

# Lawn & Landscape MAINTENANCE

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ANNUAL  
SEED ISSUE



TruGreen  
ServiceMASTER

## HIGH STAKES LAWN CARE

*For roughly one-third of the price Ecolab paid for ChemLawn, ServiceMaster is betting it can return the nation's largest lawn care firm to profitability.*



NEW FROM TURF-SEED!

**MOW-LESS**

*Brand Tall Fescue Blend*



Dark blue-green MowLess blend stands out against a Southern California background. Drought and heat tolerant Mow-Less offers year-around color in areas not before considered possible.

# MOW-LESS SAVES YOU MORE

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- Natural insect and disease resistance reduces chemical tools.
- Heat, drought and shade tolerance mean wider range of adaptability.

Mow-Less Brand Tall Fescue blend was developed to save conscientious turf managers time, money and clippings.

Mow-Less is a blend of the latest generation of dwarf tall fescues. Today, Mow-Less is composed of Silverado, Tomahawk (5DX), Monarch and Eldorado. As newer varieties are developed, like 5PM and 59D, they will be included in Mow-Less.

The components of Mow-Less all contribute dark blue-green color, heat, drought, shade and insect tolerance ... naturally. Mow-Less has made inroads into areas that tall fescue has not traditionally been adapted. Is this the start of something big? We think it's the start of something small ... with a big savings in mowing.



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Cover Illustration:  
Bob Novak, Cleveland

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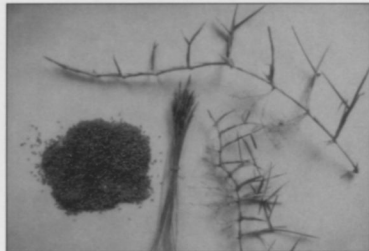
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# Editor's Focus

CONSOLIDATION IS rarely greeted with such nonchalance as was apparent in recent weeks in the lawn maintenance industry.

At one time, the news of ChemLawn's impending sale would have, and did, cause great trepidation among competitors and followers alike.

But this time around, the sale was handled quietly, quickly and without much fanfare.

In a little more than two months, ChemLawn was put on the trading block, received notice of a buyer and was sold. This quick maneuvering by Ecolab and ServiceMaster reflected the former's desire to end five years of frustration, and the latter's eagerness to incorporate about 200 branches/franchises and one million customers into its rapidly growing lawn care conglomerate.

Consolidation isn't new to the lawn maintenance industry. Throughout the second half of the 1980s, both manufacturers and end-users alike have merged and divided into a variety of sizes and service opportunities. Suppliers, seeking economies of scale in an industry affected dramatically by seasonal and governmental influences, and end-users striving to diversify to meet specific customer needs and market niches, have succeeded with reorganization.

But none have had such a direct and indirect effect on so many people at one time as has the ServiceMaster/ChemLawn deal.

An undisputed industry leader for much of the 1970s and 1980s, ChemLawn was where many lawn maintenance contractors got their start hiring on at the technician level and leaving shortly thereafter to start their own lawn maintenance companies.

As the largest supplier of chemical lawn care services, ChemLawn was also in the unenviable position of being the target of consumer media attacks. Whenever a story on the so-called danger of pesticides surfaced, ChemLawn bore the brunt of such assaults. The firm was repeatedly called on to defend the use of lawn care pesticides and to provide documented research that chemicals were a necessity rather than a luxury.

The leadership role didn't prove to be all bad as ChemLawn developed an unsurpassed team of professional research and development personnel, and provided the industry with much needed documentation on the long-term health of technicians.

The value of this research and development effort hasn't gone unnoticed by ServiceMaster. The R&D center, unlike the corporate headquarters, will remain open in Columbus, Ohio.

Whether a fan or opponent of ChemLawn, the strides the firm made in its



23-year existence should be recognized, in many cases, as aiding the entire industry. The sale of ChemLawn to ServiceMaster marks the end of an era but, hopefully, the start of a new one.

Like with TruGreen before it, ServiceMaster is wasting no time incorporating ChemLawn branch and franchise operations into the fold. From the environmental studies conducted at branch operations prior to the sale and the meetings now beginning at various locations, ServiceMaster is methodically evaluating options at each and every location to determine their viability.

While it hasn't been officially announced, industry insiders report that the ChemLawn name isn't long for the industry. In the same manner ServiceMaster has stopped selling ServiceMaster franchises in deference to TruGreen, it will most likely shed itself of the outdated ChemLawn name.

While the acquisition will bring a lot of change, mostly at the local level, it will be worth it if ServiceMaster can turn around ChemLawn, in much the same manner as it did with TruGreen. More than anything else, it has the potential to give the industry's reputation and viability a much needed boost.

Wendell R. Mullison, a noted herbicide consultant and director of the 2,4-D hotline, died recently from a heart attack. He was 78.

Mullison, a long-time employee of Dow-Elanco, and later a consultant to the lawn maintenance industry, was an authority on the topic of 2,4-D.

Donations in his memory can be made to the W.R. Mullison Scholarship Fund, Delta College, University Center, MI 48710. — *Cindy Code*

## EDITORIAL

*Cindy Code*  
Editor

*Julie A. Evans*  
Associate Editor

## GRAPHICS/PRODUCTION

*Charlotte Turcotte*  
Art Director

*Jami Childs*  
Production Manager

*Helen Duerr*  
*Tracy Green*  
*Carolyn Badger*

*Richard J. W. Foster*  
President

*Christopher W. Foster*  
Business Manager

*John Roddy*  
Assistant Comptroller

*Rosalie Slusher*  
Circulation Manager

*Mark Fosse*  
Market Research Manager

*Fran Franzak*  
Books Manager

## ADVERTISING/MARKETING

*Maureen Mertz*  
Publisher

National Sales Manager  
1723 South Hill

Milford, Michigan 48381

313/685-2065

Fax: 313/685-2136

*Dave Miethke*  
Regional Sales Manager  
4012 Bridge Avenue  
Cleveland, Ohio 44113

216/961-4130

Fax: 216/961-0364

## ADVISORY BOARD

Karl Danneberger, Tom Garber  
Des Rice, Joe Vargas  
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## EDITORIAL OFFICES

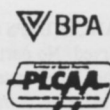
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Cleveland, Ohio 44113

Phone: 216/961-4130

Fax: 216/961-0364

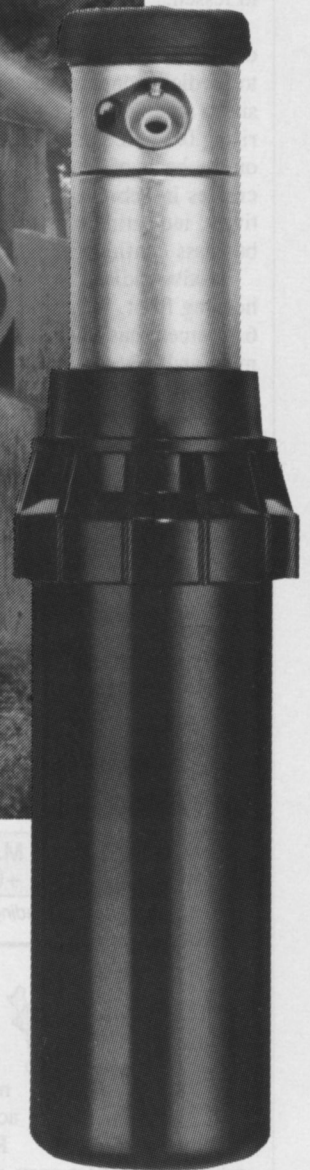
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# Hunter® SPRINKLERS



The I-25 ADS  
With Drain  
Check Valve

## RELIABLE PERFORMANCE *On Playing Fields and Parks*

The Hunter I-25 gear-driven, pop-up sprinkler is used on sports fields, parks, cemeteries and other large turf areas. The sprinkler features eight interchangeable nozzles to vary the moderate-capacity discharge rate from 3.8 to 20.2 GPM, and the radius from 40' to 65'. The 3¾" pop-up clears most turf to ensure even water distribution.

The I-25 is available as an adjustable arc sprinkler with settings from 40° to 360°, and as a fixed, full circle model. It is equipped with an ABS riser or new stainless steel riser for use in particularly abrasive soil conditions.

- Special Features**
- Drain check valve checks up to 10' of elevation change
  - Quiet, reliable performance
  - Five-year, over-the-counter exchange warranty (not prorated)

**Hunter®** The Irrigation Innovators

USE READER SERVICE #40





# Business Watch

AFTER REVIEWING the index of leading economic indicators for the first three months of the year, one might think the recession, which has gripped the country for well over a year, is beginning to lessen.

For the third consecutive month the index, consisting of several reports intended to predict economic activity over the next six to nine months, took a hike upward, rising 0.2 percent. The increase follows on the heels of 0.8 and 1.0 percent increases in February and January, respectively, indicating rising consumer and business confidence.

Positive indicators were also seen on the housing front, as housing starts increased 6.4 percent nationally in March. Employment and new home sales figures were not as optimistic, however. The country's unemployment rate remained at 7.3 percent, its highest level since 1986, and national new home sales plummeted 100,000 units to 513,000 units, its lowest number since last September (502,000 units).

The region hit hardest was the West where a drop of 53,000 units was recorded between February and March.

## RETAIL SALES\*

JAN.	FEB.	MAR.	APR.
+2.1	+1.6	-1.0	+0.9

\*Percent change from preceding month.

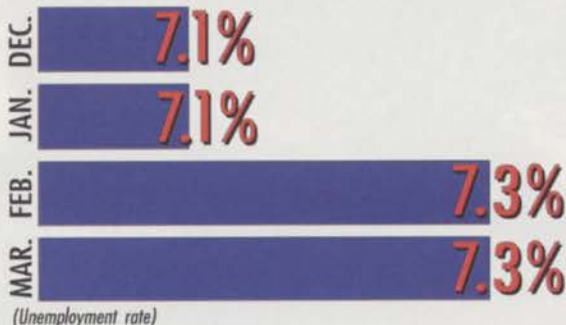
## CONSUMER PRICE INDEX\*

JAN.	FEB.	MAR.	APR.
+0.1	+0.3	+0.5	+0.2

\*Percent change from preceding month.

## LOOKING FOR DIRECTION

Across the country, employers and employees alike are searching for ways to cope with the harsh realities of an ever-shrinking job market.



Source: Bureau of Labor Statistics

## HOUSING STARTS

Thousands of homes, seasonally adjusted.



Source: National Association of Realtors

## NEW HOME SALES

Thousands of homes, seasonally adjusted.



Source: National Association of Realtors



## REGIONAL REPORT: OHIO

OHIO WILL BE among the nation's most prosperous states in the early 1990s, according to the National Association of Realtors. However, slow population gains and rising business costs are expected to chip away at this distinction as the decade progresses.

Last year, the state was among those impacted by a lingering drought. Savvy lawn care operators have turned that situation into a 1992 business opportunity.

In Dayton, Bill Clutter, president of TurfGard Co. Inc., said his renovation projects have more than tripled this year. His special services business sector, which includes seeding and grub prevention, now accounts for 25 percent of total revenues.

"We had more than 400 seeding proposal estimates completed by February," he said. "It hasn't slowed down since."

Clutter said his strategy was to start early and work long hours in the winter. "While a lot of other people were vacationing, we were working overtime putting together seeding proposals."

Doug Hague, owner of Lawn Classics in Findlay, also reported increased lawn renovation accounts. He said business in his region

has been healthy.

"The economy in northwest Ohio has not been as affected by the economic problems plaguing the larger cities," he said. "A lot of new housing has spurred on landscaping, new lawn propagation and additional fertilizing. Commercial construction also has brought on a lot of opportunities."

In the Cincinnati area, ProLawn ProScape President Bart Sheeler said residential landscape projects appear to have picked up, but commercial and industrial landscape remains down.

"Since landscape construction is still down, we've seen an increase in the number of firms 'looking into maintenance.' The maintenance market is becoming saturated and highly price competitive," he said.

Sheeler said Ohio landscape contractors can benefit from opportunities in design/build and upgrades to property owners, "as improving current property and curb appeal become increasingly important to compete in today's marketplace."

In response to last year's drought, Sheeler said, problems with water bans will require more efficient use of irrigation systems and closer monitoring of water use.



# WHEN YOU'VE GOT GRUB CONTROL THAT'S THIS GOOD, WHY NOT SPREAD IT AROUND?

When it comes to grub control, there's nothing faster or more effective than DYLOX Insecticide.

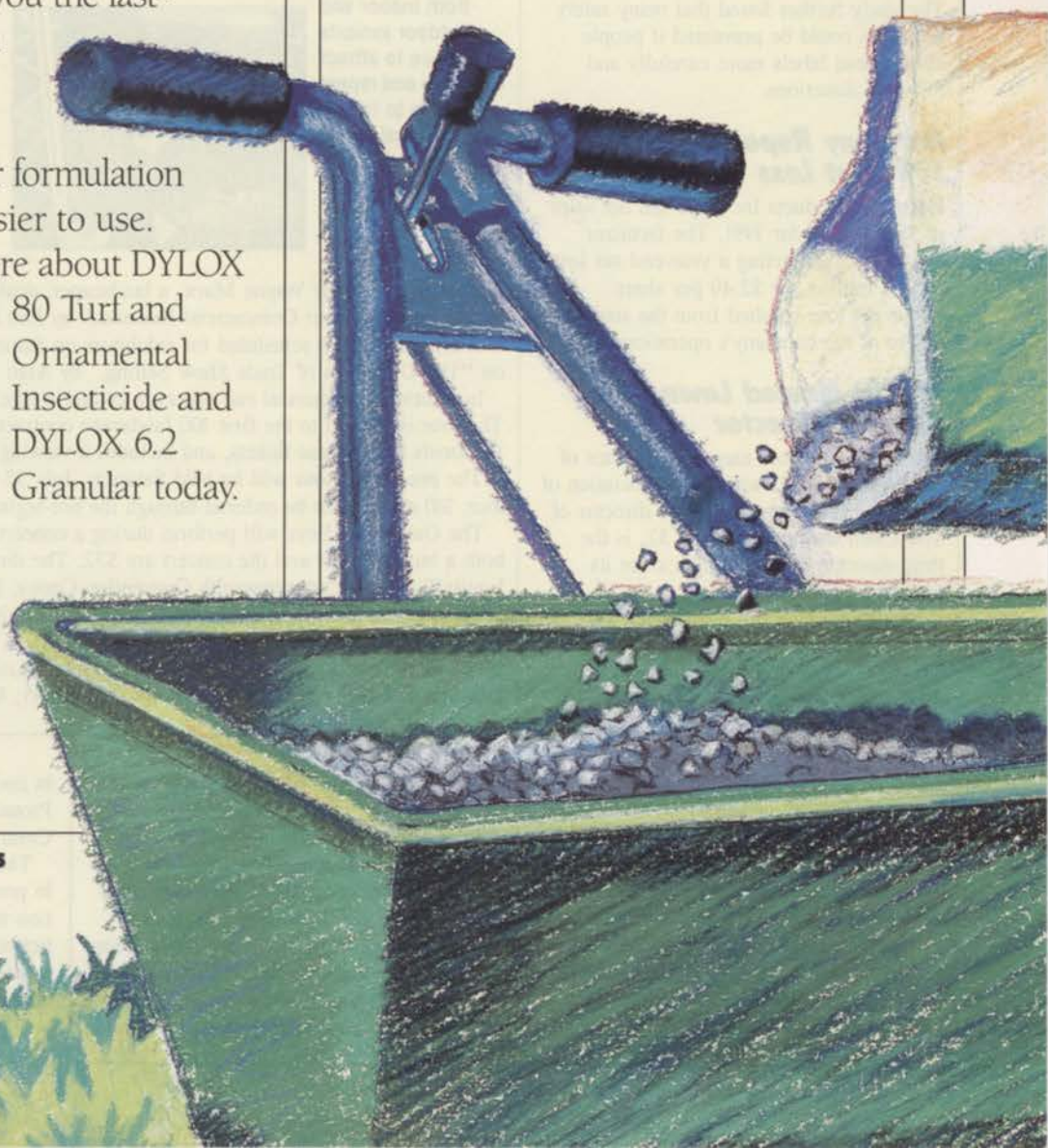
Now, thanks to DYLOX 6.2 Granular Insecticide, there are two great formulations of DYLOX to tackle tough grub problems.

DYLOX gives you the fast-acting protection you've come to depend on, and now the granular formulation makes it even easier to use.

So find out more about DYLOX 80 Turf and Ornamental Insecticide and DYLOX 6.2 Granular today.




Because the only thing faster than DYLOX at work, is the way its reputation for grub control has been spreading. Miles Inc., Specialty Products, Box 4913, Kansas City, MO 64120. (800) 842-8020.



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**MILES** 



# News in Brief

## NEWS DIGEST

### **Dixon Plans Plant Expansion**

Dixon Industries will spend \$1.3 million to expand its Coffeyville, Kan., plant by 37,000 square feet. The expansion includes additions to design engineering, customer service and parts distribution. An employee training center will also be established.

Construction is expected to be completed by October.

### **Reading Labels Can Reduce Pesticide Abuse**

American homeowners are trigger-happy when it comes to using pesticides, according to a study by the Research Triangle Institute.

The study examined more than 2,000 homes in 29 states to see if patterns of misuse contributed to thousands of accidental poisonings in homes each year. The study further found that many safety problems could be prevented if people simply read labels more carefully and followed directions.

### **Harmony Reports 1991 Net Loss**

Harmony Products Inc. reported net sales of \$1.4 million for 1991. The fertilizer company is projecting a year-end net loss of \$1.3 million, or \$2.49 per share.

The net loss resulted from the start-up nature of the company's operations.

### **Brooks Named Lawn Institute Director**

Jim Brooks, former executive director of the Professional Lawn Care Association of America, is the new executive director of The Lawn Institute. Brooks, 52, is the third director of the Institute since its founding in 1955.

Brooks replaces the retiring Dr. Elliot Roberts who headed the Institute from 1982-92. Robert Schery was the first director.

The position is currently a part-time job, but Brooks expects it will build to full time as membership, now at 125, increases.

Brooks said he wants to make the Institute more visible, develop closer alliances with related associations and help educate the consumer on the value of turfgrass.

