufacturing designs, develops and manufactures a line of compact, mid-size commercial riding mowers and attachments. The mowers are targeted for use in landscaped areas with combinations of trimming and open space where quick maneuverability and fitting in tight spots increase productivity.

Description of Manufacturing Facility/Facilities:

The company's factory is at Fort Collins, Colo., situated on 25 acres. It has 100,000 sq. ft. of manufacturing area and 16,000 sq. ft. of offices and research and development. The manufacturing operation includes parts fabrication, welding, painting and assembly. Fifteen acres of irrigated turf-grass around the facility provides on-site test mowing area. The current facility will allow growth to produce up to 25 units per day.

Description of Technical Support, Sales, Training and/or Customer Service:

The factory customer service staff is available for technical support to dealers and end-customers. A dealer program is administered by 33 independent territorial distributors across the U.S.

Major Product Lines:

Walker makes mid-size commercial riding mowers and attachments. Five tractor models have gasoline or diesel engines from 11 to 25 hp. Nine interchangeable mower decks with cutting widths from 36 to 62 inches are offered, each with grass collection, side discharge or mulching available. Six front-mounted implements are also marketed: two snowblowers, a rotary boom, a dozer blade, a dethatcher and an edger.

Walker Manufacturing

5925 E. Harmony Rd.
Fort Collins, CO 80525
(970) 221-5614

Fax number:
(970) 221-5619

Date founded:
1957

Staff:

Bob Walker, president
(marketing/finance)
Dean Walker, vice president
(engineering/manufacturing)
Max Walker, vice president
(chairman)
Bob Tomasek, customer
service/warranty



Landscape Management

ested parties the opportunity to purchase classified advertising, back issues of magazines, LM's qualified mailing list and rights to reproduce articles.

Free subscriptions for qualified individuals or companies can be obtained through the magazine's circulation department located in Duluth, Minn.

Product Focus:

Landscape Management is the second-oldest national monthly trade magazine serving "green industry" professionals.

More than 51,000 qualified subscribers include landscape contractors, golf course superintendents, athletic field/grounds managers and lawn care companies, all of whom are involved in maintaining landscapes and grounds. The magazine is also mailed to selected tree service companies, landscape architects, extension agents, horticultural consultants, irrigation contractors, sod growers, turfseed growers, dealers, distributors and manufacturers.

Major Product Lines:

Landscape Management, which will celebrate its 35th anniversary in 1997, publishes 12 regular monthly issues each year. Besides the full-run section, the magazine publishes two special demographic sections that are mailed only to a selected portion of its total audience: "Golf and Grounds" (which goes to golf course superintendents, athletic field and grounds managers) and "Lawn and Landscape" (which mails to lawn care companies and landscape contractors).

Description of Facility:

Landscape Management is one of 55 trade magazines published by Advanstar Communications, whose home office is located on a 22-acre parcel of wooded land in Middleburg Heights, Ohio. The building, which is fitted into the side of a gently-sloping hill, is of a distinctly environmentally-friendly design.

During the spring of each year, LM includes, within its regular monthly issues, the highly popular "guides" to fertilization, weed control, insect control and disease control—developed and written by the nation's finest turf and ornamental experts. These comprehensive articles are divided into cool-season and warm-season sections to recognize differences in climates and adapted species affected.

LM production offices are located in Duluth, Minn. Additional sales offices are located in Kenosha, Wisc., and Eugene, Ore.

In July, LM publishes a digest-sized reference book called the "Seed Pocket Guide" which contains regional and national results of the annual National Turfgrass Evaluation Program.

Advanstar also has major publishing and expositions offices in Duluth, Minn.; Eugene, Ore.; Santa Ana, Calif.; New York City; Chester, England; and Chicago.

In December, the regular monthly issue is called the "Green Book and Directory," a listing of important suppliers (by product category), dealers/distributors, other contacts within the green industry, and a wealth of other year-long reference material.

Description of Technical Support, Sales, Training and/or Customer Service:

Advanstar Marketing Services in the Cleveland headquarters office offers inter-

Landscape Management

7500 Old Oak Blvd.
Cleveland, OH 44130
(216) 243-8100

fax number:
(216) 891-2675

E-mail address:
75553.502@compuserve.com

Web address:
<http://www.advanstar.com>

Staff:

John D. Payne, publisher
Tom Galligan, national sales manager
Kerry Jacobson, southeastern sales manager
John Kiesewetter, western sales manager
Jerry Roche, editor-in-chief
Ron Hall, senior editor
Terry McIver, managing editor

LM REPORTS *cont. from page 34*

engine). All have 1½-inch grate. Options: blower attachment package, vacuum attachment package, leaf grate, ½-inch grate, ¾-inch grate.

