

Search on for better watering practices

By JAMES E. GUYETTE
Managing Editor

As last year's drought threatens to carry over into this season, policymakers at all levels of government are considering additional watering restrictions.

The turf industry, in response, is considering ways

to better economize its water use. Water will be a major focus of this year's Professional Lawn Care Association of America convention in Las Vegas.

California currently provides a capsule view of what changes could be in store. Chronic water shortages there have forced turf managers to apply alternative

technical and business techniques.

It has also motivated them to become organized in an effort to stem the tide of local and state water restrictions that could damage the economic health of the green industry.

At the recent California Landscape Contractors Association convention in

Long Beach, nine organizations officially united to form the Green Industry Council.

"The goals of it are to come together and develop a position on landscape water management and conservation," explains Scott McGilvray, vice president/owner of Jensen Corp. Landscape Con-



Donitz: Fight restrictions.

tractors in Cupertino. He is co-chair of the San Fran- See **WATER** Page 24

LAWN CARE INDUSTRY

Serving commercial mowing and chemical lawn care professionals

VOLUME 13 NUMBER 6

AN **EDGELL** PUBLICATION

JUNE 1989

Price increases, renovations helped offset drought

Revenues climbed, profits slipped and companies got a crash course in customer communication. Such were the ramifications of the protracted drought that scathed millions of lawns in 1988.

Chemical lawn care firms, whose customers are concentrated in the Midwest, billed 20 percent more in 1988 than 1987 through price increases and additional renovation and aeration services. Real customer growth was about 5 percent—similar to 1987 and significantly less than in previous

years.

Information was provided by 346 companies that responded to LAWN CARE INDUSTRY's annual State of the Industry Survey.

The survey's reported net 11.4 percent customer gain (Customer loss subtracted from customer gain) among LCOs is flawed. Many LCOs counted customers twice that canceled during the drought and later returned.

Additional revenues from price increases and mechanical services did not quite off-

See **SURVEY** Page 16

1989 STATE OF THE INDUSTRY



INSIDE

TODAY'S TURF

Prof. Houston Couch notes importance of pH when mixing fungicides with other materials; other tips. **10**

BIO-CONTROL

Column addresses new interest in alternative methods. **28**

CLASSIFIED

See what's for sale, miscellaneous items. **34**

Fast action mutes Nader report's impact

By JAMES E. GUYETTE
Managing Editor

Quick action by the lawn care industry helped reduce negative publicity following the release of a report critical of LCOs and the products they use.

However, the report—issued by the Ralph Nader group, Public Citizen's Congress Watch—probably will surface again as various politicians and anti-lawn care activists are expected to use it as ammunition for future legislative battles.

"This report is going to come back and haunt us in state governments this year," predicts Barry C. Troutman, Ph.D., director of education for the Professional Lawn Care Association of America.

He urges LCOs to get involved in efforts to stem the tide of overly restrictive legislative proposals that could result from the report.

"I think we need to get out there in the state govern-

ments," he says. "We need to get ahead of them (anti-lawn

care activists) and stay ahead See **ACTION** Page 33

LATE NEWS

Orkin buys Yearound Lawn Care

CALIFORNIA—Orkin Lawn Care has entered the West Coast with its purchase of Yearound Lawn Care from Western Farm Service, Inc. for an undisclosed sum. Orkin becomes the only lawn care firm besides ChemLawn to operate coast-to-coast.

Based in Ventura, Calif., Yearound has eight locations in the Seattle, Portland, Sacramento, Oakland, San Diego and Los Angeles areas. With annual sales in excess of \$5 million, Yearound was the West's largest lawn care firm.

All Yearound employees will remain with the company.

Yearound was formed in 1984 as a division of Western Farm Service, which was owned by the Shell Oil Co. Shell sold Western Farm to Texas businessman Herman T. Wilson early in 1989.

"We're an agricultural company," says Robert See **ORKIN** Page 33



Troutman: Get involved.

NEXT MONTH

***** ALL FOR STATE
157 00486132 10 93
PETE COOKINGHAM
LIBRARY W-121
USGA TURFGRASS INFO FILE STA
MICHIGAN STATE UNIV
EAST LANSING MI 48824-1048

Ryan keeps your business growing strong.



Ryan equipment is a great addition to your business. Because with the Ryan line, you can do more jobs faster at less cost. There's less downtime and more worktime. And the more work you can do, the more business you'll take on.

With competitive equipment, what you save on the purchase price you'll pay in replacement costs. But Ryan is designed to go the distance. So when you're considering Ryan, consider what Ryan can do for you in the long run.

The long-term value of the Lawnaire IV.®

The Lawnaire IV is the highest-quality, roll-type aerator on the market today. It combines speed and precision for fast and effective core aeration.

Self-propelled by a rugged 3-hp. industrial engine, the Lawnaire IV features a 38 lb. removable weight bar and a 55 lb. water drum, made of durable, corrosion-resistant polyethylene for tine penetration up to 2¾ inches. The 30 coring

tines penetrate the soil evenly every 3¾ inches across a 19-inch path. A convenient lift handle raises and lowers the machine for easy maneuverability in tight spots. A single clutch-throttle lever on the handlebar makes operation a snap.