The Lawn Institute's new address is: 1509 Johnson Ferry Road N.E., Suite 190, Marietta, GA 30062; 404/977-5492. FAX: 404/977-8205.

## **Commercial Spotlight Continues to Grow at EXPO**

SUMMERTIME, EXPO and Louisville conjure up thoughts of power equipment, outdoor demonstrations and dealer communications. This year is no different.

For the ninth time, the International Lawn, Garden and Power Equipment Expo will convene in Louisville for the largest meeting of its kind. The show is slated for July 26-28 at the Kentucky Fair and Exposition Center. Pre-registration for the trade show is free. On-site registration is \$20.

The show annually attracts visitors from every state and more than 50 countries. Last year's attendance reached nearly 25,000 including 550 exhibitors and their crews as well as more than 17,000 commercial end-users, dealers, retailers, distributors, rental equipment dealers and manufacturers' reps.



Both indoor and outdoor exhibits continue to attract first-time and repeat attendees to the International Lawn, Garden and Equipment Expo in Louisville, July 26-28.



Dynamic growth in the commercial power equipment industry has had a positive effect at EXPO. In 1991, the percentage of dealer attendees at EXPO carrying commercial products increased 73 percent over 1990. The number of landscapers/mowers from throughout the United States reached 2,475, an increase of 57 percent from the previous year.

A separate outdoor demonstration area is devoted specifically to commercial equipment as are three, two-hour educational sessions. Seminars include: "Bidding with Confidence," by Charles Vander Kooi, Vander Kooi & Associates; "How to Profit through Effective Training," by Wayne Marx, a landscaper, dealer and producer of safety videos;

and "Expanding your Commercial Business," by Len Hays, Sales Improvement Associates.

A seminar is also scheduled for exhibitors on Saturday, July 25 from 2:30 to 4:30 p.m. on "The Dynamics of Trade Show Selling," by Alan Konopacki, Ph.D.

In addition, commercial end-users are invited to take an insider's look at Churchill Downs. The tour is offered to the first 100 landscape contractors and mowing maintenance professionals to purchase tickets, and includes a viewing of the greenhouse and grounds.

The pre-EXPO tour will be held Saturday, July 25 from 2 to 4:30 p.m. Tickets for the tour, \$10 each, must be ordered through the pre-registration form.

The Oak Ridge Boys will perform during a concert/dinner show package. Tickets for both a buffet dinner and the concert are \$32. The dinner show will be held in downtown Louisville at the Commonwealth Convention Center, Monday, July 27 from 6 to 9:30 p.m.

The show is sponsored by the Outdoor Power Equipment Institute and endorsed by eight other national trade associations.

For more information about EXPO 92, contact Andry Montgomery & Assoc., 6100 Dutchmans Lane, 6th Floor, Louisville, KY 40205; 800/558-8767 or 502/473-1992.

## **Lawn Care Brochure Addresses Concerns**

A long-awaited brochure detailing what customers should know about lawn care products and services is nearing completion.

The Professional Lawn Care Association of America, its legal counsel Richard Lehr and Lawn Doctor of Matawan, N.J., have been working on this project for two years

in cooperation with the Environmental Protection Agency and the Federal Trade Commission.

The philosophy behind the brochure is to present uniform and credible information to the public. This information is particularly important in times of increased media attention on lawn maintenance products and advertising surrounding their use.

(continued on page 10)



## THE TERRA TOPPER

A New Concept in Topdressing



### Look At These Advantages

- FAST:** Does not lay the topdressing on top of the grass. No brushing is necessary.
- SAVE:** With a light topdressing 18 greens can be done in less than 2 hours with only 3 passes for average green.
- CLEAN:** Very little or no sand pick up when mowing.
- QUALITY:** Cut your greens longer and still maintain fast putting surface.
- RESULT:** Best putting surface available.

## THE TERRA T200



### Greens - Tees - Approaches

The Terra 200 will give you a fast, quality job with a minimum of maintenance cost. It will do 1 1/2 acres per hour - 10 minutes per green.

This is the ideal machine to use for spiking. The new double 4" spiking blade does the job so smooth the golfer will never know you've been on the green. It will leave 400 spiking holes in a 3 foot width.

## TERRA SOFT BROOM



For brushing in topdressing or windrowing aerating cores: Do it with the Terra Soft Tender Rotary Broom.

One pass over -- 4 or 5 passes is not necessary as with a dragmat or barn brooms.

## THE TERRA T320



Get the job done before the golfer knows you've started. Designed for fairways and large turf areas, the Terra 320 can aerate 3 acres per hour with 3 1/2" X 4" hole spacing. High production combined with low maintenance and initial cost make it the cheapest way by far to put holes in the ground.

Get the work done when the ground is ready to aerate and end up with a clean quality job.

## TERRACARE PRODUCTS CO. INC.

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Pardeeville, WI 53954

608/429-3402

FAX: 608/429-2889

## News

(continued from page 8)

Although the information was reviewed by the EPA, it doesn't constitute an approval or endorsement of its contents.

The brochure's content includes the rules of proper lawn care pesticide use, questions surrounding the safety of pesticides and fertilizers used by professionals and homeowners, what consumers can do to minimize risks, who regulates lawn care products and services and methods to determine when pesticide applications will be made.

Also covered are definitions of natural and organic, integrated pest management techniques and who to call with questions about lawn care services.

The brochure will be available to both PLCAA members and non-members. Non-members can send a self-addressed, stamped envelope to PLCAA and receive a review copy and information concerning ordering more copies.

For more information, contact: PLCAA, 1000 Johnson Ferry Road, N.E., Suite C-135, Marietta, GA 30068-2112; 404/977-5222.

## Pesticide Advisory Group Tackles Topics

Posting, notification, state registries and advertising language were some of the onerous topics discussed by a newly formed composite group developed to act as a sounding board to the U.S. Environmental Protection Agency.

The Lawn Care Pesticide Advisory Committee held its first meeting in Annapolis, Md., May 12-13. The committee's goal is to bring together diverse perspectives on lawn care pesticide issues to help guide future public policy.

Committee members represent the federal and state government, industry, business and consumer and environmental activist groups.

Disparate views surfaced on the issue of posting and notification. Some committee members voiced support for the inclusion of homeowners in any future posting and notification legislation.

Allen James, committee member and executive director of Responsible Industry for a Sound Environment, said RISE and some of its member companies disagree that homeowners should have to post and

prenotify abutting properties of pesticide applications.

More unity was achieved on the topic of registries. According to James, all were in consensus in recognizing the state's right to have a registry, if they want one. The groups also agreed that registries should be open to all who request them, not just "chemically sensitive" applicants.

Reasons for supporting that position differed vastly, however. RISE does not give credence to the "chemically sensitive" designation, explaining it has no scientific basis. Some committee members support the "chemically sensitive" label but want non-chemically sensitive applicants to be included in the registry as well.

On advertising, all agreed that EPA and the Federal Trade Commission should be more active in developing industry guidelines.

## Northwest Nurseries Hit By Rash of Thefts

Reports of stolen plant materials and equipment continue to puzzle Northwest nurseries. According to Don Grey of the Oregon

(continued on page 12)

# More Lawns Greener Greens Fewer Callbacks

**That's a promise we can prove!** With N-SURE,<sup>®</sup> a triazone nitrogen source with low urea, the benefits are significant. ■ A controlled, slow release, non-burning nitrogen means greener, healthier turf. ■ Faster and easier application with less water, less waste and less downtime for more jobs per day. (Can be applied concentrated in the hottest weather.) ■ Less volatilization means more N in the turf. ■ No more clogged nozzles and screens. ■ Compatible with the most commonly used herbicides, insecticides and fungicides.

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USE READER SERVICE #19



You aren't born smart. That's why there's  
such a thing as experience.



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**STIHL**®

USE READER SERVICE #87

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

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

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

But after my first Stihl, I never even looked at another brand.

I need to get the job done in the least amount of time, so I can go on to another job and make more money. It's that simple."

- John Frick  
Owner, Grassroots, Cincinnati, OH



*Stihl makes chain saws, blowers, and trimmers for professionals who depend on their tools for a living.*

**Stihl. For the part of you  
that promised  
you'd never compromise.**

## News

(continued from page 10)

Association of Nurserymen, its members have been hit by thieves who target container- and field-grown stock. Missing items range from one-gallon container stock to finished in-field stock.

No discernible pattern of crime has been detected. There have been some reports of people offering to sell undocumented stock to retailers, Grey said.

The OAN has instituted an awards program paying up to \$1,000 for information leading to the arrest and conviction of those who steal from OAN-member companies. Reward signs are posted on participating properties. For details, contact OAN, 503/653-8733.

### Purdue Offers Roadside Training Materials

Purdue University, in conjunction with the U.S. Department of Agriculture and professional vegetation management groups, is offering a comprehensive roadside applicator training curriculum.

Available in nine modules, the curricu-

lum is designed for initial or continuing training of vegetation control personnel. The program consists of video and written manuals and can be used for classroom or individual study.

The program, endorsed by the Responsible Industry for a Sound Environment, costs \$400 for both the tapes and manual. The manual is available for \$50. A discount is available for orders of 10 or more sets.

To order, contact: Purdue University, Agricultural Communication Service, Media Distribution Center, 301 South Second St., Lafayette, IN 47905-1092; 317/494-6794.

### Insurance Fills Gap In Spill Coverage

M.F.P. Insurance Agency, Columbus, Ohio, is offering pollution clean-up insurance for the commercial lawn maintenance industry. The insurance provides annual coverage of up to \$100,000 for spills which result from automobile accidents.

The insurance fills a need, said President Richard Bersnak, because most commercial auto insurers exclude damages re-

sulting from a spill caused by a vehicle accident. "Many lawn care operators don't know they're not covered."

Bersnak said that some states do require spill coverage, but they're in the minority. "Almost every insurance agency uses the same policy forms — the wording's the same, the exclusion's the same. They exclude pollution cleanup costs and bodily injury that result from a spill."

To offer the group spill coverage, Bersnak had to find a loophole in the insurance industry's current policies. He found one in the Risk Retention Act of 1986, which allows lawn care companies and other homogeneous groups to be insured under a group policy when a certain type of coverage is unavailable. Bersnak had to organize a non-profit association, the National Lawn Care Risk Purchasing Group, to satisfy the Act's requirements.

Bersnak said the spill insurance does not replace automobile insurance; rather, it fills a void in existing policies. Coverage is provided by Lloyd's of London. There is a \$2,500 deductible for each accident.

For details, contact: M.F.P. Insurance, 50 West Broad St., Suite 3200, Columbus, OH 43215-5917; 614/221-2398. ■

# BEAR CAT



## Big Power Commercial Chipper Shredders

Dependable and powerful, these aggressive Bear Cats feature 72 reversible, self-sharpening, serrated shredding knives. For maximum chipping performance 4 tool steel chipping blades cut a 5" diameter branch into chips in no time flat. Additional features include a large loading hopper, diamond shaped chipping chute and heavy gauge steel construction. For easy debris loading a fan blower attachment and extension tube (shown above) are available as accessories. Bear Cat Commercial Chipper/Shredders - The Professional Choice.

CRARY  
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USE READER SERVICE #20

**TORO**  
Commercial Line Trimmer  
24CC Engine  
TC3510  
Sale Price  
**\$259.00**

**Optional Accessories**

- 8" Saw Blade
- 8-Tooth Brush Blade
- Fixed Line Cutting Head
- Automatic Line Feed Head
- Prewound Spools of Line
- Precut and Bulk Line
- Blade Adaptor Kit
- Spark Arrestor Muffler

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USE READER SERVICE #21



# FAX SURVEY

**Are increased regulations and customer concerns about pesticides affecting your business profitability?**

*In addition to heightened government regulation, green marketing has increased environmental awareness in many facets of today's society. What effect is this having on your business?*

1. Are pesticide regulations and customer concerns making it difficult to profitably offer pesticide services?  
\_\_\_\_\_ yes \_\_\_\_\_ no
2. Are you required to pre-notify customers and neighbors before a pesticide application?  
\_\_\_\_\_ yes \_\_\_\_\_ no
3. Are you required to post a sign for at least 24 hours after a pesticide application is made?  
\_\_\_\_\_ yes \_\_\_\_\_ no
4. Does your state have a registry for notification of those overly sensitive to pesticides?  
\_\_\_\_\_ yes \_\_\_\_\_ no
5. Do you offer an alternative program for customers seeking an option to pesticides?  
\_\_\_\_\_ yes \_\_\_\_\_ no
6. If so, what: (check all that apply)  
\_\_\_\_\_ organic/natural fertilizer program  
\_\_\_\_\_ biological pesticides  
\_\_\_\_\_ composted fertilizer mixes  
\_\_\_\_\_ other
7. What percent of your customer base requests alternative products?  
\_\_\_\_\_ percent
8. What percent of your customer base is willing to pay for alternative products?  
\_\_\_\_\_ percent
9. What is your primary business within the industry? \_\_\_\_\_
10. In what state do you operate? \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

FAX TO  
**800/456-4865**

Or mail to: **Fax Survey, LLM magazine,**  
4012 Bridge Ave., Cleveland, OH 44113.  
OPTIONAL: Include your name and phone number if  
you wish to be contacted for an interview.

PLEASE RESPOND BY JULY 6

# Lawn & Landscape MAINTENANCE FAX SURVEY

RESULTS FROM APRIL

**Is the servicing dealer an endangered species?**  
*Times are challenging in the lawn maintenance industry; no doubt about it. And many of our readers reported servicing dealers aren't making things any easier.*

WHILE MANY READERS have found one dealer that suits the majority, but not all, of their needs, 63.6 percent of our readers said the preponderance of green industry servicing dealers are not attentive enough to the needs of the commercial industry. In several instances, readers were satisfied with their dealers, but were unhappy with attention received from manufacturers.

Readers were generally very happy or extremely dissatisfied with their dealers. If they found an attentive dealer, they usually received some level of training, overnight parts delivery and beneficial services.

But an inattentive dealer leads to frustration among lawn maintenance contractors. Overall, 66.7 percent said they did not receive training or service school offerings from their equipment dealer, and 61.9 percent said they were unable to receive overnight parts delivery.

Fast service and in-stock parts are undeniably of utmost

importance to lawn maintenance contractors. Other value-added services sought and/or received by contractors from the dealers are routine service, parts replacement, warranty information, new label information, advice on how and where to use a piece of equipment, safety alerts and calls from servicing dealers when it appeared that crews were not following and/or abusing proper maintenance procedures.

On average, *LLM* readers said they purchased equipment from 3.6 dealers. A little more than 91 percent said they purchased from dealers selling both commercial and consumer

equipment, while nearly 9 percent said they dealt only with dealers offering commercial equipment.

When not buying from a dealer (many reported a desire to work more directly with a distributor or the manufacturer of equipment rather than the dealer), 30.4 percent said they occasionally buy from mass merchandisers and 4.3 percent said they frequently buy from them. 65.3 percent said they never buy from them.

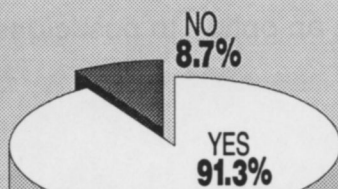
On the other end of the spectrum, 21.8 percent said they frequently buy equipment directly from a manufacturer, 39.1 percent occasionally buy from a manufacturer while 39.1 percent said they never buy directly from them.

LAWN AND LANDSCAPE maintenance contractors are a demanding bunch. "A piece of equipment that is down and has no available parts or service to repair it right away is worth its weight in scrap." Another commented, "He sold it, he should fix it."

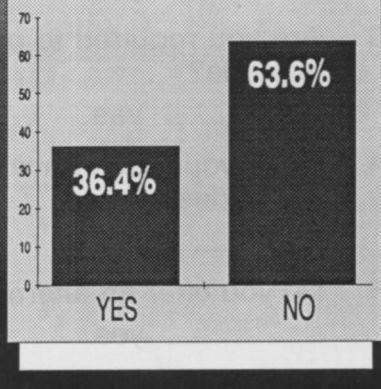
One reader summarized the plight of many small maintenance firms in the green industry: "An in-house mechanic costs too much for a small company. It is difficult to find a top, trained mechanic who wants part-time and sometimes temporary work. The dealer will keep our business if he performs with our best interests at heart, i.e., alerts us to recurring repairs that we could avoid with better training."

— Cindy Code

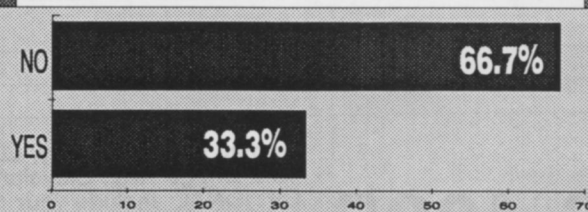
**Do you expect your dealer to provide you value-added services after your equipment purchase?**



**Do you think the majority of dealers are attentive enough to the needs of the commercial industry?**



**Does your equipment dealer provide you with training and/or service schools?**





# Association News

JACK ANDERSON IS the keynote speaker for the opening session of the **Irrigation Association's** 1992 International Irrigation Exposition and Technical Conference, Nov. 1-4 in New Orleans.

Anderson is a journalist, commentator, author and orator. His "Merry Go Round" column appears in more than 1,000 newspapers daily, making him the most widely syndicated columnist in the world.

He is the author of fiction and non-fiction books, including the recently released *Stormin' Norman*. He also is involved in radio and television.

The IA's technical conference runs two days and features more than 30 technical presentations and seminars. Booths for the exhibition portion of the show have been selling rapidly, according to the IA.

Last year's expo, held in San Antonio, Texas, attracted nearly 3,600 visitors and exhibitors — about 1,000 more than the previous year and the largest ever in terms of attendance.

Membership dues and revenues from Expo '91 helped the **Professional Lawn Care**

## For more information...



### IA

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703/524-1200

### OAN

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Milwaukie, OR 97222  
503/653-8733

### MNLA

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Lansing, MI 48906  
517/487-1282

### ONA

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Suite 185  
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614/431-2452

### ALCA

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Suite 150  
Reston, VA 22091  
703/620-6363

### PLCAA

Suite C135  
1000 Johnson Ferry Rd.  
Marietta, GA 30068-2112  
404/977-5222

**Association of America** record a profitable year in 1991. Total revenues of \$830,838 topped expenditures of \$724,363.