ECHO

Circle No. 265
(847) 540-8400

The EchoSystem 2 vacuums leaves and reduces them to ½th of their original volume. Available in three walk-behind and self-propelled models, EchoSystem2 reduces sticks and branches up to 3 inches in diameter. Converts to shredder and can transform into walk-behind blower or broadcaster with optional kit. Hopper can be rotated 360 degrees.



Ingersoll

of small tractors.

LABARGE

Circle No. 269
(800) 511-2022

PTO-driven chipper/blower/vacuum can: chip limbs and brush up to 6-inch diameter, vacuum leaves and debris, discharge or bag processed material, blow air at high velocity.

LITTLE WONDER

Circle No. 270
(215) 357-8045

ReVac model can chip, shred, reduce and vacuum leaves, branches and other organic material up to 3½ inches in diameter. Shredder hopper can be rotated to the ground to rake leaves into its opening. Optional 10- to 20-foot intake hose/snout. Engine is 16 hp Briggs Vanguard with Oil Alert. Kill switches on all intake and discharge chutes.

MACKISSIC

Circle No. xxx
(610) 495-7181

SC260-16 Chip N Shred has 4-inch rapid feed chipping. Powered by 16 hp twin-cylinder Vanguard engine with manual or electric start. Load-free starting with overload protection. Highway towable.

PARKER SWEEPER

Circle No. 272
(708) 627-6900

Vac-CS reduces debris 11-to-1. Chipper chute draws twigs, branches and other debris. Vacuum has 30-inch width. Optional hose kit allows



Parker

easy access in hard-to-reach areas.

SALSCO

Circle No. 273
(800) 872-5726

Chipper/shredder/vacs available from 8 hp Honda (3¼-inch capacity) to 25 hp Kohler (6-inch capacity); also capable of shredding material up to ½ inch in diameter. Chippers are 6x12-inch with 25 hp Kohler or 30 hp Wisconsin engine, up to 13-inch material. Engines of 37-115 hp, diesel or gas, are options.

SNAPPER

Circle No. 274
(770) 954-2598

SG8000 has 8 hp Briggs & Stratton engine, 18x15½-inch hopper opening with movable blowback shield, chipping capacity up to 3 inches, tow bar. SG5000 has 5 hp Briggs engine, 18x14-inch opening, chipping capacity up to 2 inches. LS5000 has 5 hp Briggs engine, chute that lays flat on the ground, capacity up to 3 inches.

S&R

Circle No. 275
(541) 523-5952

18- or 24-inch self-powered trailer unit that uses 25 hp Kohler engine. Power feed safety clutch release, 360-degree rotation on exhaust chute. Larger 2469T has 6-inch capacity; smaller 1846T has 4-inch capacity. Discharge height 6-foot-4 and 6-foot, respectively. Synchro-Feed has safety hand clutch.

TROY-BILT

Circle No. 276
(800) 828-5500

Tomahawk Pro Chipper line processes brush, branches, limbs, small trees up to 4-inch diameter. Advanced drum design, 4x8-inch chipping opening. Options: tow hitch, electric start, collection bag, bumper, storage cover. Troy-Bilt 8 hp, 10 hp engine or 12 hp overhead valve engine.

VERMEER

Circle No. 277
(515) 621-7826

Model BC 1800 can pull in and

chip material up to 18 inches on an intermittent basis. 68-inch feed table to the rollers puts distance between operator and feed roller system. Curb-side controllers. Live hydraulics allow operator to reverse feed rollers even if the cutting disc stops. Three engine options: 81 hp Perkins 4.41 diesel, 113 hp Perkins T4.40 diesel, 116 hp 4BTA 3.9 Cummins. Exclusive Auto Feed II system.

WOODS

Circle No. 278
(815) 732-2141

Model 5000 is PTO-driven with chipping capacity to 5 inches, shredding capacity to 1 inch; Model 5020 powered by 20 hp Kohler engine. Models 8000 and 8100 chip up to 8 inches with integrated blower (8000 is PTO-driven, 8100 is hydraulic feed). Models 9128 and 9142 are engine-driven, trailer-mounted, towable, with 9-inch chipping capacity; engines are 28 hp Kubota, 42 hp Ford.

WOOD PRO

Circle No. 279
(201) 992-8514

Two models: AVP, a one-hopper all vegetation processor, and 24D418E chipper for commercial market. AVP handles up to 6 inches



Wood Pro

diameter, available in 3-pt. hitch PTO model, engine-powered towable model. Model 24D418E chips up to 5-inch branches; four knives on 24-inch disc; 4-gallon fuel tank; large tires now standard equipment.

LM

LANDSCAPE management

Every month the Market Showcase offers the readers of *Landscape Management* a complete and up-to-date section of the products and services you're looking for. Check it out every month, or you might miss out.