Add Ryan's durable, low-maintenance, chain-drive design, and you've got an aerator that will keep you on the job and out of the repair shop for years to come.



Increase your customer base with the new Mataway® Overseeder.

Nothing is as versatile and effective for turf renovation as Ryan's new Mataway Overseeder. A powerful 10-hp. engine and extra wide 19-inch swath lets you dethatch or deep slice up to 10,000 square feet per hour. Snap out reels make it easy to change the type of blade and spacing you want. An Overseeder accessory can also be added, giving you the flexibility to power rake, overseed, or to do both at the

same time with a single piece of equipment.

It's a cost-effective way to stay one step ahead of your competition.

A full line of Ryan reliability.

The proven Ryan Ren-O-Thin® power rakes with interchangeable reels; the industry standard Jr. Sod Cutter with Tote Trailer; and the Tow Lawnaire for really large turf areas put you in a position for additional business. Because they're what you need to provide

professional quality turf care.

Prove it to yourself.

The best test of Ryan's reliability is in your own back yard. So ask the dealer nearest you for a free demonstration today. Or call toll-free: 1-800-228-4444.

RYAN®

BUILT TO LAST

6484 Cushman, OMC-Lincoln, P.O. Box 82409, Lincoln, NE 68501

© Outboard Marine Corporation, 1987. All rights reserved.

Circle No. 121 on Reader Inquiry Card

The National Pesticide Telecommunications Network, a pesticide information hotline available to consumers, can be a big help to lawn care firms.

All LawnMark offices have given the toll free number (1-800-858-7378) to customers who want third party information about pesticides. Questions get answered in a forthright, scientific manner.

"Once they give that number to people, oftentimes it's the end of the issue," says Marty Erbaugh, LawnMark president. LawnMark officials have called for information themselves to see how questions are answered.

The Council of State Governments will not recommend California's Proposition 65 in its 1989 publication for suggested state legislation.

The council, a joint agency that conducts research on state programs, voted not to include the controversial law.

The Chemical Specialty Manufacturers Association worked with industry and state officials to prevent inclusion of Prop. 65 in the CSG's Suggested State Legislation Guide.

Household pesticides are poorly regulated, according to

the May/June issue of *Harrowsmith*, an environmentalist magazine.

A feature article, "Bug Bomb Fallout," summarizes required testing that has been done for the 10 most widely used household pesticides; the products fare from bad to worse.

Don't expect environmentalist attacks on pesticides to subside. Eight years of frustration caused by President Reagan's indifference to environmental issues is just letting loose, warns Jack Engel, chairman of the Chemical Specialty Manufacturers Association. LCI

LAWN CARE INDUSTRY

Cover photo courtesy of Elanco Co.

ELLIOT MARAS
Editor

JAMES E. GUYETTE
Managing Editor

ROBERT EARLEY
Group Vice President

KIM SESSER
Production Manager

CAROL LANDSTROM
Production Supervisor

BRYAN VOLLMAN
Graphic Design

JOAN SCHUMACHER
Circulation Supervisor

GAIL PARENTEAU
Reader Service Manager

THEODORE C. MATHEWS
Promotion Director

JOHN PRESSELLO
Graphics Manager

MARKETING/SALES

Midwest Office:

JON MIDUCKI
(216) 243-8100 ext 422
FAX (216) 826-2832
National Sales Manager
7500 Old Oak Blvd.
Cleveland, OH 44130

MARSHA COSBY
GLORIA COSBY
(216) 243-8100
FAX (216) 826-2832
Regional Sales Managers
7500 Old Oak Blvd.
Cleveland, OH 44130

Southern Office:

DICK GORE
(404) 233-1817
FAX (404) 261-7022
3475 Lenox Road, N.E.,
Suite 665
Atlanta, GA 30326

Western Office:

BOB MIEROW
(206) 783-0549
FAX (206) 784-5545
1515 N.W. 51 Street
Seattle, WA 98107

Classified

DAWN NILSEN
(218) 723-9349
1 E. First St., Duluth, MN 55802

Please send advertising materials to:
LAWN CARE INDUSTRY
120 W. Second St.
Duluth, MN 55802
218-723-9192

EDGEHILL COMMUNICATIONS, INC. PUBLICATIONS

ROBERT L. EDGELL, Chairman
RICHARD MOELLER, President
LARS FLADMARK, Executive V. Pres
ARLAND HIRMAN, Vice Pres./Treasurer
THOMAS GRENEY, Senior V. Pres.
EZRA PINCUS, Senior Vice President
JOE BILDERBACH, Vice President
JAMES GHERNA, Vice President
GEORGE GLENN, Vice President
HARRY RAMALEY, Vice President