Dues generated the most income, accounting for 48.8 percent of the total. Expo '91 comprised 22.7 percent.

Other sources of income included conference, 10.2 percent; product sales, 6.3 percent; donations, 5.5 percent; advertising, 3.3 percent; seminars, 1.8 percent; and

miscellaneous and interest, 1.4 percent.

As for expenses, administration costs topped the list, comprising 26.6 percent of the total. Other major expenses were membership/member services, 17.9 percent; legislative affairs, 14.6 percent; conference, 11.6 percent; and Expo '91, 7.2 percent.

Membership in 1991 reached 935, including 205 new members.

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USE READER SERVICE #23

The **Ohio Nurserymen's Association** recently captured top honors at the Grand International Indoor Horticultural Exhibition and Competition, held at AmeriFlora '92 in Columbus, Ohio.

ONA's entry, Midwestern Garden, won a gold first prize in the overall and technical categories; as well as a silver second prize in the artistic category. The garden also scored victories in various plant material categories, garnering 11 first-place ribbons, one second place and one third place. Overall, ONA won \$8,700 out of a total of \$30,000 in prize money.

This was the first year that the exhibition/competition was held in the United States. The ONA garden competed against 19 other gardens; eight of those entered by national organizations and 11 entered by foreign countries.

AmeriFlora '92 appears in Columbus through Oct. 12. The \$94 million exposition offers elaborate landscape and garden displays from horticultural experts around the world.

For more information, contact AmeriFlora '92, 1995 East Broad St., Columbus, OH 43209-1679; 800/BUCKEYE.

The *1992 Membership Directory and Advertisers Buyers' Guide* is now available from the **Michigan Nursery and Landscape Association**.

The comprehensive directory includes contacts and phone numbers for more than 600 association member companies. Also listed are Cooperative Extension Service county offices, the Michigan legislature and the Michigan Department of Agriculture, Pesticide and Plant Management division. New this year is a cross-reference of membership by industry segment.

The buyers' guide lists stock and supplies from leading companies. Cost is \$40 to non-members. Members receive their first copy free, and each additional copy for \$20.

A new manual and video on handling and shipping nursery stock are available from the **Oregon Association of Nurserymen**.

The 20-minute video covers the primary methods of handling and loading balled and burlapped, bare root and container-grown nursery stock. It was filmed at three Oregon nurseries.

The manual consists of more than 30 pages written by member growers and university and agriculture department personnel. Like the video, the manual covers handling and loading plant stock. It also includes chapters on working with truck brokers, import and quarantine requirements for Oregon shippers, methods of arranging transportation and effects of ethylene on plants during shipping.

An appendix contains a glossary of shipping terms, container stacking diagrams and driver and customer information sheets.

The video is \$16.95 for OAN members and \$26.95 for non-members. The manual is \$14.95, members; and \$24.95, non-members. They come packaged together at a special rate: \$26.95, members and \$43.95, non-members.

The **Associated Landscape Contractors of America** has released *Plants for People — The Psychological and Physiological Effects of Plants*.

Compiled from the data base at the National Agricultural Library in Beltsville, Md., the bibliography lists all research references currently on file on how plants affect people from a psychological standpoint.

A short synopsis of each reference is provided, along with instructions for obtaining access to information. Each of the references listed is available from the National Agricultural Library.

There is no cost to ALCA members. Non-members can receive the bibliography for \$20. ■

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**THURSDAY, July 30th** - The "Annual SNA Kick-Off Reception" welcomes you to SNA '92, featuring the fantastic sounds of the **"Big City Jazz Band"**.

**FRIDAY, July 31st** - "The South's Biggest Dinner & Show" featuring an electrifying performance by **"Lee Greenwood"**, then dance the night away at the "Blues Brothers' Bourbon St. Bar", featuring an encore performance by **"Terry Lee & the GT's"**.

**SATURDAY, August 1st** - The tradition continues with our "Annual Awards Banquet". Our tribute to **SNA Past Presidents**, is celebrated with the versatile sounds of **"The League of Decency"**.

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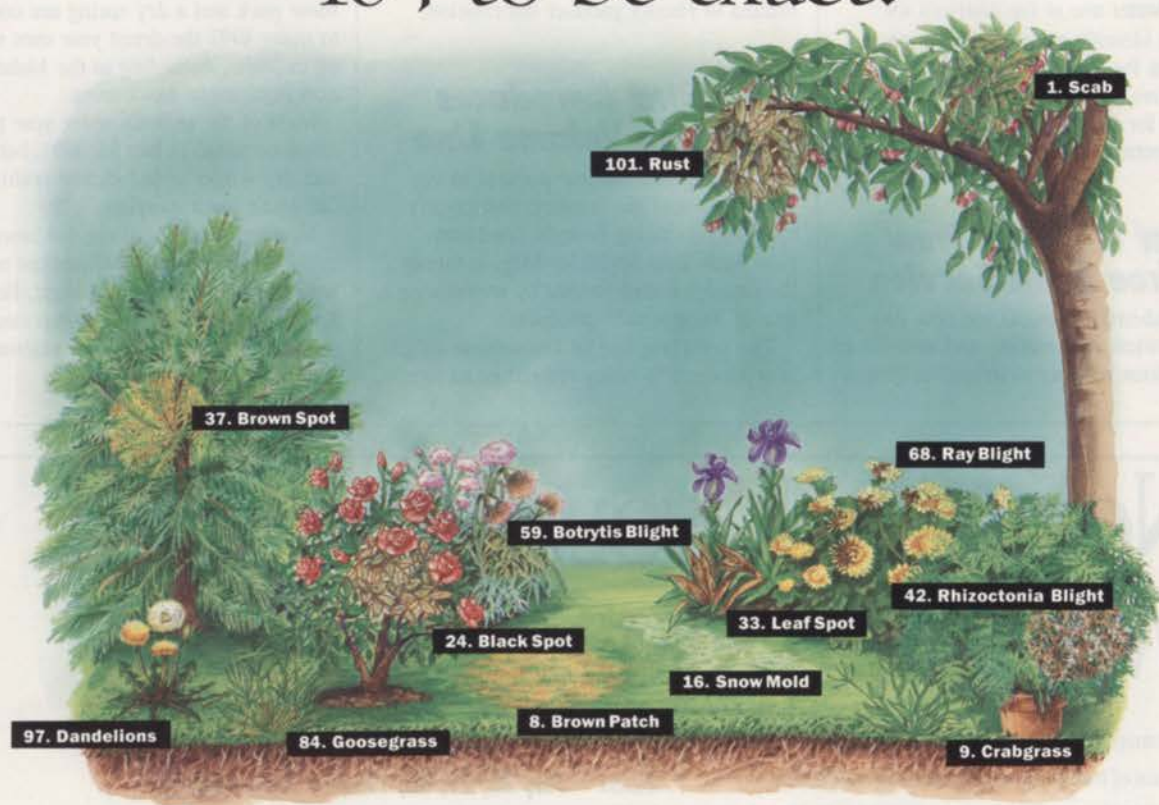
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# Irrigation News

## **Irrigation Improvements Sought in Boulder Valley**

AQUA ENGINEERING Inc. of Fort Collins, Colo., has been selected to perform a multi-faceted water conservation study for the Boulder Valley School District.

As the fourth largest water user in Boulder, the district is seeking to counter increasing water rates including an 11 percent increase this year.

The firm will evaluate irrigation systems and water use at the district's 49 schools to identify potential irrigation improvements for water conservation. Possible measures include use of district-owned raw water for irrigation and centralized irrigation control throughout the district.

## **Hunter Expands New Toll-Free Data Service**

Hunter Industries' DATAline now provides technical information and answers to any questions relating to irrigation system

design and equipment.

The DATAline is headed by Jay Inglis, Hunter technical information manager, who works out of the firm's new East Coast manufacturing facility in Cary, N.C.

The Design and Technical Assistance (DATAline) service is open Monday through Friday from 8 a.m. to 6 p.m. EST. The number is 800/733-2823.

The service can offer information on subjects ranging from calculating run times to pipe sizing. The program is not limited to Hunter product information.

## **Rain Bird Introduces New Low Volume Line**

Xeriscaping has become popular in various regions of the country, particularly those experiencing drought conditions. Now Rain Bird Sprinkler Mfg. is taking the concept a step further by introducing a line of Xerigation™ products.

The complete line of low-volume irrigation products is being offered as an alter-

native to conventional landscape irrigation methods. Xerigation emission devices, distribution and control zone components together with tools create the new system. The components can also be used to retrofit sprayhead systems.

## **Summer Brings Drought Concerns in Idaho**

Critically low reservoirs, a disappearing snow pack and a dry spring are combining to make 1992 the driest year ever recorded in Idaho, according to the Idaho Irrigation Equipment Association.

Most of the region's water year precipitation occurred in late fall 1991, but a warm and dry winter added almost nothing to the area's water supplies.

Northern Idaho will see business as usual in 60 percent to 70 percent of the region. However, Boise, Magic, Bear and Southside Snake River are expected to experience water shortages by midsummer, according to the association. ■

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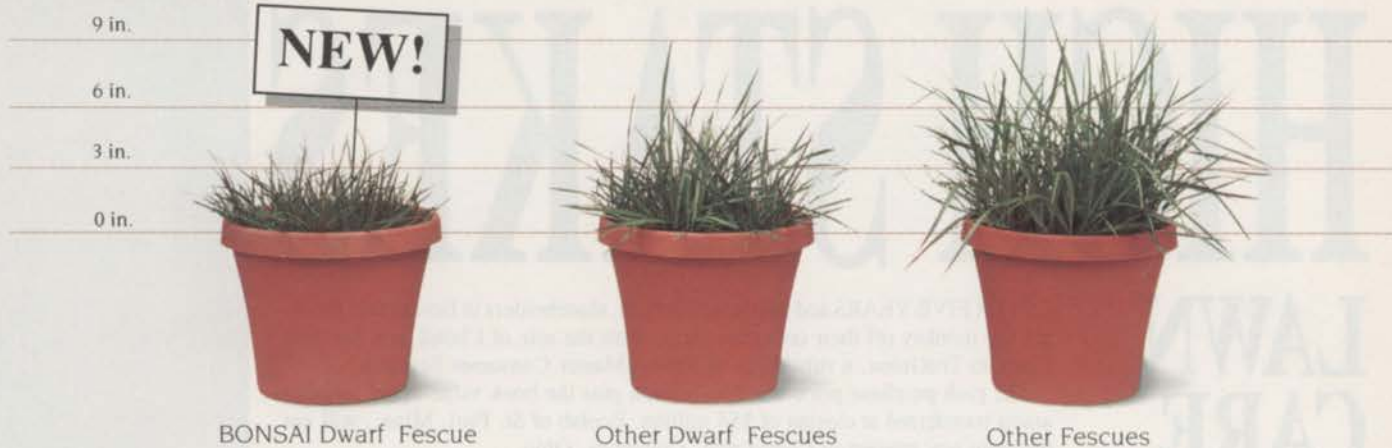


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USE READER SERVICE #18



# LESS IS MORE.

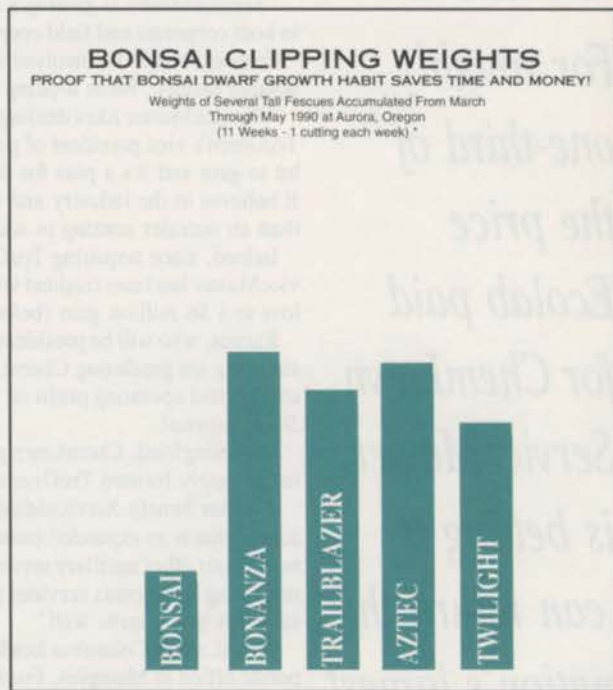


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USE READER SERVICE #45



# HIGH STAKES

## LAWN CARE

*For roughly one-third of the price Ecolab paid for ChemLawn, ServiceMaster is betting it can return the nation's largest lawn care firm to profitability.*

*By Cindy Code*

AFTER FIVE YEARS and millions of dollars, shareholders in Ecolab Inc. finally got the monkey off their collective backs with the sale of ChemLawn Services Corp. to TruGreen, a subsidiary of ServiceMaster Consumer Services.

The cash purchase price was \$50 million plus the book value of net tangible assets transferred at closing of \$54 million. Ecolab of St. Paul, Minn., will not maintain any interest in ChemLawn, Columbus, Ohio.

"ServiceMaster is gaining a quality organization with outstanding individuals in both corporate and field operations," said Don Karnes, president of TruGreen. "We're excited to be involved with ChemLawn. It's a good organization with a notable history. We're looking forward to the future."

"ServiceMaster likes dealing with homeowners," added Norman Goldenberg, TruGreen's vice president of government and environmental affairs. "We have a lot to gain and it's a plus for the industry. TruGreen is dedicated to lawn care. It believes in the industry and is willing to take a bigger piece of the pie rather than an outsider coming in with no experience."

Indeed, since acquiring TruGreen from Waste Management in late 1990, ServiceMaster has been credited with taking TruGreen from an estimated \$18 million loss to a \$6 million gain (before goodwill amortization) in one year.

Karnes, who will be president of the combined TruGreen/ChemLawn business, said they are predicting ChemLawn will turn a profit in 1993. ChemLawn never contributed operating profit on a full-year basis to Ecolab, according to *The Wall Street Journal*.

Dave Siegfried, ChemLawn president for nearly two years, will not play a role in the newly formed TruGreen/ChemLawn.

Another benefit ServiceMaster Consumer Services hopes to derive from the acquisition is an expanded customer base. "It gives us a million more customers to offer our other ancillary services to," Goldenberg said. "We have begun actively marketing these cross services (prior to the ChemLawn acquisition) and I understand it's going quite well."

ChemLawn's Columbus headquarters will be closed in favor of TruGreen's corporate office in Memphis. Further details of the move are not yet available. And while only time will tell, it's predicted that ChemLawn, including its name, will be fully integrated into TruGreen.


The firms' branches and franchises currently overlap in about 35 markets. Any antitrust concerns were dealt with early on, but never really posed a problem because of the start-up nature of the lawn maintenance business.

The fate of ChemLawn's pest control business has yet to be determined. Terminix, a subsidiary of ServiceMaster, is by far the larger of the two pest control operations, Karnes said, but it does not preclude the continued existence of ChemLawn's pest operations.

Since Ecolab placed ChemLawn on the block in March, a variety of investor groups and green industry firms quietly pursued a deal with ChemLawn's disgruntled parent firm. The low profile of Ecolab and potential buyers seemed appropriate. After all, it was just one year ago that Ecolab spoke proudly of its \$37 million refocusing and rebuilding program at ChemLawn. But the plan fell short.

Throughout its relatively short stint in the lawn care business, Ecolab repeatedly insisted it could restore ChemLawn to the lofty position of industry leader and market trendsetter. But sibling rivalry from Ecolab's biological offspring — worldwide institutional services (never satisfied with its adopted relation) — fought back for more parental attention, and won.

Last year, Ecolab formed a joint venture with the German firm Henkel KGaA and acquired its institutional cleaning and sanitizing businesses in 19 countries



With the purchase of ChemLawn, ServiceMaster gains the lion's share of the lawn care pie. Illustration: Bob Novak.





in the Latin American and Asian Pacific regions. The venture was expected to add \$50 million in annual revenues to Ecolab's international operations.

Shortly thereafter, it was announced that the international move precluded Ecolab from providing ChemLawn the resources it needed from a parent company; hence the sale.

Since the March 2 announcement that ChemLawn was for sale, ServiceMaster's April 27 letter of intent to buy, ServiceMaster's board of director approval May 8 and completion of the sale May 20, the transaction has created little stir in the marketplace. Certainly not the ruckus caused by the 1987 sale.

**WHAT HAPPENS NOW?** Surprise, anxiety, relief and unending questions greeted the acquisition announcement. For so long, ChemLawn was *the* lawn care industry, then the firm to be copied and, finally, the firm that was in a constant state of flux induced by employee layoffs, managerial changes and shifts in the lawn care industry, among others.

Although ServiceMaster's acquisition of ChemLawn is completed, it will be some time before specifics are known about the fate of various branch and franchise offices around the country. The complete transition could continue through 1993.

The transaction could produce several business options: Separate

ServiceMaster, TruGreen and ChemLawn branches/franchises could remain functional in all current operating cities; branches could be consolidated in smaller markets; and branches could be consolidated but left to compete with franchisees.

Additionally, ServiceMaster earlier this year began buying back certain ServiceMaster franchises. This process is continuing — aggressively in some markets.

Karnes said all branch and franchise operations are being dealt with on an individual basis. Possibly complicating the issue, however, is the exclusivity most ChemLawn franchisees have to the cities in which they operate.

ServiceMaster franchisees have no such contract agreement.

"We'll be meeting with each franchisee to work through this process," Karnes said.

Bruce Fowler, ChemLawn general manager of franchisees, said no new policy regarding franchises had been established. "I just hope it's resolved fairly for ChemLawn franchisees. They've worked hard and done well by the ChemLawn system," he said.

The situation may get sticky in areas where franchisees competing with company-owned branches are in effect contributing profit to their competitors, according to one franchisee.

While there are more speculative than substantive details on the drawing board, most agree there's more positives than negatives to be extrapolated from this acquisition. Perhaps more than anything else, the mega sale within the lawn care industry proves the viability of the service itself.

"I think it's good for the industry," said Rick Beard, general manager, Massey Services, Maitland, Fla. "ServiceMaster has an excellent track record in service operations which will help ChemLawn and, subsequently, the whole industry.

"When an industry has a leader who's not doing well, it erodes confidence in basic business itself."