For all ads under \$250, payment must be received by the classified closing date. VISA, MASTERCARD, & AMERICAN EXPRESS accepted. Send to: Advanstar Marketing Services, 7500 Old Oak Blvd., Cleveland, OH 44130

BOX NUMBER REPLIES: *Landscape Management*, LM Box #, 131 W. First St., Duluth, MN 55802

FOR ADVERTISING INFORMATION AND AD PLACEMENT, CONTACT: DAN HOKE, 216-891-2762, 1-800-225-4569, (ext. 762), Fax 216-826-2865

FOR SALE

COMMERCIAL INSURANCE FOR LAWN CARE FIRMS "GREEN INDUSTRY SPECIALISTS"

M.F.P. Insurance Agency is dedicated to providing comprehensive insurance programs to the Green Industry at competitive prices. We back up this dedication with a staff of professionals who understand every facet of your business, from marketing to customer service. We know how to properly insure your company whether you're a sole proprietor or a multi-state operation.

Just as your customers look to you for lawn care advice, people come to us for insurance advice because they do not want to become insurance experts themselves. If you want good advice, the right coverage, and competitive rates, please contact:

Richard P. Bersnak, President

Jill A. Leonard, V.P.

1-800-886-2398
FAX: 614-221-2203

M.F.P. Insurance Agency, Inc.
50 West Broad Street, Suite 3200
Columbus, OH 43215-5917

Circle No. 301 on Reader Inquiry Card

FOR SALE

Creative curb

Concrete Curb &
Landscape Border
Equipment



Create
Beautiful
Concrete Borders & Curbs
for Less than Half the Cost
of Conventional Methods!

- Add on to your services/profits
- Low maintenance/easy to use
- Self-propelled, electric or gas powered
- Create various shapes and sizes
- Durable curbing is freeze/thaw tolerant

23362 Madero Rd., Suite E • Mission Viejo, CA 92691
(714) 587-8488 • (800) 292-3488 • FAX:(714) 587-9680

PEST CONTROL COMPANIES FOR SALE

Missouri	Gross: \$299,000.00
East Georgia	Gross: 540,000.00
Central Georgia	Gross: 88,000.00
Brevard County, FL	Gross: 360,000.00
Broward County, FL	Gross: 75,000.00
Charlotte County, FL	Gross: 575,000.00
Citrus County, FL	SOLD Gross: 1 Million Plus
Clay County, FL	Gross: 510,000.00
Florida Panhandle	Gross: 300,000.00
Marion County, FL	Gross: 70,000.00
St. Lucie County, FL	Gross: 90,000.00
Volusia County, FL	Gross: 110,000.00

Acquisitiveness (the desire for legitimate gain) is an indispensable quality in a successful owner!

There can be many problems awaiting a seller, for example: fair market value, confidentiality, qualified buyers, etc. Let us do away with many of those problems.

All Calls Are Confidential.

PREFERRED BUSINESS BROKERS
Jay Hollon, PCO, Licensed Broker
800-633-5153 • 941-858-4185

1989 & 1990 ISUZU/GMC Cabovers:

Excellent condition. Warner Built Stainless Split Tanks and Bed. Hydro-cell 25 GPM 2 Hose Reels w/guns. 1,000 lbs Dry Fert Storage. Ready to do Production.

Call 201-891-6456

E-Z Trench Model J300

Used 2 Times
Good as New

Price - \$2300.00

7:00 am to 5:00 pm - 615-895-5522
Anytime - 615-890-4272

Nursery & Landscape-Western Colorado,
17 acres, trees & trees, great income,
plus water, well and more.

Only \$199,000 + inventory

TAYLOR PROPERTIES 970-874-8000

FOR SALE

Hamptons, Long Island, N.Y.

- ▶ Nursery/Garden Center + Residence
- ▶ Going Business ▶ Established Clientele
- ▶ Same Location Over 40 Years
- ▶ Fronts on Main Highway
- ▶ Turn Key Operation with Inventory & Equipment

COOK PONY FARM REAL ESTATE INC.
20 MAIN STREET
EAST HAMPTON, N.Y. 11937
1-800-324-9601

FOR SALE

Landscape Co. in Santa Cruz, California

- ◆ Garden All Year Long
- ◆ Landscape Construction & Maint.
- ◆ Routes ◆ Profitable
- ◆ Turnkey Operation

Call (408) 475-8608

FOR SALE

Full Service Company
Providing Landscaping,
Grounds Maintenance and Lawn Care Located
in Vero Beach, FL. 1995 Gross over 650K.

Inquiry at:

P.O. Box 595, Vero Beach, FL 32961

LANDSCAPE management

MARKET SHOWCASE GOLF COURSE MARKETPLACE CLASSIFIED ADVERTISING

For all ads under \$250, payment must be received by the classified closing date. We accept VISA, MASTERCARD & AMERICAN EXPRESS. Credit card orders are accepted by phone.