Beard, a 17-year employee at ChemLawn before leaving in November 1990, said ChemLawn's problems started before Ecolab bought the firm and resulted from an inability to keep up with market shifts.

"When Ecolab stepped in, they got a shell of what ChemLawn used to be," he said. "There were very few people left in the organization at the regional manager



level and above, and those who were running the show didn't understand regional and seasonal differences."

Right from the start, ServiceMaster has a chance to succeed where Ecolab couldn't because of the price each paid for ChemLawn. "It takes a lot of pressure off an organization," Beard said.

"Everybody knew Ecolab paid too much money," said Tom Rutherford, an industry consultant and former 15-year employee of ChemLawn. "There's plenty of companies making money in lawn care. There's no reason that with revenues of \$300 to \$400 million you can't make a profit."

"Improving the quality of service is the number one objective to make more profit. Can TruGreen improve on that level of service? That's the number one question."

The merging of three firms with such vast lawn care revenues is more a sign of the times in the service industry in general, rather than a severe shrinkage of lawn care, Goldenberg said.

"It represents consolidation occurring in service industries throughout the United States," he said. "Consolidation is another means of doing business better through economies of scale and making people more productive."

"There's no question lawn care is at least leveling off," said Phil Christian of PDC Consultants,

"I'm certainly surprised that they would end up all together, but I'm also pleased at the thought of the combination of talents providing the industry with a leader, and frightened at the prospect of lots of Ecolab policies being continued."

Christian, once an employee of ChemLawn, has provided his con-

without its name. Hopefully, it will go back to the basics of managing good people and won't step into the same potholes."

"I'm glad to see it. I'm glad to see someone in the industry take it over... someone that has a good reputation," said Steve Derrick, technical director for Orkin, Atlanta, Ga. "There are lots of good people at ChemLawn."

Orkin operates about 50 branches, most of which compete with either ChemLawn or TruGreen.

Most contractors interviewed said the average lawn care operator probably would not be directly affected by the merger. TruGreen and its new teammate may gain a larger market share and stronger entities in certain markets, but size is not as important a competitive factor as is the quality of service.

While it may be too early to predict the future success of the ChemLawn/TruGreen affiliation, it's widely believed that management, service and employee morale are the keys to future prosperity.

"If they can get it right, it's

## ServiceMaster hopes to cross-market its ancillary consumer services to ChemLawn's customer base of one million.

Alpharetta, Ga., "but we haven't made a good penetration in beds, shrubs and trees. We're moving from our roots of homeowner lawn care to homeowner and commercial landscape management."

There's no reason, however, why this shift can't be successfully addressed.

sulting expertise, at one time or another, to both ChemLawn and TruGreen.

"I'm hoping they bought out ChemLawn to take them back, in effect, to some old ChemLawn standards. It's really brought out some mixed emotions. I'm glad ChemLawn will survive, with or



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(ChemLawn) worth more than they bought it for," said Patrick Norton, president of Barefoot Grass, Worthington, Ohio.

Barefoot competes with both ChemLawn and TruGreen in most markets but, Norton said, it's too early to tell how it will affect his business. "It's business as usual for us. We feel comfortable with our approach to lawn care," he said.

"If anyone can pull it off, ServiceMaster can," said Tim Doppel, president of Atwood Lawn-care, Sterling Heights, Mich. "It'll be fun to watch how it develops over several years, but it won't affect me. If the smaller companies are worried about the big guys, they're worried about the wrong thing.

"I know my niche. They're too big and don't impact me."

**SERVICE WARS.** It all began in April 1987 when Ecolab paid a hefty \$375 million for the nation's largest provider of lawn care services; a price hugely inflated by its bidding war over ChemLawn

	ServiceMaster <small>(Lawn care)</small>	TruGreen	ChemLawn
Year formed	1985	1974*	1969
Number of branches	—	67	160
Number of franchises	111**	—	50***
Number of employees	350-400	2,700	3,000
1991 revenues	\$12 million	\$92 million	\$355 million
Number of markets	41 states	23 states	45 states
Customers	51,000	450,000	1 million
Key managers	Rick White <small>Vice president of lawn care</small>	Don Karnes <small>President</small>	Dave Siegfried <small>President</small>

\*Started as ChemGreen in Troy, Mich. Became TruGreen in 1978.  
\*\*Number changing as company buys some franchises back.  
\*\*\*Some ChemLawn franchisees operate multiple offices.

with Waste Management. In a hostile takeover attempt, Waste Management sought to buy

ChemLawn for \$270 million, but then ChemLawn President Jack Van Fossen said the price did not

fully reflect the value of the company. After some quick maneuvering, Waste Management was forced to back out. (continued on page 63)



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USE READER SERVICE #24



# AGAINST THE ODDS

*The goals of seed research haven't changed, but the results have. Years of research and investment have yielded new technology and improved varieties being released into the buyers' market.*

By Julie A. Evans

WHAT GOES down must come up, or so it goes in the price-sensitive seed market. Due to a host of variables, including weather, the economy, decreased acreage and dwindling carryover, seed prices appear to be climbing back up to pre-recessionary levels.

For seed buyers, that's the bad news. The good news is that improved varieties continue to find their way out of the laboratories and into the buyers' hands — no easy feat, considering the amount of time, money and research required.

**LEAVING THE LAB.** Bringing a new seed to the market is expensive and time-consuming. Tom Stanley, marketing manager for TurfSeed Inc., Hubbard, Ore., estimated that approximately seven years and \$40,000 is a typical investment. Even then, the failure rate is phenomenal.

"Of the thousands of selections that are made each year," he said, "probably less than five become commercial releases. The rest fall by the wayside."

"In order to be commercially viable, a variety has to be better

than what we have in the marketplace currently," he explained. "Plus, it has to have the ability to produce seed in a sufficient quantity to make it economically feasible."

Stanley added that most tested varieties do *not* show a significant improvement over existing varieties. Those that do stand out are not usually economical seed producers; hence, the low number of new entries in the marketplace each year.

Virgil Meier, turfgrass breeder for O.M. Scott & Sons, Marysville, Ohio, estimated development of a good variety at a minimum of 10 years and as high as 15 years. "It takes a lot of testing to verify what you think may have happened in the laboratory," he said. "It takes three to four years for one test, and you need several tests to verify that it is indeed an improved variety."

**HOT SPOTS.** Mounting environmental concerns in the areas of water conservation, reduced pesticide use and fewer clippings fuel much of the new activity in research and development. Most improvements, though, result from ongoing research into age-old areas of development — areas such as drought and heat tolerance, insect and disease resistance, lower fertility and improved density and color. In other words, the goals of seed research haven't changed as drastically as have the results.

Heat and drought tolerance are

two areas of ongoing research for Meier at O.M. Scott. "It takes a lot of testing for drought tolerance under high heat and low moisture conditions," he said.

"This program to look at drought and heat tolerance goes back 20 years. We saw the handwriting on the wall and kept trying to develop varieties that get the most performance with the least amount of input. Water is so critical for excellent turf."

For the southern United States, the company just released Sonesta, a new seeded bermudagrass variety that is said to do well under high heat conditions.

The race is also on to develop lower-growing varieties. But for fescues, don't expect to hear the term 'dwarf' being bandied about as much these days.

"Dwarf fescue is not quite the buzzword that it was a few years ago," said A. Douglas Brede, research director for Jacklin Seed Co., Post Falls, Idaho. "Most of the new ones coming out now are low growing, but not particularly dwarf. About three years ago, they got so small, they ran into problems such as poor seed establishment. Now we've come back to moderate growth but less clippings."

## SEED PRICES RISE AS SUPPLY FALLS

SEED BUYERS should watch for higher prices this fall, according to seed manufacturers, who cite weather, increased demand and reduced supply as reasons for the price increase.

"The amount of product is thinning out," said Scott Patterson, vice president of Peterson Seed, Savage, Minn. Over the past couple of years, he explained, there was more seed than need, resulting in a "burdensome supply problem on most types of turfgrasses. Instead of selling, it seemed like we were liquidating the product."

That situation has changed, he said, because of good use of carryover stocks. The weather also has conspired to raise seed prices. "There's always speculation as to whether it will be a good crop or poor crop. Right now we're looking at a poor crop because of weather conditions in the Pacific Northwest."

An extremely dry fall, followed by a mild winter, resulted in reduced

moisture availability during the growing season.

Still, he said, the weather's impact won't be fully realized until harvesting.

A. Douglas Brede, research director for Jacklin Seed, Post Falls, Idaho, said bluegrass production is down this year from last year due to the mild winter. Bluegrasses need cold temperatures to bernalize (process of switching from vegetative to reproductive state), he explained.

Tall fescue and ryegrass, however, are in a good carryover position from 1991 and "the mild winter probably helped them," Brede said.

The price of Kentucky bluegrasses to wholesalers is about "twice what it was last year at this time," he said. "I don't think we'll climb beyond the level we're at now. Prices on tall fescue and ryegrass will hold their own."





New seed varieties are scrutinized for a number of years before they're marketed to the industry. Photos: Jacklin Seed Co.

Turf-Seed's Stanley said that research now is focusing on improvements within the lower-growing varieties. "What we need to concentrate on is disease resistance within those varieties such as brown patch resistance," he said.

As an example, he pointed to one of the company's new offerings, Confederate, a tall fescue that combines dwarf, semi-dwarf and standard varieties for improved survival characteristics in the humid south.

At Seed Research of Oregon,

Corvallis, specialty seeds are grabbing a lot of R & D attention. President Mike Robinson noted the company's work with blue fescues and new creeping bentgrass varieties.

The blue fescues are similar to hard or sheeps fescue, Robinson said. They are very low maintenance and have a dark bluish-green color. Suggested uses are wildflower mixtures and golf course roughs. The blue fescues will have limited availability this year.

Robinson said the Colonial

bentgrasses have applications in both golf courses and home lawns. "We're going for a finer leaf texture, more upright leaf growth, darker green color, better seed production and better disease resistance," he said.

Robinson added that Colonial bentgrass, a cool-season grass adapted for the northern United States and Canada, is popular in Europe.

Seed buyers this year can expect to find some darker green varieties on the marketplace. According to Brede, there is a defi-

nite trend toward darker color in tall fescues and perennial ryegrasses.

"It's amazing to see some of these new grasses in plots with older grasses that were topping the lists just years ago. We haven't lost the water use efficiency in making them smaller and denser."

Rich Hurley, research director for Lofts Seed, Bound Brook, N.J., said the company is introducing a number of new ryegrasses exhibiting dark green color, including Palmer II, Prelude II, Repell II and Yorktown III.

Turf-Seed will release Bright-Star perennial ryegrass this fall, a "significant step up in turfgrass quality, especially in terms of color," Stanley said. "I like to refer to it as the Midnight of perennial ryegrass."

**PRIME TIME.** Seed priming is one area of research that may see brighter days. Like seed pregermination, seed priming is designed to start the germination process early. But that's where the similarities end.

Landscapers have been practicing seed pregermination for years, Meier said. With pregermination, water is added to the seedlings, then the process is halted before the seedling emerges from its coat. Soaked seeds must

At Turf-Seed, Hubbard, Ore., Tom Stanley said it's still too early to predict seed supply. "I do sense a strength in fine fescues and in perennial ryegrass, and as of this date, some strength in common Kentucky bluegrass. Proprietaries will follow suit. Bluegrasses have gone from 40 cents to 80 cents per pound."

Mike Robinson, president of Seed Research of Oregon, Corvallis, also cited weather as contributing to low yields for common Kentucky bluegrasses and fine fescues. He said fine fescues are not flowering properly.

"We have seen quite an escalation in price because of the short



Research concentrates on improving age-old turf problems.

supply anticipated for this year," he said.

He also said perennial ryegrass usage appears strong enough to impact limited carryover supply.

"Demand has been good for all turfgrasses except tall fescues. There's too much carryover for that and the price is low.

Jerry Pepin, director of research for Pickseed West, Tangent, Ore., said demand has been strong this spring in the Northeast, Middle Atlantic and Midwest regions. He attributes that strengthening to an improving economy and a high number of renovation projects resulting from drought conditions last summer.

"A lot of seedlings from last year failed due to early cold snaps in early November. They have to be replanted."



be planted within approximately five days, often through hydro-seeding. The trick, Meier said, is to have the process far enough along so that faster emergence takes place without damage to the seed.

The advantages of seed pregermination are water savings and faster greenup. The disadvantages are inherent in the process: If the seed is too wet, it could rot. With too little water, growth is hampered, negating any benefits of the pregermination process.

Planning poses another obstacle. Pregerminated seed won't wait for bad weather to blow over. Once the process is initiated, the landscaper has very little time to initiate seeding.

Seed priming offers an alternative to this somewhat risky process. With seed priming, the seed is soaked and then dried off, prohibiting the root and shoot from breaking through the seed coat. The seed can then be stored for up to three months to a year, depending on the species; but after the recommended time, the effects are lost and germination

could be adversely affected.

Kumterter Products Inc., Lincoln, Neb., offers a patented seed priming process — Solid Matrix Priming (SMP).

According to Tom Rutherford, an independent turfgrass consultant who works closely with Kumterter Products, seed priming offers the following benefits: faster germination, more uniform emergence, wider window of application dates and reduced water requirements during seeding.

Rutherford stressed that seed priming is a niche use product and benefits are more pronounced for some species than others. He cited bahiagrass and buffalograss as examples. These species are notoriously slow to germinate, he said; priming can reduce emergence from one month to seven days.

In contrast, a species like perennial ryegrass is relatively quick to germinate. Thus, "the value of the benefit is diminished" even though germination time is cut in half.

Rutherford added that even fast starters like ryegrasses benefit in less than ideal planting conditions

such as early spring and fall when temperatures might otherwise hinder growth.

Like pregermination, priming has its drawbacks. One problem is its relatively short shelf life — from three months for tall fescues to up to a year for bluegrasses. Another problem is cost. Rutherford acknowledged that the cost of primed seed can be as high as double that of unprimed seed. He said Kumterter is interested in working with the turf industry in establishing prices.

Turfseed manufacturers in general appear wary of the process. Jacklin's Brede said he is not interested in the process because it has not proved itself to be an economical alternative.

Meier said he is somewhat skeptical of the benefits of seed priming.

"At this point, we believe there are too many disadvantages and too much risk in most cases for us to get involved," he said. "There was some use in the market a year or two ago, but I think it's regressed to some extent because the risks were weighed out

and the benefits haven't been proven."

**ZOYSIA DEVELOPMENT.** A potential breakthrough in zoysiagrass production is under way at Jacklin Seed. Brede is working on a procedure for treating zoysiagrass seed that promises to increase germination and speed up establishment rates.

"Zoysia is one of our more desirable species, but it has not been used as much because it has been so slow to establish and rather unreliable at times," he said. "We've overcome that with this treatment process. It will open up new uses."

Previously, he explained, zoysia had been treated in Korea where the process was expensive and used toxic chemicals. Brede's method of treatment eliminates those chemicals and results in 10 percent higher germination, he said. More important, though, is the establishment rate.

"It establishes much quicker than Korean treated or untreated and the price is about the same. This is quite a breakthrough." The

(continued on page 30)

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## Against the Odds

(continued from page 28)

zoysiagrass will be available this fall, he added.

Zoysiagrass is best adapted to warm-season and transition zones, but breeding efforts at Jacklin are producing more cold-tolerant varieties.

**NATIVE SPECIES.** The search for low-maintenance turf alternatives has led some landscapers to buffalograss. At the University of Nebraska, turfgrass plant breeder and associate professor Terry Riordan has been working to develop buffalograsses that require less water, less pesticides and less mowing. His work began in 1984.

Because of its low-growing nature, buffalograss offers turf managers the option of mowing only once every four to six weeks, or it can be maintained as high-quality turf and mowed weekly.

The goal is to develop the buffalograss for golf course or landscape applications "so people can cut down on maintenance without affecting the appearance," he ex-

plained.

"We're taking the characteristics of a native species that was pretty well adapted to low maintenance conditions and improving the aesthetic quality."

Jacklin Seed is also evaluating buffalograss varieties this summer. Right now, "it's not looking thrilling to me for areas outside of the Great Plains," Brede said.

Buffalograss is extremely drought tolerant and crowds out weeds in areas with little rain fall. But in other areas, it requires a lot of weed control, he said.

The University of Nebraska has licensed two varieties, 609 and Prairie, to Crenshaw DoGuet in Austin, Texas. They are vegetative varieties, or female clones that produce no male flowers. According to Riordan, the vegetative species are considered more aesthetically pleasing, as the seeded (male) varieties produce male flowers that grow above the canopy.

The primary area of adaptation for the buffalograss is the Great Plains, he said. Production is in Texas, Nebraska, Arizona and

Oklahoma.

Barbara Bauer, sales manager for the Austin, Texas-based company, said the 609 buffalograss has sold out three times since its introduction to the marketplace last September.

"We have had a phenomenal response from commercial development, homeowners, golf courses, highway development — anyone interested in fewer chemical applications and water conservation," she said.

Bauer said sales have stretched from the Southeast coast to the West Coast, where drought conditions have added to sales.

"Our feedback is customers are happy with it," she said. "It does what it says. The only warning we give is that when the sod is laid, depending on the variety, time of year and temperature, it loses its laid color entirely. It looks like it's dormant, but it's not."

The color comes back in about 2½ weeks, she said.

Bauer also cautioned that buffalograss cannot compete for water with other species. "When laying it, you need to remove

whatever is down. You can't plug it into another type of grass," she said.

This year, the company plans to add to its 300 acres in response to demand.

Riordan also has been working with the Native Turf Group to bring seeded bermudagrasses to the marketplace. The NTG — consisting of Arrow Seed Co., Broken Bow, Neb.; Farmers Marketing Corp., Phoenix, Ariz.; Johnson Seed Co., Enid, Okla.; and Stock Seed Farms, Murdock, Neb. — holds exclusive worldwide rights to propagate and market selected seeded buffalograss lines from the University of Nebraska. The new varieties are said to do well in such diverse areas as Dallas, Texas; Lincoln, Neb.; Ithaca, N.Y.; and Tucson and Yuma, Ariz.

For wide-area plantings, the new seeded cultivars offer a more economical means of establishment. ■

*The author is Associate Editor of Lawn & Landscape Maintenance magazine.*



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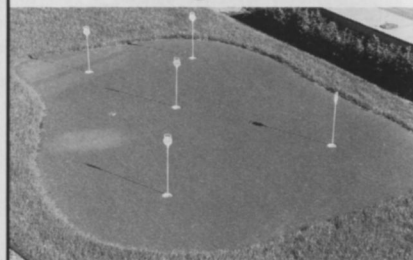


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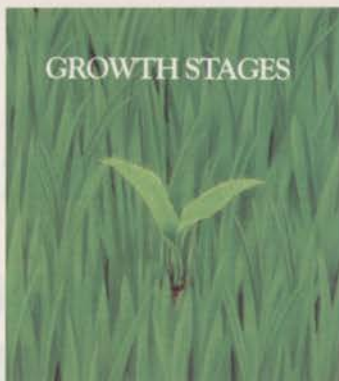


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**USE READER SERVICE #58**



# DIFFICULT TERRAIN CALLS FOR TOUGH ANALYSIS

*Mowing on difficult terrain is an ingredient of any mowing business. Selecting the right equipment, crews and man-hours to do the job is essential to maintain profitability.*

*By Steve and Suz Trusty*

DISCUSSION OF difficult terrain by a group of mowing contractors can turn into a session of "can you top this" as everyone describes their own tough sites.

Consider this situation: You've been asked by one of the city's major developers to submit a bid for mowing an extensive office complex. The site is bordered on one side by a small shopping center. A section of interstate highway — which also serves as a main artery for city traffic — curves around the property. Since the office park is considerably lower in elevation than the interstate, steep, grass-covered slopes angle up to its edge, constituting the remaining three boundaries of the property.

Multiple office buildings are clustered around a curving, central parking area. The parking lot is dotted with landscape islands. A sidewalk parallels the border of the parking area, divided from it by a 5-foot strip of turf. Individual walkways branch off this sidewalk to the entrances of each building. The front areas, between the sidewalks and the buildings, and the spaces between buildings, are elaborately landscaped.

A service road wraps around three-quarters of the site, between the buildings and the slopes to the interstate. The area behind the buildings is divided between turf and paving.

Part of the site is under construction. Landscaping is being completed on a few of the newer

buildings. Seven different building subcontractors and landscape firms are involved with these projects.

Beyond the existing office complex, and within the curve of the interstate, is an open grassy section. This area is slotted for the future development of a mirror-image office and parking circle. A retention pond and well-landscaped park nestle at the edge of this grassy section, close to the established buildings. Eventually, the park will serve both complexes as a lunch and coffee break haven. Benches have been placed at strategic viewing spots and walkways provide easy strolling.

The office buildings are leased by a variety of businesses. Some are new firms, struggling to gain a hold in the community. Others are branches of well-known companies, with several other locations within the city. Naturally, each has a stake in the appearance of the property.

This is a highly visible location. It's along the route from the airport to the heart of the city. It's along the route followed by most business owners and profession-

als from their homes in the most exclusive suburbs to their job sites.

Your trucks, your equipment and your crews would be a continual advertisement to those who use your services.

This complex is one of several projects for the developer. Some are completed; others are in the planning stage. The firm is known for its business ethics and fairness — and for its ability to leave nothing extra on the table during negotiations. Yours is not the only company which has been asked to bid on this job.

All aspects of mowing difficult terrain are involved in this project. You'll need to balance quality of cut, the most productive combination of equipment and crew sizes and the safety factor at a cost that will allow you to cover expenses under variable conditions and make a profit.

Do you bid this job? If you do bid, how do you effectively calculate costs and profit to get the contract in this tightly competitive situation? If you are awarded the contract, will the obstacles and potential problems be worth

the effort?

Why did you get into this business, anyhow? Wouldn't it have been easier to be a rocket scientist—or a lawyer?

**FIRST THINGS FIRST.** No matter what the size or condition of the site, it's essential to analyze the situation by breaking it into workable components.

Safety is a primary concern. Mowing contractors have seen insurance rates skyrocket in the past litigious-filled decade. Operator and bystander safety remain huge issues. Accidents significantly raise your insurance costs. Look to your own figures. How much more in dollars per hour do you have to generate now, just to cover those additional insurance charges? Safety is indeed an ethical issue — it's also a practical, bottom-line, business issue.

"The first and most important part of any mower manual is the safety section," said Dave Schmerse, project manager of product safety, John Deere, Moline, Ill. "It should be required reading for any crew member that has any possibility of using that unit. Even then, it's wise to use constant reinforcement of the simple rule — shut off before you get off."

"ROPS (roll over protective structures) are used with riding units to protect the operator in case of roll over. They can only do their job if the operator stays on the machine. Remind your crews, when the ROPS are in place — use your seat belt."





Schmorse cautioned.

Time is money, but resist the urge to bypass or remove safety equipment in the interest of saving time. Monitor units to make sure crews have not engaged in such practices. If you're already pushed for time to mow, you sure don't have time to take someone to the emergency room and fill out all those papers — and that's not even considering the liability factor.

Safety makes matching the capabilities of your crew members to the equipment and mowing conditions all the more vital. Productivity means business survival. What combination of people and machines will get your jobs done in the most efficient manner? What combination of speed and quality of cut will turn out a job you'll be proud of — one that will guarantee client satisfaction? What combination of ride-on and walk-behind units will produce the greatest degree of productivity and ensure the safety of your crews?

**LINKING CREWS.** If budgeting allows, it makes sense to use multi-

ple units and operators on a job site. The work at each site can be organized to eliminate wasted time and effort.

A crew leader can direct and supervise the activities of others, as well as perform a portion of the work. More experienced personnel can operate the most complex equipment and tackle difficult mowing situations. The remainder of the crew can be assigned to simpler machines and easier tasks on the same property.

Operators are going to be more comfortable riding than walking. During a long, hot day in the field, that comfort will translate into productivity.

Front mowers offer advantages. The design allows for improved operator vision. The front wheels don't run over the turf, matting it down before mowing it. Greater maneuverability and a shorter turning radius mean the operator can ride when mowing landscaped areas, rather than traipse around with a walk-behind unit. The mower deck can get under fence rails and overhanging shrubbery and alongside landscape and construction features.

Tractors also offer advantages. Crews may perceive them as more stable, with better traction. Implements can be added for additional on-site projects.

In the big, open areas, choose mowers with the widest possible deck combination. In big areas with obstacles, such as complex landscaping, use front mowers or commercial walk-behind mowers.

**EQUIPMENT CHECK.** We asked Joe McDonald and Paul Loomans — marketing coordinators for front mowers and commercial walk-behind units respectively, at John Deere's Horicon, Wis., facility — for points to consider when selecting equipment for tough situations. Here are just a few of their suggestions.

Look for construction quality. Stamped or formed mower decks, rather than welded decks, offer more rigidity. They'll take the beating of commercial use, even holding up when your operators run into things.

Consider blade thickness. Blades are the first thing to get damaged, so opt for heavy, durable blades.

**Mowing on difficult terrain takes preparation and proper equipment choices. Photo: John Deere.**

When matching the mowing unit to the job, consider options that make your tough situations easier to handle. Balance the quality of cut and productivity factors with equipment choices.

Typically, a shaft-drive mower has a longer life than belt-driven mowers. Automatic belt tensioning on mower spindles promotes longer belt life. On manually adjusted mowers, performance usually suffers, or the operator hears squealing, before adjusting belt tension. With age, the belts stretch, reducing tension on the pulleys, which can result in an uneven cut. By the time the belt slips, it has been damaged.

Traction is essential. Full-time four-wheel drive that can be engaged or disengaged on the go, and works in forward and reverse, provides maximum traction and flotation in poor conditions. Consider options such as "on-demand" four-wheel drive that automatically engages and disengages

*(continued on page 36)*



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## Difficult Terrain

(continued from page 33)

as needed. This maximizes trimming ability and delivers better fuel economy and less tire wear. Consider a differential lock which locks the front drive wheels together for improved traction on hillsides or in wet conditions.

Does the deck offer good float — both side-to-side and vertical? Decks that move with the contour of the turf, especially in the larger deck sizes, avoid scalping and turn out a finer finish. With the flotation option, contractors can use larger decks and be more productive, especially in flat spaces with normal undulations, rolling hills and berms.

Consider the wheels. Anti-scalp rollers and gauge wheels follow the ground contour. Pneumatic wheels ride on top better than solid plastic or rubber wheels, giving a higher quality cut. In tough applications, the mower deck and tractor should use four-ply tires or foam-filled tires to reduce damage from debris.

If the grade is too steep for ride-on units, the operator can opt to use a commercial walk-behind. Because the center of gravity is lower on a walk-behind unit, it's less likely to roll over. Choose the deck size according to the degree of slope, the irregularities of the terrain, and the required finish of cut. Deck size also has a bearing on safety. A deck under 40 inches gives better hillside control — and often a better quality cut.

Does the unit offer an optional fast speed? Is the transmission engagement placed for operator ease? Does the unit offer the option to vary the speed in tough conditions instead of gearing down?

Evaluate the mower safety systems in terms of the worst case scenario within your specific site situations. For example, on a steep hillside, what will happen if the operator falls?

Consider how the braking system works. When you release the handle to stop the unit, does the parking brake automatically engage or must it be locked down manually?

If much of your difficult mowing is on hillsides: When you let go of the machine, does it stop or continue to run? If it continues to run, and the operator fails to manually engage the brake, could the unit roll off the hill? If the engine "kills," how difficult will it be to restart on the hillside angle? The recoil start on a 14- to 17-h.p. machine can be strenuous and dangerous on a sloping surface.

Consider using a string trimmer for cutting turf in unsafe mowing conditions. The smaller area covered makes the job time-intensive and the quality of cut suffers. But in must-trim, less-visible situations, this is a viable option.

Some roadside areas, especially those that aren't mowed often and where quality of cut is not as critical, are better handled with a side rotary cutter. The combination of debris and tall turf puts operator safety at risk.

**MAKING CONCESSIONS.** Loomans and McDonald agree that there are trade-offs in most difficult mowing situations. In analyzing the

various conditions, your equipment options and the capabilities of your crews, your expertise is a vital component; and ultimately the deciding factor.

All mowing units must pass base requirements for safety and stability. But nothing is as tough as the actual, on-the-job testing your equipment faces every day. There are the visible hazards — berms, shallow ditches, slopes, hills and undulations — and the undetected hazards — ridges, holes, pockets of loose or wet soil, rocks and debris.

Some hazards are related to other companies or individuals. Nearby construction projects may alter water patterns, causing washing or gullies in properties under your care. The employees of that office complex may decide to organize early morning, noontime, or evening events in that adjoining park you must mow.

Make some allowance for difficult conditions that are nearly impossible to predict. Extended rainy periods may force you to mow in wet conditions for weeks at a time. Long periods of drought can alter turf growth and force you to make adjustments in the type of mowing equipment used.

Safety dictates that riding units be operated up and down a hillside; and walk-behind units from side to side. In reality, many operators mow across gradual slopes on riding units rather than up and down. If the slope is 20 feet deep and 2 miles long, who's going to mow it up and down? Even then the operator must be aware that such hidden elements and rocks, debris or holes could suddenly change the terrain.

Mowing conditions are variable. Operator's manuals typically say nothing about such factors as the degree of angle on a slope that is safe for operation because many factors must be taken into consideration. As a rule of thumb, if you need to adjust your position on the mower seat to feel comfortable on a slope, you're "pushing the limit." If you or your crew think an area is too steep or too unstable for safe mowing — it is.

Accounts change hands because of how such areas are handled. Perhaps you believe that added charges to cover the additional time could place you in an uncompetitive position.

When such conditions occur, discuss the situation with the client. If cutting with a string trimmer compromises the look of the site, a change to ground cover or other more appropriate landscaping may be needed.

Most customers will be open to a workable solution. If the client refuses to consider the safety of your personnel, you are likely dealing with an intractable client — one who will always be trouble. Their attitude may be one you can't afford.

Mowing difficult terrain will always be a factor. To stay in business — and stay profitable — in today's competitive marketplace, you must base your decisions on thoroughly analyzed options. ■

*The authors are partners in Trusty & Associates, Council Bluffs, Iowa, and are consultants to the horticulture trade.*





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**Everett Mealman**  
Chairman and  
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The *environmental age* weed control program being used by Roger Albrecht is typical of progressive turf professionals.

Albrecht is president of Nitro-Green Corporation, which has 38 lawn care franchisees scattered over 15 different states, and he manages two locations in California for his own hands-on experience.

"Our goal is to eliminate all broadcast spraying of herbicides on the ornamental turf we manage, and replace it with spot treatment as necessary," says Albrecht. "We want to be pro active on environmental issues and be able to assure our customers that we are using the absolute minimum requirement of chemicals."

Albrecht goes on to explain that such a

program takes time to implement because the turf needs to be so healthy and thick that weeds cannot easily germinate.

"The elimination of the pre-emerge broadcast is the critical step," says Albrecht, "because, no matter what, some crabgrass is going to appear, and since crabgrass is a major cause of complaints, we must be able to eliminate it fast with no discoloration."

Trimec Plus provides the safety net that enables Albrecht to eventually eliminate pre-emerge. "We have absolute confidence in Trimec Plus to handle any crabgrass or nutsedge that shows up," says Albrecht.

And, of course, the same spot sprayer filled with Trimec Plus that Albrecht uses to control crabgrass and nutsedge also controls the other grassy and broadleaf weeds that can germinate throughout the year. "Having *one* herbicide for *all* of our spot treatment is a major factor in our program," says Albrecht.

But if Trimec Plus is ideal for spot treatment, it is also unsurpassed for broadcasting when the need exists. Listen to George Toma, the executive turf consultant for the Royals, Chiefs, and NFL:

"My son, Chip, the groundskeeper for the Truman Sports Complex, used a broadcast of Trimec Plus on the out-of-sight, unirrigated perimeters of the complex, which was loaded with every conceivable weed, and

Trimec Plus absolutely took out everything except the bluegrass."

According to Toma, it would have taken four different selective herbicides to do the job that Trimec Plus was able to do . . . but even more important, Toma says that Trimec Plus did a better job on all of the individual species than a narrow spectrum selective could have done.

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USE READER SERVICE #72

HERBICIDE

758-292



# DEFYING DROUGHTY AREAS WITH STURDY PLANTS

DROUGHT tolerant doesn't have to mean cactus. Plants, just like people, have a range of attributes that define their character. Some are delicate prima donnas that must be pampered at every turn. Others are spunky pioneers, able to roll with the punches and weather any storm.

Think pioneers — sturdy, hardy, adaptive — when seeking drought-tolerant plants.

First, determine what conditions the plant must be able to withstand. There are many variables to consider within a geographic region or hardness zone — even within one client's property. Take the time to analyze the soil type and pH, the drainage situation, temperature, sun and wind patterns.

Each microclimate can harbor its own plant community, allowing you to expand the range of materials used within the landscape.

Look beyond the obvious. We've all encountered a row of thriving trees, shrubs or flowers, marred by one or two dead or declining plants. Maybe the supposed weaklings have been replaced with healthy plants of the same variety — only to fail in the same location.

Close examination often reveals a hidden hazard. Roots may be contending with such physical factors as buried debris, compacted soil or

restricted drainage. Top growth may be affected by drying winds, runoff from a roof, increased shade from new construction or developing landscape, even the actions of neighborhood children or dogs.

Consider the human factor. Will the plants be under the sup-

Some plants are better suited to survive low water environments. A little ingenuity and close examination of the grounds will provide landscape options.

By Steve & Suz Trusty



Drought-tolerant doesn't mean cacti only. Instead, keep environmentally adapted native species in mind. Photo: Steve Trusty

ervision or care of your personnel? If the property owner is responsible for maintenance, will plant care have high priority? Will a knowledgeable horticulturist, or at least a plant-loving person, be in charge? Do the individuals in control realize that even super-hardy plants need a bit of help get-

ting established?

What is the location's normal rainfall pattern? Are there adequate spring and fall rains, with hot, dry summers? Is natural moisture in short supply year-round? Is there sufficient rainfall most seasons, interspersed with occasional dry periods? Is the area

under long-term drought conditions, with ordinances restricting or limiting supplemental watering?

What water resources will be allocated for plant care? Will there be sprinkler or drip irrigation systems, an adequate system of hoses and sprinklers, a regular watering program?

With these factors nailed down, choosing appropriate drought-tolerant plants becomes easier.

**PLANT SELECTION.** The next major factor to consider is the desired look or effect. This will narrow down the plant type — tree, shrub, herbaceous perennial, annual — and certain characteristics. What heights and plant forms are desired? Will a large shrub work as well as a small tree? Are showy blossoms essential? If so, when should they appear and how long will they be expected to last?

Consider the drought-tolerant native plant species that fulfill your requirements. They will have special qualities that allow them to survive while other plants wither and die. Your choices needn't be limited to these natives. By observing their particular drought-defying characteristics, you will be able to select from a range of plants with similar growth patterns.

Nature's ingenuity is reflected in the coping mechanisms of these plants. Obviously, all drought-tolerant plants won't have all of these attributes, but just the right combination to adapt to their natural environment.

Drought-tolerant plants have water-grabbing roots. They will

(continued on page 40)



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USE READER SERVICE #25

### Sturdy Plants

(continued from page 38)

have either a long tap root or an extensive system of fibrous roots. The fibrous roots may extend deep into the ground or form a wide mass close to the soil surface. When water is available, these plants will be able to take it in.

A water reservoir may store moisture for use in dry conditions. Water could be stored in fleshy roots, in bulb-like formations at the base of the stem, in thickened or fleshy stems or leaves. Some of these reservoirs will be protected by hard or thick outer surfaces, or, as with some cactus, by sharp thorns.

Leaf colors range from bright and shiny to gray or silvery. A few varieties have a top shiny surface and a bottom silvery one. Some leaf surfaces display a wax-like texture to reflect light; some have a fine, almost hairy covering to deflect light.

Some drought-tolerant plants stand alone in the blazing sun, withstanding all the stresses nature gives them. Others nestle within the shade of larger trees or shrubs, or huddle together for protection from the drying sun and wind.

Xeriscaping doesn't mean landscaping with rocks and cactus or eliminating all turf. Xeriscaping simply dictates that water be used wisely by grouping together plants with similar requirements, amending existing soils where appropriate, using mulch to conserve moisture and watering only where and as needed. These practices are beneficial, even when you're using only a few drought-tolerant plants.