ISSUES CLOSING DATES

November 1996 10/4
December 1996 11/6

(Please call Sales Rep to confirm dates.)

SEND AD COPY WITH
PREPAYMENT TO:

Dan Hoke
LANDSCAPE MANAGEMENT

7500 Old Oak Blvd.
Cleveland, OH 44310.

For more information call:
1-800-225-4569 or 216-891-2762

Fax: 216-826-2865.

FOR SALE

TWO-WAY RADIO SALES & SERVICE
 RITRON • JOBCOM
 MOTOROLA • RADIUS • SPIRIT
708-429-0234
ON-SITE COMMUNICATIONS
 17347 Oleander Ave, Tinley Park, IL 60477
 FAST TURNAROUND - 90-DAY WARRANTY

FREE 1996 MKI LANDSCAPERS SUPERSTORE CATALOG
Buy Direct & Save!
 Engines, Equipment, Parts & Accessories.
 Call Mohawk Industries 800-724-2229 for your free catalog.
 Up to 90 Day Terms.
 Trimmer Line • Filters • Tires • Blades • Belts
 Safety Supplies • Hand-tools • Blowers • Pulleys • Much More

Advertising in
LANDSCAPE MANAGEMENT Showcase
 is a **BRIGHT IDEA!**
 For rates and closing information, call Dan Hoke at 216-891-2762, or fax him at 216-826-2865

The benefits of Classified Advertising

IMPACT EXPOSURE VALUE RESULTS

Call 216-891-2762

ADVANSTAR COMMUNICATIONS MARKETING SERVICES

7500 Old Oak Blvd.,
 Cleveland, OH 44130

GOLF COURSE MARKETPLACE

TURBO TURF HYDRO SEEDING SYSTEMS



- Seed-mulch-fertilize
- Faster germination
- Lower seeding costs
- 1 man operation
- No messy straw
- Units start @ \$1295

FOR A FREE HYDRO SEEDING INFO PACK CALL
BADGER ASSOCIATES
 1108 THIRD AVE, NEW BRIGHTON PA 15066
800-822-3437

MICELLANEOUS



50 x 75 x 12 \$10,129
 Build it yourself and save MONEY 5,000 sizes, all bolt-together ALL STEEL BUILDINGS. Call today for a price quote and a brochure.
HERITAGE BUILDING SYSTEMS
800-643-5555

NEW PUBLICATION!

Containment System Design:



Chemical Storage, Mixing and Recycling
 by Fredric R. Haskett
 Item #668 \$74.95

Find out how to prepare your company for the scrutiny of government regulators. Learn how your operation can comply with new regulations. Understand the legal implications of compliance versus noncompliance. Discover the difference between the cost of recycling finished product residues and the cost of disposal.

Call 1-800-598-6008
 Outside the U.S. call 216-826-2839

Advanstar Marketing Services
 7500 Old Oak Blvd. • Cleveland, OH 44130
 Price subject to change CODE: 949511

Let Classifieds Work for You!

EQUIPMENT FOR SALE

NEW 1996 TERRA-RIDER AERATOR
 Get more work done faster and easier with our new 1996 Aerator



Features include:

1. 22" aerating width will allow you to go through a 36" opening, such as a gate, etc.
2. 98 5" long tines-3 1/2" c 4 1/2" spacing.
3. 8HP electric start Briggs & Startton engine.
4. Tecumseh foot operated hydrostatic drive.
5. Electric screwjack to put tines in the ground and the transport.

TERRACARE PRODUCTS CO., INC.
 PO Box 250, Pardeeville, WI 53954
 (608) 429-3402 Fax (608) 429-2889

BUSINESS OPPORTUNITIES

BIG OFF SEASON PROFITS

- Most profitable Season
- Keep Good People
- Use Own Trucks and Trailers
- Offset Fixed Overhead
- Sell to Existing Customers

PROFESSIONAL OUTDOOR CHRISTMAS LIGHTING

1995 - Christmas
 25% of Sales - 50% of Profits
 CALL TODAY
1-800-687-9551 OR 1-806-866-9551

EDUCATIONAL OPPORTUNITIES

Learn LANDSCAPING

TRAIN AT HOME for exciting hobby or career. Start your own spare or full time contracting business, work in the garden/nursery field or landscape your own property—we show you how. **FREE BROCHURE** describes opportunities. No salesmen.

Lifetime Career Schools, Dept. LF0196
 101 Harrison St., Archbald, PA 18403

CALL TOLL FREE 1-800-326-9221 MON-FRI 9-5 E.S.T.