Drought-tolerant plants exhibit blooming cycles that help to perpetuate their species. Some, such as spring-blooming wildflowers, burst into spectacular masses of flower when water is available. The blossoms attract pollinating insects, quickly develop seeds, which mature and fall, all within a single rainy period. Other plants blossom with summer rains and remain in flower for long periods to allow for pollination. The seeds of these plants mature in the fall, remain dormant over winter and start growth with the warmth of spring. A few drought-tolerant plants bloom in early fall, with a short cycle similar to spring bloomers. When season-long flowering is

desired, choose shrubs and perennials from each of these blooming categories. Add border plantings of such drought-defying, long-blooming annuals as marigolds, portulaca and alyssum.

**INSTALLATION.** When possible, plant drought-tolerant plantings according to the natural cycle of the selected varieties. Some are better adapted to spring planting; others to fall. The planting season for balled and burlapped or container plants is often any time the ground can be worked, but plants need extra care to withstand weather extremes.

Follow your area's recommendations for use of soil amendments when planting. In some situations, trees and shrubs extend roots into the existing soil more easily, and have better long-term survival, if soil amendments are not used. Such smaller plants as perennials and ground covers may benefit from the addition of organic matter to the original soil.

Whatever the season or form used, new plantings will need adequate water until they are well established. Make arrangements to provide supplemental water when nature fails to deliver. If your crews will not be handling this care, be sure to stipulate the watering intervals and approximate amounts of water that will be needed at each watering.

Many beginning gardeners tend to barely sprinkle new plants, or wash them away with gushing hoses, rather than providing slow, deep soakings that thoroughly wet the plant root zone.

You'll need to adjust the suggested watering intervals according to the species used, their growth stage, natural rainfall and weather conditions. Flower beds and ground covers may need water every two to five days; trees and shrubs every seven to 10 days. Leave an instruction sheet with the client that spells out the basic guidelines as a reminder.

Drought-tolerant plantings may benefit from mulching. Again, follow local recommendations. It is possible to kill your drought-tolerant plants with kindness. Too heavy mulching, too much water and excessive fertilization alter the growing conditions for which you selected them. ■

The authors are partners in Trusty & Assoc., Council Bluffs, Iowa.





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USE READER SERVICE #41



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# HEALTHY LAWNS THWART DISEASE

*Strategies for disease control start with cultural practices. Fertilization, irrigation, thatch management and turf variety selection must be performed with care.*

By Bob Gitlin



Red thread symptoms appear as irregularly shaped patches on tan-colored grass with a reddish-brown cast. Photos: Rhone-Poulenc

PERHAPS 75 PERCENT of turf maintenance fungicide sales are to golf courses, where upscale economics and aesthetics demand continual chemical supervision. Within non-golf lawn care, most fungicides are used to treat ornamentals.

Preventively, rather than reactively, containing disease outbreaks in turf is considered the best cure by contractors. Another reason to use fungicides judiciously is trumpeted by their very manufacturers: The best strategy to control disease in turf is to keep the lawn healthy to begin with.

**STOPPING DISEASE.** While the extent of disease outbreak varies from region to region, many contractors are reporting decreased incidences of disease in recent

years. Charles McGinty, president of McGinty Bros. Inc. Professional Lawn and Tree Care, Long Grove, Ill., which tends residential and commercial turf, said the last time he had a problem was when the ring disease fusarium blight (summer patch) ravaged two areas in the northwest Chicago suburbs heavily sodded with the once highly touted Merion bluegrass.

"Sod growers then started growing blends of bluegrass so they would not be susceptible to any one disease. Over the past five years, disease is less of a problem for us."

McGinty sells fungicidal attacks (he prefers liquid) as options at the outset of the season. "Our strategy is to keep a lawn in as healthy a condition as possible

and not end up having to treat for diseases. We try to get the property owner, whether a home or office building, to cooperate with us as far as mowing and watering."

As vice president of Environmental Care Inc., the biggest all-commercial maintenance company in the United States, Dave Hanson has seven states for which to help devise and implement strategies to control turf disease. California, Nevada and Arizona suffer few active disease problems, though rust does occur. Conversion of most of that turf to tall fescue, at least in cool-season areas, has virtually knocked out summer patch, he said. But patch diseases (such as summer patch) arise in Colorado, and brown patch afflicts Texas and Florida.

Most ECI disease control pro-

grams are sold as extras, largely because of the price squeeze on commercial maintenance jobs. In Texas and Florida, on the other hand, disease control tends to be included in the contract from the outset. ECI employees use either granular or liquid fungicides.

"On some sites in the South, we may have an isolated outbreak of brown patch on a two-acre site, maybe a total of 2,000 square feet affected, and a granular application makes sense; whereas in Colorado, where summer patch is more prevalent on an entire site, it's easiest to treat with a liquid application."

Strategies for disease control start with cultural practices. "Brown patch may be aggravated by excessive fertility. Other disease problems, like rust in Kentucky bluegrass, may be the result of underfertility. You have to perform proper fertilization, irrigation, thatch management and variety selection," Hanson said.

Proper turf selection is crucial. Here, ECI professionals are sometimes limited by constraints beyond their control, such as when they inherit a sick turf whose owner is adamant they not tear up and replant. "In other instances, we may have the opportunity to overseed with resistant varieties. Overseeding perennial ryegrass in a Kentucky bluegrass lawn may mask summer patch."

**DISEASE CYCLES.** Eradicating established diseases, while sometimes effective, generally costs more and gains less than would preventing disease in the first place, Hanson said. A disorder such as the summer patch ECI has wrestled with in the Rockies requires proactivity.

"If you wait until you see the symptoms, you can dump all the fungicide in the world on there and it's not going to do anything about it."

A good turf person is acquainted with disease life cycles. The "disease triangle" of host, pathogen and environment must be memorized.

"Typically," Hanson said, "we

(continued on page 44)



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USE READER SERVICE #46





## Healthy Lawns

(continued from page 42)

assume we always have the pathogen there; it's maybe in an inactive condition. We always have the host there, although some hosts are more susceptible than others. What we're lacking are proper temperature and moisture conditions. When those conditions aren't right, boom, you have a disease outbreak."

Therefore, technician training is critical.

"You have a crew with a foreman, but then you also have a supervisor who hopefully is a graduate trained horticulturist who can spot these problems. During an estimate, he can recognize the property has had problems with diseases."

This evidence may require a trained eye. The lawn care company may do the budget-conscious customer a favor by talking him into a fungicidal application, such as when ECI's people diagnosed Colorado lawns with a history of patch disease.

"We told them, 'On your bluegrass, we can see summer patch scars. When summer comes, it'll be too late to treat. We need to treat this in the spring. Here's what it would cost, and here's what it would do for you.'"

**TREATING DISEASES.** Green Thumb Landscapes Inc., Norcross, Ga., battling an upswing of brown patch last year caused by excessive rains, primarily used several liquid fungicides.

"I was told by the extension services sometimes you can even control it with a little extra fertilization," said Hank Sickerman, owner and president. "Backpack sprayers are easy in small areas. On large areas you have to put out some type of granular. For the most part, our disease problems were still small."

The South's warm-season turfs and longer hot periods generally offer more disease problems than do northern turfs. There's little tolerance for disease among Sickerman's 95 percent residential customers.

"We run some high-caliber homes, \$500,000 to \$1 million Atlanta-area subcontracts. Only

**Common in Kentucky bluegrass, necrotic ring spot usually occurs in warm/hot, dry conditions.**

the largest companies can afford to handle their own chemical applications," he said. "For smaller companies like mine — we have fewer than 100 clients — it pays to sub out."

Like other contractors, Sickerman said, the best defense is prevention. He makes sure his people don't spread disease from one lawn to another. "We spray our mowers with bleach. You've got a lot of 'landscappers' out there who don't. They transmit seed heads from one lawn to the next. They have no clue what's going on. Customers ask us to fix the problem for the same price, and we can't." Another problem:

operators and homeowners who think more is better.

"They think, 'If this much takes care of it, let's use a little more.'"

Sickerman believes in careful use of fungicides. "Everybody is on an environmental kick; I have been for a while. I'd rather treat something naturally — at least try it once. If that's not helpful, and I feel it needs something more, I'll discuss it with the customer first."

"We've had our battles with fusarium blight, necrotic ring spot and brown patch," said Bob Macko, whose Custom Greenery Lawn Care, Farmington Hills, Mich., has learned special strategies in tending turf that grows on difficult clay soils, particularly in urban areas.

"You relieve a lot of stress by

watching how much nitrogen you put down. I put a lot of iron down, try to give my lawns color and thickness. I use a lot of potash. We avoid stressing the lawn out; excessive growth only leads to more disease problems as the summer goes on."

Accounts with disease history go on a list, which is consulted year by year. "Prime time around here is the beginning of June; that's when you want to treat for disease. The ones I have a lot of problems with, I try to aerate, power rake, overseed and put less susceptible varieties into the lawn."

The smart pro communicates the necessity for customer follow-

run it every day, and that's not necessarily the right thing to do. They want people riding down the road to notice that they have the sprinklers."

Brown recommends every lawn maintenance contractor find out who his county extension contact is. That paid professional is in touch with the latest findings from the state extension service. Sometimes a soil sample sent to that contact can achieve an answer to a disease query. Real stumpers go to people like Brown for further analysis.

You can't treat all lawns in a neighborhood for one disease generally determined to afflict an area. By doing so, you may create other kinds of disease problems on turf that never suffered the target menace. Brown recommends lawn care professionals avail themselves not only of public resource contacts, but seminars available in every state to learn to better manage turfgrasses.

"Doing the right things from a cultural standpoint is the best way to prevent disease," said Allan Yust, product marketing manager, DowElanco Specialty Products, Indianapolis. "We recommend aerating, verticutting and proper fertilization."

If chemical fungicides are being used more selectively now, Yust attributed this largely to more efficient products, such as advanced sterile inhibitors that do not require frequent reapplications.

"You're better off doing preventive sprays," said Andy Seckinger, Chipco product manager, Rhone-Poulenc Ag Co., Raleigh, N.C. "Most turf researchers recommend a rotation, because of the tendency of fungal diseases to develop resistance. You've got to know your grass type, your usage and your microclimate. From those factors, design a program that allows you, on a preventive basis, to put your materials down before the problem arises. If you wait to see symptoms of a problem like pythium, it's probably too late for even the fastest fungicide."

"In Florida, where St. Augustinegrass is a major lawn grass, contractors have severe problems with gray leaf spot," said Dr. Douglas Houseworth, manager of technical support for turf and ornamentals at Ciba-Geigy Corp.,

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## Disease outbreaks in turf are best cured on a preventive basis.



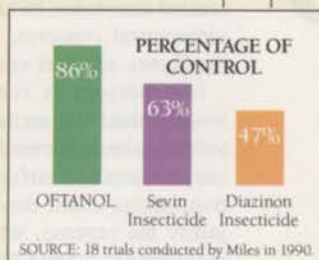


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Getting rid of grubs that attack your customers' lawns can be pretty tricky sometimes. Unfortunately, simply treating against these destructive pests doesn't always guarantee success.

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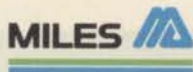


to treat with OFTANOL when grubs are at or near the surface. An easy way to check is by just pulling back a bit of sod and looking for an infestation. Or call your local Extension office to determine peak periods of grub feeding in your area.

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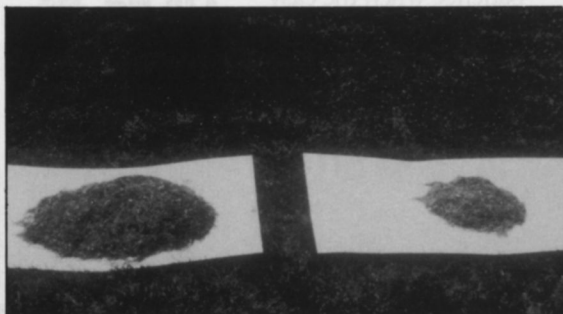




# CUTTING COSTS WITH PGRs

*Plant growth regulators are still fighting for widespread acceptance in the lawn and landscape maintenance market. With more education and improved application techniques, better days may be ahead for these clippings management tools.*

*By Julie A. Evans*



Reduced grass clippings is turning many PGR disbelievers into advocates. Photo: O.M. Scott & Sons

REDUCED mowings and clippings as well as lower labor costs are among the more frequently cited reasons for using plant growth regulators. In the past, their biggest consumers have been golf course superintendents and highway maintenance crews.

After nearly a decade in the marketplace the products are anchoring a secure niche in commercial and residential landscape maintenance as well. Several factors have contributed to this increased acceptance, including environmental concerns, product familiarity and user education.

Not everyone is convinced, however, that PGRs are the answer to their maintenance needs. Some cite problems with turf discoloration; others claim they cannot justify the expense, which can range from less than \$20 per acre to more than \$100 per acre, depending on the product.

As defined by Joseph DiPaola, associate professor of crop science/turf at the University of North Carolina, the PGR is an organic compound, either man-made or natural, that modifies the growth and development of a plant.

Applied in small amounts, either grams per acre or ounces per acre, PGRs can reduce mowing requirements and clippings volume by as much as 50 percent. Results last approximately three to 10 weeks, depending on the product and the turfgrass species. But PGRs require a high level of operator expertise to be effective. Timing and application rates are critical to product success.

"These are very sophisticated compounds," DiPaola said. "If you try to control tall fescue seedheads now, for example, it's a lost cause. The seedheads are already out," he said. "And those that are not out wouldn't receive the chemical stimulus correctly."

DiPaola added that like any tool, PGRs can be used or abused. "They're like a hammer — if you hit the wall instead of the nail, it's not going to work. PGRs are a good tool but you can misuse them."

According to Mike Shaw, product development manager for DowElanco, Indianapolis, "The key hurdle is these are real technical products. The end user has to come to work with this technology. They're not products you put in a bag, read the label, apply and they work. The products do what we say, but you have to work with them. You have to learn them."

PGRs are commonly classified into two categories, Type I and Type II. By this definition, Type I PGRs, such as PBI/Gordon's Limit and Embark, suppress plant growth development by inhibiting cell growth at the crown. Flowering is significantly affected. They can be root- or foliar-absorbed.

Because of their comparatively lower cost, Type I PGRs are the most common choice for landscape maintenance applications. Potential drawbacks include temporary turf discoloration and turf thinning. These symptoms can be minimized with proper application techniques.

Type II PGRs, including O.M. Scott's TGR, DowElanco's Cutless and Ciba-Geigy's Primo, reduce plant cell elongation. Flowering is unaffected. Seedheads still form but they're shorter.

Advantages of Type II PGRs are less phytotoxicity (less discoloration), improved turf density and reduced water usage. They are also selectively injurious to *Poa annua*.

Type II PGRs are root absorbed and have longer residual effects than the Type I regulators. They are also prohibitively expensive for many non-golf course applications.

PGRs have been chosen by some cost-conscious landscape contractors as a means of reducing clippings volumes and cutting back on landfill waste. Doug Obermann, product sales specialist, plant growth regulators for PBI/Gordon, Kansas City, Kan., said the company received close to 1,000 new inquiries this year, many of them linked to landfill

(continued on page 48)



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## PGRs

(continued from page 46)

closures and high disposal costs.

"I really think people are looking for ways to minimize yard waste. They're looking for options to composting and paying for the disposal of yard waste," he said. "One company told me their cost of disposal of yard waste is 2 percent to 3 percent of gross income."

Properly applied, PGRs can reduce mowing costs immediately. "One less mowing saves money on the deal," DiPaola said. "But people have trouble with this — you have to know how much it costs to mow."

To make the application even more cost-effective, a herbicide can be tank-mixed with the PGR.

According to a 1987 report by the Roadside Maintenance Committee of the Transporta-

**The newest thing  
about PGRs may be  
that more people are  
using them.**

tion Research Board, 20 of 37 states responding to a survey used PGRs in their roadside vegetation management programs. Five of those states budgeted more than \$100,000 per year for PGRs, realizing an average annual savings of nearly \$30 per acre (compared with mechanical mowing).

**WHAT'S NEW?** One new entry on the market this year is Primo from Ciba-Geigy. The foliar-absorbed PGR is pending approval by the Environmental Protection Agency. It can be used on all major warm- and cool-season turf-grasses, but it is not currently recommended for use on golf course greens.

"We are aiming for 50 percent reduction over 46 weeks — 50 percent growth reduction as well as 50 percent reduction in mowing frequency," said Bernd Drubbisch, product manager for the Greensboro, N.C.-based firm.

Drubbisch said Primo, a Type II PGR, may be used on highly maintained commercial and residential turf areas.

Overall, the newest thing about PGRs these days may simply be that more people are using them. According to Dean Mosdell, project leader, research product development for O.M. Scott & Sons, Marysville, Ohio, the "new trends" in PGRs "are basically the old trends being re-looked at because of landfill issues. There's very little new with regard to formulations."

Mosdell said discoloration continues to be a factor, but most people are willing to put up with some degree of it for reduced clippings. "It's up to the manager of the turf to decide whether he's willing to accept a decline



in quality for reduced clippings.”

Obermann noted how improved application techniques have boosted results. Those include: using a higher spray volume and spraying early before seedhead emergence. He also recommends mowing higher after application.

“With growth regulators, the grass is on hold, so you don’t have that new generation. When you mow lower, you expose more of that dying or dead tissue, whereas if you mow higher, you have more green grass.”

John Patten, territory sales representative for PBI/Gordon, added that the company now offers Embark Lite as a “nearly foolproof” introduction to turf growth regulators. He said it gives users a chance to learn application techniques before moving on to Embark 2S, which is a longer-lasting formulation.

“If you talk to people who used regulators 10 years ago, they’ll mention discoloration. We wanted to make (Embark Lite) as safe a product as possible with regard to discoloration. Once people get the hang of using Embark Lite, they go back to Embark 2S to get a longer duration,” he said.

Last year, the company introduced a combination spray pack with Embark Lite and Limit. Limit is labeled exclusively for bluegrasses, fescues and perennial ryegrasses. Embark goes into more warm-season grasses. The product combination is intended to reduce the amount of active ingredient in each and eliminate potential color loss caused by overlap.