LANDSCAPE management

For all ads under \$250, payment must be received by the classified closing date. We accept VISA, Mastercard, & American Express. Credit card orders are accepted by phone. Send Ad copy with payment to: Dan Hoke, LANDSCAPE MANAGEMENT, 7500 Old Oak Blvd., Cleveland, OH 44130 or call 216-891-2762. Fax Number 216-826-2865.

BOX NUMBER REPLIES: Mail box number replies to: LANDSCAPE MANAGEMENT, Classified Ad Department, LM Box #, 131 W. First St., Duluth, MN 55802. Please include box number in address.

HELP WANTED

Large Commercial Landscape Maintenance Contractor Located in Beautiful Central Florida Seeks Energetic, Dedicated Landscape Professional to Join Our Fast Growing Team.

Landscape Enhancement Supervisor *Competencies:* Regional Shrub and Annual Knowledge, Familiar With Southern Turf Grasses, Able to Exact Quality Work from Diverse Crews. CDL an Asset, 2-yr Degree Preferred.

Salary Range: \$23,500-27,000 + Benefits. Relocation Bonus.

Send Resumé With Cover Letter to: Mr. Thomas Klus, Nanak's Landscaping Grounds Maintenance, Inc., 1174 Florida Central Parkway, Longwood, Florida 32750, Or FAX to 407-830-8883

SALES & MARKETING REP

Successful candidates will be involved in new business development and promotion of landscape management and related site services. Directly responsible for estimating, bidding, and sales. Some travel required. Excellent growth potential and benefits are available for qualified applicants.

Qualified candidates should have a horticultural related degree, and/or strong sales record in the landscape industry. High level of communication, interpersonal, and organizational skills are required.

Please send or fax resume to:
Personnel Dept., P.O. Box 110322,
Stanford, CT 06911-0322
Fax: (203) 316-5434

HELP WANTED

One of No. VA's Most Successful Landscape firms has opening for Designer/Estimator. Must have minimum of 2 years experience. Excellent growth opportunity and benefits package.

Call 703-352-7555

HELP WANTED

Help Wanted

LANDSCAPE ARCHITECT

MID SIZE LANDSCAPE MANAGEMENT FIRM LOCATED IN THE MIDWEST NEEDS EXPERIENCED LANDSCAPE ARCHITECT WITH SKILLS IN ARRIGATION, LANDSCAPE DESIGNS, ESTIMATING AND CENTRAL SATELLITE SYSTEMS FOR LARGE COMMERCIAL PROPERTIES. GOOD STARTING SALARY WITH FULL BENEFITS PACKAGE.

Send resume and salary history to
LM Box 521.

Grounds Maintenance and Enhancement Supervisors & Managers

Become a part of one of Maryland and Virginia's fastest growing team of landscape professionals. Come and work for a company that recognizes quality as a daily occurrence and knows that customer satisfaction is a successful driving force.

Positions are full-time with exceptional compensation, benefits, and advancement opportunities. Mail or fax your resumé today to: Tom Davis, Bozzuto Landscaping Company, 15127 Marlboro Pike, Upper Marlboro, MD 20774, Fax No.: 301-627-7011.

HORTICULTURAL PERSONNEL

DuBrow's Nurseries, Inc., a full service Horticultural corporation, with locations in Northern/Central NJ and Eastern PA, is looking for all levels of management; managers, foremen/women, assistant foremen/women for our growing Grounds Management, Design/Build and Nursery/Growing divisions. Must possess a related college degree, bilingual is a plus. Competitive salary and full company benefits. Please fax resumes to: DuBrow's, attn. Michael Branch, fax: 201-992-6050. EOE M/F.

LANDSCAPE DESIGNER/SALESPERSON

Large design/build firm in Louisville, KY, is seeking landscape designer/salesperson. Experience preferred but not required.

Please send resume to
P.O. Box 43713, Louisville, KY 40253.

PROFESSIONAL GROUNDS, INC.

Established company in Washington, D.C. area has career positions in our landscape division for supervisor and foremen.

Minimum of 3 years experience in landscape construction required. Good pay, benefits, and growth potential.

Call Bill Moss at
(703) 339-0600
E.O.E.

For Advertising Information
Contact Dan Hoke at
216-891-2762

Landscape company seeks top notch manager to revitalize sales & production in Mid-Atlantic region. Searching for dynamic individual with personal fortitude, high career aspirations, plus the drive & desire to create & obtain goals. Excellent opportunity for the right person with proven track record. Salary & benefits commensurate with experience & ability. LM Box 520. 9/96

MAINTENANCE SUPERVISORS The Brickman Group, Ltd., one of the nation's largest and fastest growing full service landscape companies, has an immediate need in principal cities east of the Mississippi for maintenance supervisors with 2-5 years experience. Brickman seeks energetic, team oriented college graduates with proven leadership, communication and interpersonal skills. Brickman offers full-time positions, excellent advancement opportunities and exceptional compensation and benefits with an industry leader building on a 56-year tradition of uncompromising customer service. For immediate confidential consideration, please send or fax your resume with an indication of your geographic preferences and willingness to relocate to: **The Brickman Group, Ltd., Corporate Office, 375 S. Flowers Mill Road, Langhorne, PA 19047, 215-757-9630, EOE.** 9/96

FLORAPERSONNEL, INC. In our second decade of performing confidential key employee searches for the landscape/horticulture industry and allied trades worldwide. Retained basis only. Candidate contact welcome, confidential, and always free. 1740 Lake Markham Road, Sanford, FL 32771. PHONE (407)320-8177. FAX (407)320-8083. 11/96

KT Enterprises, Inc., one of the Metropolitan areas' largest quality oriented landscape companies is seeking applicants for the following positions in Maryland and Northern Virginia: Area Managers to manage satellite offices. Supervisors to manage 3 to 6 landscape maintenance crews. Crew leaders to manage 6 to 24 personnel. KT offers excellent starting salaries, health insurance, dental insurance, 401K, paid holidays and paid vacations. Please call Will Cullen 703/222-0449 Ext. 306 or fax resume to 703/222-0578. EOE/AAP 9/96

OREGON'S LARGEST COMMERCIAL LANDSCAPE COMPANY located in the Portland Metro area is looking for experienced Maintenance Supervisors and Irrigation Technicians. Must be self-motivated, team-oriented, industry professionals with good communication & organizational skills. Training and advancement for those who want to be part of the Northwest's Best. EOE. Send resume to: NORTHWEST LANDSCAPE INDUSTRIES, 16075 SW Upper Boones Ferry Road, Tigard, OR 97224-Or FAX to (503)620-7592. 9/96

Fastest Growing Company in Southern Florida seeks Management and Supervisory Personnel for Pest Control, Lawn, and Termite Control. Excellent growth potential. Full benefits package. All replies strictly confidential. Send resume to: P.O. Box 7011, West Palm Beach, FL 33405-7011. 12/96

BRANCH SALES MANAGER National Lawn Equipment, Parts & Accessories Supplier expanding into the Northeast, Mid Atlantic and Southeast. Need articulate individual with retail management experience. Computer literate. Several markets available. Send resume with salary history & requirements to: **Landscapers Supply, P.O. Box 459, Spring Valley, NY 10977-0459.** 8/97

CLASSIFIEDS

HELP WANTED

MANAGEMENT TRAINEES WANTED- Rapp's Green Lawn, an established, fast growing company, is seeking management & sales trainees for our Midwest locations (Indiana, Missouri, Ohio & Pennsylvania). Lawn care experience or college credits helpful. Must be able to relocate. Excellent benefits. Starting salary upper \$20's. Come work for a company that cares about it's employees! Send resume to **Michael Markovich, Rapp's Green Lawn, Inc., PO Box 9038, Ft. Wayne, IN 46899** or fax resume to **219/432-7892.** 11/96

LANDSCAPE MAINTENANCE SUPERVISORS Scott Byron & Co, a premier provider of residential maintenance services to Chicago-North Shore suburbs has openings due to expansion for experienced supervisors. These are full time, year round positions with excellent pay and benefits. For immediate and confidential consideration, fax or send your resume to: General Manager, 30088 N. Skokie Hwy, Lake Bluff, IL 60044, Fax-847-689-0277. e.o.e. 9/96

Production/Division Manager Well-established, full-service landscape design/build firm located in Northern NJ seeks qualified, self-motivated individual to grow with us. Diverse and challenging position requires professional with 3-5 years experience in the Green Industry. Strong communication, organizational and supervisory skills are essential. Sales and design experience and a degree in Horticulture or related field are strongly desired. Send resume with salary requirements to: Jacobsen Landscape Design and Construction, Inc., 41 Birch Street, Midland Park, NJ 07432, Attention: Personnel Department, or Fax (201)444-4334. 9/96

EDUCATIONAL OPPORTUNITIES

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 1-800-326-9221 or write Lifetime Career Schools, Dept: LF01X8, 101 Harrison Street, Archbald, PA 18403. 12/96

EQUIPMENT FINANCING

FINANCE your new or used **EQUIPMENT** through **LEASING.** Advantages include: no down payment, \$1,000 and up, tax deductible, flexible terms, start-up financing available, sales/lease back possible. Call TRIDENT Leasing 1-800-305-3464 or FAX 412-325-3466. 9/96

Send Box Number Replies to:

Landscape Management
Classified Ad Dept.
131 West First St.
Duluth, MN 55802-2065.

Don't forget to include box
number in address!