At DowElanco, Shaw said the challenge to getting PGRs accepted on a wider scale is to focus in on labor savings and what that means in dollars and cents. “That includes causing less wear on equipment and reducing the need for and frequency of irrigation.”

**FIELD NOTES.** Landscape contractors appear divided about PGR efficacy and use. Some swear by the products, praising their abilities to lower maintenance costs and water use. Others remain skeptical.

Ken Wentland, production superintendent for Lied’s Nursery Co., Sussex, Wis., said his company has experimented with PGRs with mainly positive results. He offered several sug-

## TURFGRASS PGRs

Product	Common Name	Uptake Site	Labeled Grass Species
Cutless (DowElanco)	Flurprimidol	Root	Bentgrass Common Bermudagrass 419 hybrid Bermudagrass 328 hybrid Bermudagrass Kentucky bluegrass Perennial ryegrass Zoysiagrass <i>Poa annua</i> management conversion
Embark (PBI/Gordon)	Mefluidide	Foliar	Bermudagrass Centipedegrass Kikuyugrass St. Augustinegrass Kentucky and annual bluegrass Tall, Red and Chewings Fescues Perennial ryegrass <i>Poa annua</i> seedhead suppression
Limit (PBI/Gordon)	Amidochlor	Root	Kentucky bluegrass Perennial ryegrass Tall and fine fescue
Scotts TGR Turf Enhancer (O.M. Scott & Sons)	Paclobutrazol	Root	Bentgrass Hybrid Bermudagrass Kentucky bluegrass Perennial ryegrass St. Augustinegrass <i>Poa annua</i> control
Primo* (Ciba-Geigy)	CGA 163935	Foliar	Bahiagrass Common and hybrid Bermudagrass Centipedegrass St. Augustinegrass Zoysiagrass Creeping bentgrass Kentucky bluegrass Fine and Tall Fescue Annual and Perennial Ryegrass

\*Full registration pending approval by the Environmental Protection Agency

Table 1.



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gestions for their use:

First, he recommended mowing the application site twice, once prior to application and once immediately following.

"For every job we've done with the regulators, we had to mow the lawn, apply the product, then mow again. You need to mow it a second time for the PGR to hold."

Wentland did not feel that the extra mowing created a disadvantage. "A lot of people apply these products and assume the grass will stop growing right away. It doesn't work that way."

He said he hasn't had any problems with discoloration, but warned against applying the products in high traffic areas.

"According to the label, you shouldn't use PGRs in high-traffic or high-visibility areas. On high-growth areas, PGRs slow the rate of growth dramatically. If it's a high-traffic area, normally grass grows fast enough; with the growth regulator, traffic doesn't slow down, but the ability of the grass to recover does — it would

wear down and look ratty. That's exactly what you don't want to happen in high-traffic conditions."

Finally, Wentland recommended using a turf dye during application, "because if you don't get an even application, that spot will grow like crazy. You need really even coverage, and turf dye allows

said. "If you treat a turf with most PGRs for any reason, if the turf has disease, insects, drought or other problems — there's no recuperative potential. You're making an existing problem worse and putting the turf at risk. You want the turf healthy when you start."

Peter Scholz, vice president of maintenance operations for Rein-

problems with turf discoloration.

At The Bruce Company of Wisconsin, Racine, PGRs for ornamentals have been used with success for several years. But Arnie Sieg, vice president, said growth regulators for turf have proved unsatisfactory. He found the products difficult to calibrate correctly and complained of turf discoloration and browning.

Still, Sieg is willing to consider new products or improved formulations. "We're in the mowing business to make money. Anything you can do to reduce mowing costs helps. And if you can reduce mowing costs for your clients, I think you should do that too," he said.

This fall, the company is adding two cemeteries to its client list. Sieg thinks a PGR could help maintain the difficult-to-mow areas. "We're interested in anybody who has anything new. We want to talk to them," he said.

*The author is Associate Editor of Lawn & Landscape Maintenance magazine.*

## PGRs can lead to less wear on equipment and reduce the frequency of irrigation.

you to do that."

Wentland said PGRs eliminated about four mowings in a season, some during the busiest period. That frees up employees for other maintenance jobs, he said.

The University of North Carolina's DiPaola added that turf must be healthy before a PGR application. "You want the density and color of turf to be better than minimum acceptable standards," he

hold & Vidosh, Pontiac, Mich., said the company has been fairly successful with PGRs. "One area where they work well is on steep berms where we can't get a regular mower. Another is on an industrial site to cut down on the frequency of mowings.

"It's definitely cut down on manpower and man hours. And on a site where the berms are steep, there's the safety issue."

Scholz said he hasn't had any



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# Hands On

*Editor's Note: Hands On is a new feature in Lawn & Landscape Maintenance magazine to provide our readers with ideas and resources for running their businesses. Items for this department will come from a variety of sources, but most importantly, we need you to share ideas and lessons learned with your peers. Submit your hands-on stories to: Hands On, LLM, 4012 Bridge Ave., Cleveland, Ohio 44113. Or if you want to phone us, call 800/456-0707.*

## Improving Employee Performance



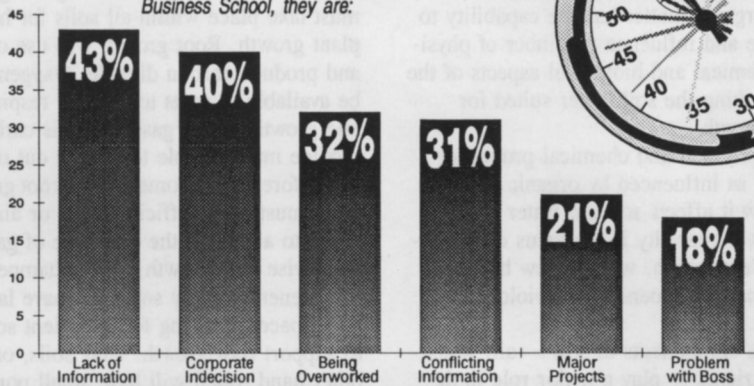
EMPLOYEE REVIEWS reinforce good work habits and act as guidelines to job improvement. Not only is a job review a "yardstick" of work accomplished, but it can protect an employer against unlawful dismissal litigation.

Here are some tips for successful performance reviews:

- Tell employees if they are doing a good job. If employees feel unappreciated, they'll leave. It's too late to retain a good employee after they have accepted another job.
- Base reviews on specific job functions. When you hire someone, job responsibilities should be outlined in writing.
- Review employees at least once a year.
- Make employee goals measurable, such as mowing a particular number of lawns per week.
- Do not ignore poor performance. Let employees know where they need to improve.
- Evaluate for the entire time since the last review, not just recent performance.
- Do not downgrade employees because they fall down in one aspect of their jobs.
- Use reviews for two-way communications. The review should be a rating tool as well as a planning device to map out a growth plan for an employee. — *National Association for the Self-Employed*

## RUNNING OUT OF TIME?

Which job-related factors are most stressful to managers? According to a survey of 225 middle managers by the Columbia Business School, they are:



Source: Small Business Reports

## Leadership Does Make a Difference

SINCE THE United States' victory in the Persian Gulf war, Gen. Norman Schwarzkopf has been plugged into the nation's speakers circuit discussing the principles that guided his troops to victory. Although his policies aren't new, many landscape contractors would be better off if they followed them.



- **You must have clear goals.** And you must be able to articulate them clearly. One of the advantages the United States had in Kuwait was the clarity of the mission: "Kick Saddam Hussein's butt out of Kuwait. The goal was clear and simple, and something that every one of our troops understood."
- **Give yourself a clear agenda.** Every morning write down the five most important things for you to accomplish that day. Whatever else you do, get those five things done. Insist that the people who report to you operate the same way.
- **Let people know where they stand.** Everyone knows you do a disservice to a B student when you give him or her an A+. The grades you give the people who report to you must reflect reality.
- **Set high standards.** Too often we don't ask enough from people. People generally won't perform above your expectations, so it's important to expect a lot.
- **When in charge, take command.** Leaders are often called on to make decisions without adequate information. As a result, they may put off deciding to do anything at all. That's a big mistake. Decisions themselves elicit new information. The best policy is to decide, monitor the results and change course if necessary. — *Business Week*

## Low Cost Ways to Keep Market Share

IF THE RECESSION has left you with more time than money, Creative Marketing & Management in Hoboken, N.J., suggests you spend it promoting your business. The following ideas require only a little imagination and some pocket change:

- Donate products or services to industry trade associations or non-profit groups. For instance, donate time for employees to speak about water management or grass-cycling and their effects on the environment. This will earn immediate exposure.
- Exchange leads and information with non-competing entrepreneurs in your market. For instance, if you're designing a new facility, visit other lawn maintenance companies to get ideas.
- Expand your professional network. You may not have much clout with government regulators, but becoming active in trade associations and industry councils can help build alliances for the good of your firm and the industry. — *Inc. magazine*



# Compost Corner

## ORGANIC MATTER: OFTEN SHORT IN QUANTITY, BUT CRITICAL TO SOILS

**SOIL ORGANIC MATTER**, long overlooked by turf managers, is a critical and important component of all soil types. No matter what the soil type (sandy, clay, etc.), organic matter has the capability to improve and influence a number of physical, chemical and biological aspects of the soil, making the soil better suited for plant growth.

The physical and chemical properties of soil, as influenced by organic matter and how it affects soil air, water and nutrient availability is the focus of this article. Next month, we'll review how organic matter influences soil biological activity.

Three components of soil — air, water and nutrients — play a major role in determining healthy plant growth. While the relative amount of air and water are extremely variable, they generally constitute 25 percent each of the total soil volume, with the remaining 50 percent being mineral or solids. Organic matter will generally

run no more than 3 to 5 percent in most soils, although its effect is considerable.

**SOIL AIR.** A sufficient exchange of gases must take place within all soils for healthy plant growth. Root growth will use oxygen and produce carbon dioxide. Oxygen must be available to roots to support respiration and growth, while gases such as carbon dioxide must be able to diffuse out of the soil before they become toxic to root growth. Soils must have sufficient pore or air space to allow for the exchange of gases, otherwise root growth will be hampered.

In general, sandy soils will have large pore spaces allowing for sufficient soil air to support root growth. Clay soils, on the other hand, often will have small pores and inhibit the movement of O<sub>2</sub> into, or CO<sub>2</sub> out of, the soil.

Root growth is often slowed in clay soils as the result of a lack of aeration. Turf or ornamental plant health suffers as a result of un-aerated compact soil.

**SOIL WATER.** Sufficient water, just like air, is critical to healthy root growth. Water is required for a wide variety of metabolic processes and plant transpiration, and soils must contain water in sufficient quantities either through rainfall or irrigation.

Lack of soil water generally is a greater problem in sandy soils. Because of the large pore space in sands, water will drain quickly, leaving little water available for plant growth. Sandy soils are droughty and require frequent irrigation.

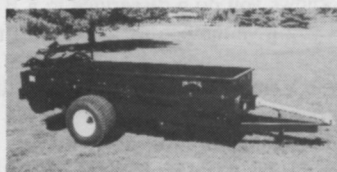
Clays, on the other hand, are capable of retaining more water than sands. However, because of the small pore space in clays, water will often run off clay soils before it has a chance to infiltrate. Water present in the small pores of a clay soil will often be held tightly to the soil particles, leaving little available for plant growth.

**NUTRIENT AVAILABILITY.** The availability of nutrients to plants from a soil is determined primarily by the ability of a soil to

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hold nutrients and make them available to the plants when needed. Although greatly oversimplified, the nutrient availability of a soil can be measured by its cation (nutrients such as nitrogen) exchange capacity (CEC).

Soils with smaller particle sizes (i.e., clays) generally will have a greater ability to hold nutrients for plant use. For instance, the CEC (as measured in meq/100g) of different soils will vary as follows:

sand	2	silt loam	20 to 25
sandy loam	5 to 10	clay	25 to 50
loam	10 to 20		

Turf and ornamental managers can expect to have to fertilize sandy soils more often than heavier textured clay soils since nutrients quickly can leach below the root zone. Pollution of groundwater by nutrients generally is more of an issue on sandy soils than clay soils.

The ideal soil then is one which supplies the right amount of soil, air and water, and has the ability to hold nutrients and make them available for root uptake. While loams (soils having moderate amounts of sand, silt and clay) contain the

right combination of these factors for quality turf and ornamental growth, most soils contain either too much sand or too much clay, and thus present challenges from several standpoints — soil modification, fertilization or irrigation.

**BENEFITS OF SOIL ORGANIC MATTER.** Organic matter, although a small component of most soils, offers big advantages to less than perfect soils. Small quantities of organic matter in a soil that has either too much sand or too much clay can result in a dramatic improvement in the soil and ease the job of growing healthy turf and ornamentals.

Compared to the sand, silt or clay fraction of soils, organic matter has tremendous water holding capacity, and high CEC (sand = 2 to 5, clay = 40 to 50, organic matter = 200 to 300 meq/100g). And most importantly, organic matter provides soils with soil structure or aggregation.

The role of organic matter in the formation of aggregates in clay soils is critical in making these soils productive. Aggregates are formed as individual soil particles stick or are bound together into larger aggregates.

The decaying organic matter produces

materials which bind individual soil particles together, greatly improving heavily textured soils. Clay soils, therefore, are improved through aggregation as they become less compact and soil pores, or the air spaces between individual aggregates, are enlarged. This results in improved aeration of clay soils, increased water infiltration and less surface water runoff. Plant growth is significantly improved in an aggregated clay soil.

Organic matter, therefore, can be used to improve a wide variety of soil characteristics in soils at both ends of the spectrum. Added either at the time of establishment or as a topdressing in conjunction with aeration, organic matter in the form of composts or peat can improve poor quality soils and lead to better rooting and healthier plants.

Thus, organic matter has tremendous beneficial physical and chemical effects on soils of all types, whether droughty sands or hard, compact clays. — *Jim Wilkinson*

*The author is vice president, research and development and professional sales for Earthgro Inc., Lebanon, Conn. Earthgro, with six East Coast facilities, is a producer of composted natural organic products.*

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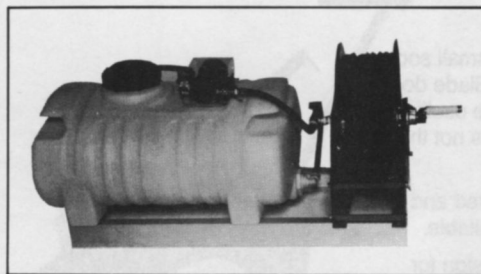
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# People

**RICHARD WEBB** joined Tornado Products as vice president of sales and marketing. He directs sales and marketing programs for the company's Baker Yard Waste Management Systems.

**Harold Pinto** was named vice president of sales for Jacobsen, division of Textron. Pinto directs the company's worldwide sales efforts.

**Kevin Colesworthy** is Hunter Industries' new district manager for northern Florida. He coordinates sales and marketing efforts for Hunter residential sprinklers for turf and landscape; and commercial sprinklers for sports fields, parks and public areas.

**Bruce Wheeler** is the new western regional salesman for ROOTSinc. His territory includes California, Oregon, Washington, Nevada, Utah, Arizona, Idaho and New Mexico.

JCB Inc. appointed three to its North American management team: **Richard Aldersley**, vice president of sales; **Ron Crites**, vice president of parts and service; and **Larry Carroll**, vice president of finance and administration.

**Randy Hall** and **Ben Bonds** were named territory managers for Husqvarna Forest & Garden Co. They are responsible for recruiting, developing and servicing outdoor power equipment retail dealers. Hall services 43 counties in middle and eastern North Carolina. Bonds services southern Alabama, southwestern Georgia and portions of Florida.

**Elliott Schaffer** joined CLC Labs as vice president, sales and marketing and consulting horticulturist. He is responsible for developing and implementing marketing strategies for the core business of plant nutrient soil testing and plant tissue analyses.

BCS America named **Rick Cuddih** national sales manager. He directs all U.S. marketing and sales efforts and oversees advertising and promotional programs.

Dixon Industries appointed **Tim Renn** as territory manager for Virginia. He serves as a link between Dixon and its servicing dealers.

**Dan Clawson** is the new director of North American sales for Solatrol. He



Pinto



Colesworthy

oversees marketing and distribution. Also, **Kurt Penberg** was promoted to western regional sales manager.

Other additions to Solatrol's sales staff include: **Lee Andersen**, sales representative, Orange and San Diego counties; **Mark DeLange**, regional sales manager, Southern California; **Mike Deveraux**, regional sales manager, Florida; and **Jerry Zella**, regional sales manager, northern California.

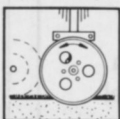
**John Crowson** is the new national sales manager for Scag Power Equipment. Crowson works closely with Scag's regional sales managers and distributors. ■

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Just like a small sod cutter, the Blade does not spin, the oscillating motion does not throw debris.

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Right Angle Blade

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# Products

## Product Spotlight

**Grasshopper** introduced the Down Discharge™ mulching deck. The low-profile front deck is available in 44-, 52- or 72-inch cutting widths. It has three alloy steel medium mulching lift blades with spindle heads designed to eliminate fiber wrap. A 360-degree shroud surrounds each blade, and discharge plates are placed down to direct clippings into the grass bed.

Circle 126 on reader service card



New from **John Deere** is the Tricycler variable-opening mulching attachment for 48- and 54-inch mower decks. The design allows the operator to set the mulching plate or baffle at one of five positions — higher for mulching grass clippings and lower for mulching leaves.

Optional equipment makes it possible to go from side discharge to mulching and to collecting debris for a compost pile.

Circle 127 on reader service card

**Kelly Lime & Rock** has introduced a line of pelletized limestone, dolomitic limestone and gypsum in 50-pound poly bags.



The high calcium limestone is non-burning and helps correct soil acidity, provide plant-available calcium and magnesium and decay lawn clippings. It can be applied with any spreader. The dolomitic limestone also adds magnesium.

Pelletized gypsum loosens clay and compacted soils, repairs salt damage, corrects alkaline soils and supplies plant-available calcium and sulfur.

Circle 128 on reader service card

MB-50 mist sprayers from **Automatic Equipment Manufacturing Co.** are designed to provide efficient pesticide applications to target plants. The sprayers produce a turbulent air stream that propels droplets of the pesticide to the plant, penetrating the canopy and reaching the stems and undersides of leaves.