EQUIPMENT FOR SALE

SPYDERS- New/Used/Rebuilt. Full line of replacement parts and update kits. Kubota, Ruggerini, and Kohler engines & 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, Crystal Lake, IL 60012. (800)397-7509, FAX (815)455-7366. 12/96

FOR SALE

COMPLETE NURSERY, RETAIL SALES and MAINTENANCE BUSINESS in PIEDMONT, NORTH CAROLINA... HIGH GROWTH RETIREMENT and RESORT AREA. On busy highway. Thriving and growing. Owner will stay for transition. Call John McKeithen, Gouger, O'Neal & Saunders, Inc., 800-672-2228 or 910-692-2696. 9/96

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. 800-597-8283. 12/96

GROUND MAINTENANCE FIRM Upper Midwest based year around ground maintenance firm specializing in large contracted property maintenance, mowing, pruning, weed and feed, and snow removal. Revenues exceed \$2MM. Experienced staff in place. Outstanding reputation, offers turnkey opportunity with established client base. Reply to LM Box 519. 9/96

Landscape/Maintenance Old established Northern Colorado landscaping, maintenance & snow removal business. Grossing over \$1,000,000. Owner anxious to retire. Terms. **VR Business Brokers 970-407-1000.** 9/96

FRANCHISE OPPORTUNITIES

FRANCHISE OPPORTUNITY HELP!! WE HAVE MORE CUSTOMERS THAN LOCATIONS TO SERVE THEM. **NaturaLawn of America**, the leader in organic-based lawn care, has franchises available nationwide. Positioned to take advantage to the increasing demand for environmentally friendly lawn care, NaturaLawn of America offers proven, innovative advertising and marketing strategies, very competitive pricing on our exclusive products, on-going training and operational support, protected territories and more. Call **800-989-5444.** 9/96

LEASE FINANCING

LEASE any type equipment for your business. Call AmeriNet Financial (216)543-3800. 12/96

WHOLESALE DISTRIBUTORS

Needed to market environmentally friendly, liquid, slow-release fertilizer products direct from manufacturer. Ken Franke, P.O. Box 123, Plato, MN 55370; 800-832-9635. 10/96

The next ad closing for
LANDSCAPE MANAGEMENT
is **October 8, 1996**
for the November 1996 issue.
Call Dan Hoke at 216-891-2762

AD INDEX

101	Agrevo/Golf North	9G
102	Agrevo/Golf South	9G
108	Akzo Nobel Salt Inc	SR19
109	Akzo Nobel Salt Inc	SRCv2
103	American Cyanamid	21
104	American Cyanamid/Reg	37
106	Dixie Chopper	2-3L
	Dow Elanco	5
110	Echo Inc	7
116	Fisher Engineering	SR5
111	Florantine	12G
112	Georgia Turfgrass	40
114	Grasshopper	SR10-11
113	Gravelly	34
117	Husqvarna	29
118	Intl Irrigation Assoc	35
119	Int'l Seeds Inc/Insert	17-18
120	J C Erlich & Co	16L
121	Kubota Tractor	3
122	Lofts Seed Inc	5G
123	Nat'l Arborist Assoc	Cv3
124	New Holland	5L
125	Nitro Green	4
130	Nutramax	7G
127	PBI Gordon	33
128	Pickseed West	11G
126	Rohm & Haas	2-3G
131	Roots	13L
129	Ryan, Ransomes Corp	9L
	SMR Direct/Reg Insert	34a-34d
132	Schipper	6
134	Stihl	Cv2
135	Tanaka	4
136	Tee 2 Green	Cv4
137	Toro	15
138	Turf Merchants/Manhattan 3	9
139	Turfco	15L
140	Walker Mfg	11L
141	Wells Cargo	16L
142	Western Products	SR15
143	Zeneca	25

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

Grab Bag

Is poor seed the real problem?

There are more than a dozen reasons for a new stand of turfgrass seed to not establish properly, according to Jim Freilich of the Scotts Co., Gervais, Ore.:

- ▶ poor soil preparation;
- ▶ inadequate renovation procedures;
- ▶ weed seed sources nearby;
- ▶ native plant population;
- ▶ mulch contaminants;
- ▶ topsoil contaminants;
- ▶ herbicide residual;
- ▶ no fertilizer applications;
- ▶ insufficient moisture/irrigation;
- ▶ old seed or improperly-stored seed;
- ▶ wrong planting time;
- ▶ improper selection of seed mix;
- ▶ disease and insect damage; and
- ▶ shade too dense.

Postage-stamp park

Once upon a time, tiny Waldo Park in Salem, Ore., could stake a claim as being the world's smallest city park, per *Ripley's Believe It or Not*. That and the title of "Littlest Redwood Park in the World" are now history, but the 2400-sq. ft. plot of land is still notable for the history that remains: a 124-year-old redwood tree, planted by William Waldo four generations ago. Salem Parks field supervisor Darrell Belcher claims the corner on which the park sits "is kind of a sacred place." Low-maintenance ivy is used as a groundcover, but "the tree controls the street there," says Belcher. Thanks to park maintenance operator Gary Robb for the information.



'Houston, we have dirt!'

Dr. Douglas W. Ming of the National Aeronautics and Space Administration leads the work on development of synthetic soil using zeolites, a common group of minerals found across the western U.S. According to a NASA report, the soil could provide a precise timed release of plant nutrients to provide years-long fertility with low run-off potential. Ivy planted in the soil has lived for more than two years on a diet of nothing but deionized water.

Plain talk from the doctor:



"People call it 'summer bentgrass decline' because they're afraid to say summer bentgrass d-d-death!"

—DR. JOE VARGAS
MICHIGAN STATE UNIVERSITY

Gaining on Jack Benny

Median age of superintendents who are members of the Golf Course Superintendents Association of America is somewhere between 35 and 39 years, according to the association.

Breakdown of ages:	40-44 years = 2169 members
20-24 years = 261 members	45-49 years = 1271 members
25-29 years = 1340 members	50-54 years = 712 members
30-34 years = 2071 members	54-59 years = 520 members
35-39 years = 2314 members	60-64 years = 403 members
	65-69 years = 275 members
	70-74 years = 175 members
	75-79 years = 146 members
	80-84 years = 81 members
	85-89 years = 38 members
	90+ years = 14 members

Grab Bag is a new LM department that features brief observations and prognostications throughout the green industry. If you have an unusual photo or comment you'd like to share with us, please send it in...

TCI EXPO '96

DROP IN. HANG AROUND.

SEE WHAT THE TREE CARE INDUSTRY can offer you. Over 150 exhibitors will be on hand with the equipment and services you need.

Check out a chipper, inquire about insurance. Need a lift? We've got 'em - from 15 to 55 feet and more! Try a tree health management seminar or get the low-down on leasing.

It's all here at the tree care industry's most comprehensive trade show...TCI EXPO '96!

CHARLOTTE, NC
NOVEMBER 7 - 9, 1996

For more information or a registration package, call toll-free today:

1-800-733-2622

TCI EXPO '96 is cosponsored by the
National Arborist Association and the
International Society of Arboriculture.



'Penn Pals'
at the
1996 PGA
Championship

Eighteenth hole, Valhalla Golf Club, Louisville, Kentucky

Penncross and PennWay are Part of the Picture at the 1996 PGA

We have always maintained high standards at Valhalla. Penncross creeping bentgrass greens and PennWay blend fairways and tees are some of the perks our members enjoy. Touring pros also expect the best fairways and greens, and our bents will accommodate them.

Turf preparation began in fall prior to this golf season. Our plan was to have the

turfgrass healthy and ready the fall before the tournament, so we encouraged growth with an aggressive renovation and fertilization program before our cold temperatures came.

The PGA is August 5-11, typically a difficult time of year for cool-season grasses. Louisville is past the extreme edge of bentgrass adaptation. You'll find more bermuda- and zoysiagrass fairways around here, but the Penn bents perform like warm season grasses for us when it's really hot. The bents are especially aggressive and repair ballmarks, spikemarks, and divots quickly. We *do* take extra care to keep them from overtaking bunker faces and encroaching on our roughs. As far as disease pressure and turf vitality,

the Penn bents have been a good choice. We grow ryegrass, Kentucky bluegrass, fine and tall fescues in the roughs.

Valhalla opened in 1986. I've been here since 1988 and have experienced very little *Poa annua* even though it's a problem in the area. A good maintenance program and aggressive bents seem to control it, but we are seeing more signs of the persistent nuisance.

Our greens are mowed at 1/8" all year. I don't change the height of cut, but I will change from a grooved to solid roller in the summer. For the PGA, I want the greens to be 'the Beast'. I want to take them to the edge. To go along with the Jack Nicklaus course design, the greens need to test the best players

in the world. More so than the roughs or anything else.

I'm proud to be a part of the PGA Championship here at Valhalla. Preparation for a Major is much simpler with a spectacular course, great people, and exceptional turfgrasses."



Mark Wilson, CGCS, Supt.
Valhalla Golf Club
Louisville, KY



©1996 Tee-2-Green® Corp.

Circle No. 136 on Reader Inquiry Card

Call or fax today for a FREE copy of 'Penncross and PennWay at the 1996 PGA Championship' and for the Penn Pals dealer nearest you.

Tee-2-Green® Corp.

PO Box 250
Hubbard, OR 97032 USA
800-547-0255
503-651-2130
FAX 503-651-2351