PTO and 18-h.p. engine-driven units are available.

Circle 129 on reader service card

Pennant® liquid and granular herbicide from **Ciba-Geigy** may now be used by lawn care professionals to control difficult

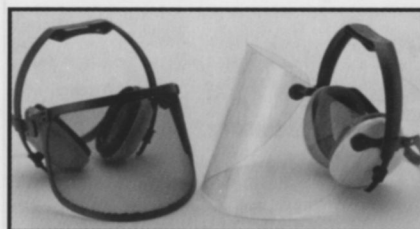


weeds in residential lawns with warm-season turf. Previously, Pennant was registered only for commercial lawns and similar warm-season turf areas.

For turf and landscape managers, Pennant is the only preemergent herbicide labeled for nutsedge. It also controls a number of other difficult weeds, including crabgrass, annual sedges, *Poa annua* and certain broadleaf weeds.

Circle 130 on reader service card

The **Elvex** CoolGuard offers combined hearing and face protection. The face protection is removable.



Two models are available: an antifog acetate faceshield or a nylon mesh screen.

Circle 131 on reader service card

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Well, we bought a new walk-behind and spent a lot of extra money to have hydraulic drive instead of belts and "Oh so what, while we're at it throw in a Velke."

The results were more than I hoped for. My guys now get twice the work done. And my problem kid—he won't get off the thing! He thinks he's lawn skiing. All I know is that he's become one of my top performers. He's producing so much I've not only given him back his lost pay, but a raise.

Now I just smile throughout my day watching his newfound attitude. What more can I say except thanks for making such a great product.

Gratefully yours

*Steve Wilbraham*

Steve Wilbraham  
Condominium Grounds Maintenance



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*From Lawn-Wright, Inc., makers of the Grass Gobbler.*

**PBI/Gordon Corp.** introduced Ornamec 170 grass herbicide, a new 1.70 percent fluzazifop-P-butyl formulation labeled for post-emergence use in and around hundreds of species of flowers, shrubs, trees and ground-

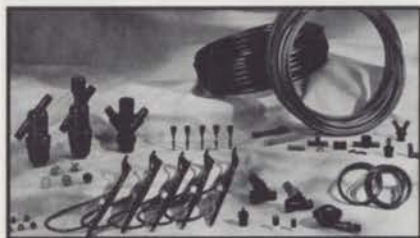


covers. Most species of ornamentals, as listed on the label, are tolerant to over-the-top applications of Ornamec 170.

A 3-gallon SP-1 backpack sprayer is available at a discount with minimum purchase of 1 gallon, 4 quarts or a case of 10-ounce containers.

**Circle 132 on reader service card**

**Toro** introduced a line of water conservation products, including sub-surface drip irrigation, drip irrigation, microspray,



high-flow shut-off device, rainswitch, improved controllers, adjustable stream rotor nozzle and Flo-Pro valves.

**Circle 133 on reader service card**

Cheyenne bermudagrass is a warm-season, cold-tolerant, turf-type bermudagrass from **Pennington Seed**.

Cheyenne can be established from seed. Features include a dark green color, wear tolerance, drought tolerance, low growth habit and deep root formation.

**Circle 134 on reader service card**

**Whitmire Research Laboratories** introduced a liquid concentrate form of X-clude,<sup>®</sup> its microencapsulated natural pyrethrum insecticide. PT<sup>®</sup> 170 X-clude can be mixed with water at two different levels: at the ½ ounce per gallon rate as a preventive treatment; and at the 2 ounces per gallon rate for control of infestations of aphids, spider mites and other insects.

**Circle 135 on reader service card**



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flotation. With only 5.5 psi of ground pressure, the AMT transport leaves nary a track on turf. This same flotation also keeps it moving through sloppy situations.

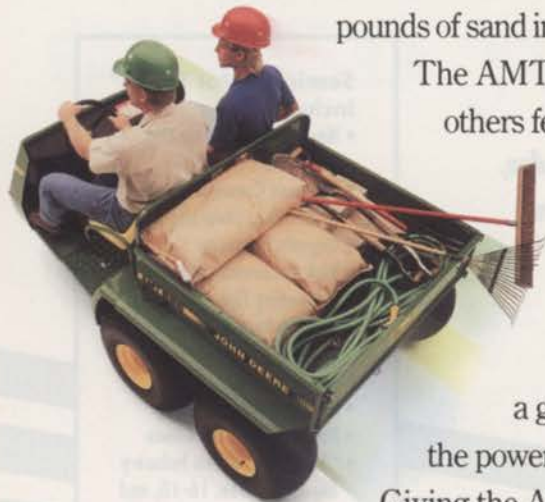
And while the AMT transport may be considered a gofer, it can haul like a horse. Ten of them, in fact. That's the power inside the overhead valve, John Deere "K" Series engine.

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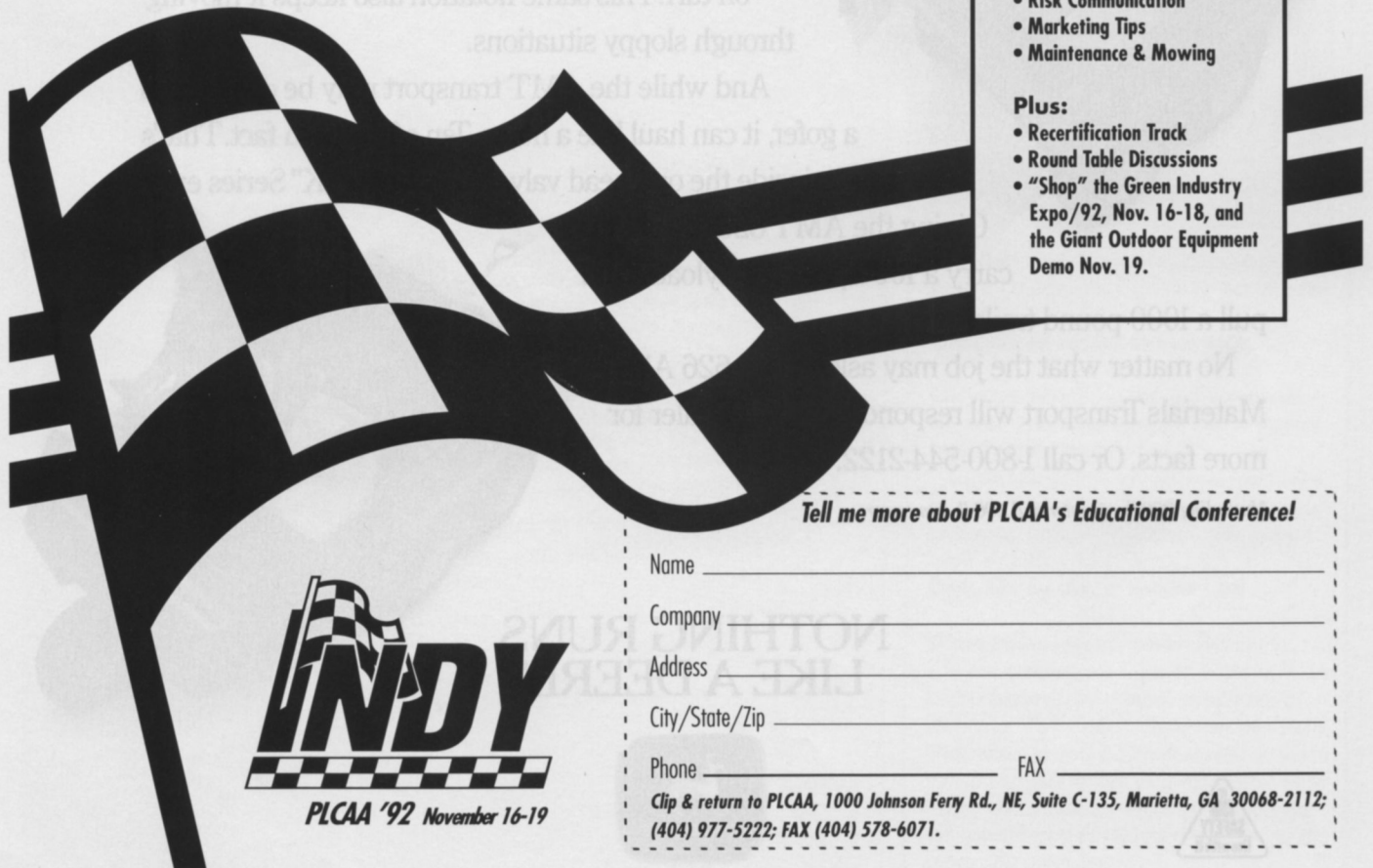
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# Calendar

**JULY 1:** Cornell Turfgrass Field Day, Pine Island, N.Y., co-sponsored by the Hudson Valley Horticulture Agents, Orange County Sod Growers Association and the New York State Turfgrass Association. Contact: NYSTA, 800/873-TURF or 518/783-1229.

**JULY 7:** Focus on Wetland Plants, sponsored by the Center for Urban Horticulture, Seattle, Wash. Contact: Center for Urban Horticulture, University of Washington, GF-15, Seattle, WA 98195; 206/685-8033.

**JULY 8-9:** Pennsylvania Pesticide Institute, The Embers, Carlisle, Pa. Contact: Pennsylvania Nurserymen's Association, 1924 North Second St., Harrisburg, PA 17102; 717/238-1673.

**JULY 15:** Annual Nursery Field Day, Hampton Roads Agricultural Experiment Station, Virginia Beach, Va. Contact: Hampton Roads Agricultural Experiment Station, Virginia Polytechnic Institute and State University, 1444 Diamond Springs Road, Virginia Beach, VA 23455; 804/363-3900.

**JULY 16:** Sowing the Seeds for Success, 1992 Summer Field Day & Trade Show, Shemin Nurseries, Burtonsville, Md. Contact: Landscape Contractors Association, 9053 Shady Grove Court, Gaithersburg, MD 20877; 301/948-0810.

**JULY 23-25:** American Sod Producers Association, 25th Anniversary Summer Convention Field Days, Fairmont Hotel, Chicago. Contact: ASPA, 1855-A Hicks Road, Rolling Meadows, IL 60008; 708/705-9898.

**JULY 23-27:** American Association of Nurserymen Annual Convention and Nursery Industry Trade Show, Grand Hyatt Hotel, Columbus, Ohio. Contact: Lisa Harmon, AAN, 1250 I St. NW, Suite 500, Washington, DC 20005; 202/789-2900.

**JULY 26-28:** International Lawn, Garden and Power Equipment Expo, Kentucky Fair and Exposition Center, Louisville, Ky. Contact: Expo '92, 6100 Dutchmans Lane, Sixth Floor, Louisville, KY 40205; 800/558-8767 or 502/473-1992.

**JULY 28:** Dr. Alex Shigo, Penn Allied Nursery Trade Show, King of Prussia, Pa. Contact: Pennsylvania Nurserymen's Association, 1924 North Second St., Harrisburg, PA 17102; 717/238-1673.

**JULY 28-30:** Penn Allied Nursery Trade Show, Valley Forge Exhibit and Convention Center, King of Prussia, Pa. Contact: Pennsylvania Nurserymen's Association, 1924 North Second St., Harrisburg, PA 17102; 717/238-1673.

**AUG. 7-9:** TAN-MISLARK Regional Nursery & Garden Supply Show, George R. Brown Convention Center, Houston, Texas. Contact: Texas Association of Nurserymen, 7730 IH-35, Austin, TX 78745-6621; 512/280-5182.

**AUG. 20-21:** Pennsylvania Landscape and Nursery Trade Show and Conference, Expo Mart, Monroeville, Pa. Contact: Pennsylvania Nurserymen's Association, 1924 North Second St., Harrisburg, PA 17102; 717/238-1673.

**AUG. 28-30** 1992 Farwest Show, Oregon Convention Center, Portland. Contact: Oregon Association of Nurserymen, 2780 S.E. Harrison, Suite 102, Milwaukie, OR 97222; 503/653-8733.

**SEPT. 11-16** Responsible Industry for a Sound Environment Second Annual Conference, Washington, D.C. Contact: RISE, 1155 15th St., NW, Suite 900, Washington, D.C. 20005; 202/872-3860.

**SEPT. 20-23** Florida Turfgrass Association, 40th Annual Conference and Trade Show, Prime F. Osborn Convention Center, Jacksonville, Fla. Contact: Florida Turfgrass Association, 302 S. Graham Ave., Orlando, FL 32803-6399; 407/898-6721.

**SEPT. 21-24** Northwest Turfgrass Conference Exhibition, Sun River Lodge and Resort, Sun River, Ore. Contact: NTA, P.O. Box 1367, Olympia, WA 98507; 206/754-0825. ■

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USE READER SERVICE #36



## High Stakes

(continued from page 25)

ering, ChemLawn began courting other buyers. A short time later, Ecolab purchased the firm for about \$375 million. In the end, Ecolab paid a high price to learn lawn care services were not compatible to its primary service core of industrial cleaning and sanitizing, businesses bringing in annual sales in excess of \$1 billion.

Perhaps most ironic about the sale is the fact that Waste Management finally managed to get a hold of a portion of ChemLawn's assets. Waste Management holds a 28 percent interest in ServiceMaster Consumer Services, a relationship which has evolved in recent years. Waste Management does not have any day to day involvement in the firm.

After failing to acquire ChemLawn, Waste Management went after TruGreen, the industry's second largest lawn care provider. In businesslike fashion, Waste Management acquired both TruGreen and a variety of pest control firms between 1987-89. The relationship was short-lived, however, as Waste Management formed an accord in the fall of 1990 which spawned ServiceMaster Consumer Services Limited Partnership, an operating unit of ServiceMaster.

The partnership sent TruGreen and various pest control operations to ServiceMaster and contributed a piece of ServiceMaster's entire consumer services pie — including maid service, residential and commercial cleaning services and its home warranty business in addition to lawn care and pest control — to Waste Management.

Ecolab is now happily on the outside looking in. In its five-year stint with ChemLawn, the lawn care firm recorded losses totaling nearly \$56 million, including a \$34.5 million restructuring charge in 1989 and an operating profit in only one year, 1988, when it earned \$14 million.

Peak profitability at ChemLawn was realized in 1984 when the firm reported \$292 million in sales, a \$27 million operating profit and 1.5 million lawn care customer base. ChemLawn's residential customer base fell from 1.7 million at the end of 1987 to 1.3 million at the end of 1990.

**BRIGHT FUTURE?** Ecolab and ServiceMaster have in common the immenseness of their service operations. But that's where the similarity ends, as far as lawn maintenance is concerned.

Ecolab plans to divert its attention and purse strings to the international industrial cleaning business. ServiceMaster, on the

other hand, said it plans to spend a long time in the lawn care business.

"We think highly of the industry, feel comfortable in this business and plan to stay in this industry," Karnes said. "We're going to refocus back into the residential market and get back to the basics of lawn care. We will also continue in the commercial services market."

ServiceMaster hopes to take its TruGreen/ChemLawn team to the top.

"I think ServiceMaster Consumer Services represents itself as a leader in all the areas it performs services," Goldenberg said. "The lawn care operation under TruGreen was not the leader. This was an opportunity to provide that leadership in the lawn care market."

"There's a tremendous amount of field expertise in ChemLawn. Why Ecolab was not satisfied, I can't answer," he said.

"It's been tough in the lawn care business for the last few years. We've had to work harder and smarter. We've done a good job at TruGreen because of dedication."

While many industry insiders are pleased by TruGreen's success in the last several years, skeptics are leery of jumping on the ServiceMaster/TruGreen/ChemLawn bandwagon.

"I'm not convinced TruGreen and ServiceMaster can deliver simply because they're already in this business," Christian said. "TruGreen made some mistakes ChemLawn made even when it had a clear role model doing it wrong. But I'm hopeful it will be a good marriage and hopeful a new leader will emerge from the group." ■

The author is Editor of Lawn & Landscape Maintenance magazine.

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### LANDSCAPE SALES

Earthgro, the nation's leader in natural organic and composted landscape products, has two sales and technical support positions open in the New England and New Jersey/Philadelphia markets. Qualified individuals should have a technical/sales background with experience in the horticultural, landscape or golf course industry. Minimum of 3 to 5 years experience is mandatory, and a degree in agriculture, turf or horticulture will be helpful. Submit resumes to J.F. Wilkinson, Earthgro, P.O. Box 143, Lebanon, CT 06249.

...

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### Healthy Lawns

(continued from page 40)

Greensboro, N.C. "In other parts of the United States, such as Texas, bermuda-grass decline and virus diseases are a problem. In the transition zone, you've got a lot of fescue that's severely attacked by brown patch (Rhizoctonia)."

It takes a lot of customer money to chemically eradicate many of these problems. He recommends use of more tolerant turf varieties, cutting down on nitrogen and living with a little more brown turf than you might otherwise desire. Economics may thwart even preventive applications. But don't get creative with label directions. He recalled the lawn care operator who, armed with a quart of Banner, was using it at half the recommended lowest rate and stretching the interval from seven to 14 days. "He probably wasted his money."

Lawn maintenance contractors are becoming more savvy with turf management programs.

"We have put together a summer patch strategy for use with Bayleton and were surprised that a full third of our respondents were lawn care folks," said Steve Chaney, marketing manager for turf and ornamental products, agricultural division, Miles Inc., Kansas City, Kan. Different areas of the country require different disease strategies.

"In the Northeast it goes by calendar date, sometimes in midspring making an initial application, followed by applications about every 30 days. In the Midwest, soil temperatures of 65 degrees at the 2-inch depth determine the first application. You have to follow good agronomic practices. Keeping mowing height up, dethatching, core aeration, proper fertilization and proper watering are keys to reducing infection."

The bottom line in disease elimination: Don't wait until it's too late. ■

*The author is a free-lance writer based in Cleveland Heights, Ohio.*

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of

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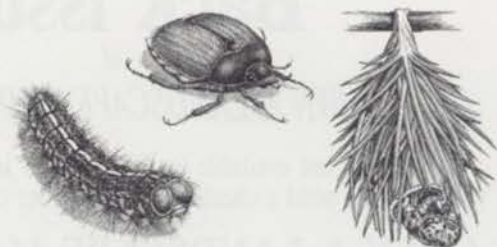
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