LCI ADVISORY COUNCIL



MARTY ERBAUGH
Erbaugh Corp.
Peninsula, OH

RON KUJAWA
KEI Enterprises
Cudahy, WI



A. J. POWELL
U. of Kentucky
Lexington, KY

JACK ROBERTSON
Robertson Lawn Care
Springfield, IL

LAWN CARE INDUSTRY (ISSN 0160-8042) is published monthly by Edgell Communications, Inc. Corporate and Editorial offices: 7500 Old Oak Boulevard, Cleveland, Ohio 44130. Advertising Offices: 7500 Old Oak Boulevard, Cleveland, Ohio 44130, 111 East Wacker Drive, Chicago, Illinois 60601 and 3091 Maple Drive, Atlanta, Georgia 30305. Accounting, Advertising Production and Circulation offices: 1 East First Street, Duluth, Minnesota 55802. Subscription rates: \$25 per year in the United States; \$50 per year in Canada. All other countries: \$100 per year. Single copies (pre-paid only): \$2.50 in the U.S.; \$5.00 in Canada; elsewhere \$10.00; add \$3.00 for shipping and handling per order. Office of publication: Edgell Communications, Inc., 1 East First Street, Duluth, Minnesota 55802. Second class postage paid at Duluth, Minnesota 55806. Copyright © 1989 by Edgell Communications, Inc. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher.

POSTMASTER: Send address changes to LAWN CARE INDUSTRY, P.O. Box 6200, Duluth, Minnesota 55806.

ABP BPA

THE ANDERSONS TurFact™ #15



Tee Time® insecticides root bugs out where they hide.

Our Tee Time granular insecticide and fertilizer combinations go right to the root of the insect pest problem. That's because we use special conditioning agents that absorb insecticides to keep them on the ground where they belong... not blowing away like dust in the wind.

We offer Tee Time in the widest variety of insecticide registrations available, with Diazinon®, Dursban®, Dylox® and Oftanol®. Formulated to work best for your application. Or prepackaged formulas in granular or liquid.

Our specialists can help you find the Tee Time solution to root out your particular insect pests. To find out more about Tee Time insecticide mixes, just call 1-800-225-ANDY, or contact your local Tee Time distributor. And get the latest TurFact from your partner.

Personal service. Consistently high product quality. Technical innovation. Proven performance. All backed by a genuine integrity that is all too uncommon in today's business world. That's The Andersons.

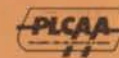
©1988 The Andersons

TurFact™ and Tee Time® are trademarks of The Andersons.

Diazinon® is a trademark of Ciba-Geigy.
Dursban® is a trademark of Dow Chemical Co.
Dylox® is a trademark of Mobay Corp., Agricultural Chemicals Division.
Oftanol® is a trademark of the Parent Company of Farbenfabriken Bayer GmbH, Leverkusen.

the professional's
partner™

The
Andersons



1-800-225-ANDY

Circle No. 103 on Reader Inquiry Card

Circle
the
Reader
Service
numbers
of those
items of
interest
to you.

For rapid response, use the peel-off label from the front cover

NAME _____

TITLE _____

FIRM _____ PLACE COVER LABEL HERE

ADDRESS _____ PRINT PHONE NUMBER BELOW

CITY _____

STATE _____ ZIP _____

PHONE () _____

101	116	131	146	161	176	191	206	221	236	251	266	281	296	311	326	341
102	117	132	147	162	177	192	207	222	237	252	267	282	297	312	327	342
103	118	133	148	163	178	193	208	223	238	253	268	283	298	313	328	343
104	119	134	149	164	179	194	209	224	239	254	269	284	299	314	329	344
105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345
106	121	136	151	166	181	196	211	226	241	256	271	286	301	316	331	346
107	122	137	152	167	182	197	212	227	242	257	272	287	302	317	332	347
108	123	138	153	168	183	198	213	228	243	258	273	288	303	318	333	348
109	124	139	154	169	184	199	214	229	244	259	274	289	304	319	334	349
110	125	140	155	170	185	200	215	230	245	260	275	290	305	320	335	350
111	126	141	156	171	186	201	216	231	246	261	276	291	306	321	336	351
112	127	142	157	172	187	202	217	232	247	262	277	292	307	322	337	352
113	128	143	158	173	188	203	218	233	248	263	278	293	308	323	338	353
114	129	144	159	174	189	204	219	234	249	264	279	294	309	324	339	354
115	130	145	160	175	190	205	220	235	250	265	280	295	310	325	340	355

LAWN CARE INDUSTRY

JUNE 1989

This card void after Aug. 15, 1989

1. CHECK BELOW YOUR PRIMARY BUSINESS AT THIS LOCATION:

A. LAWN CARE COMPANY: Read each choice before answering.

- 10 Chemical lawn care company
- 20 Mowing/management lawn care company and/or landscape contractor
- 30 Both chemical lawn care company and mowing/management lawn care company and/or landscape contractor

B. SUPPLIER

- 50 Chemical and equipment dealer and/or distributor

C. OTHER (specify) _____

2. WHAT IS YOUR TITLE? _____

I would like to receive (continue receiving)

LAWN CARE INDUSTRY each month: Yes No

Signature: _____ Date _____



BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 665 DULUTH, MINNESOTA

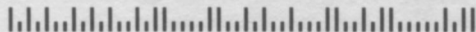
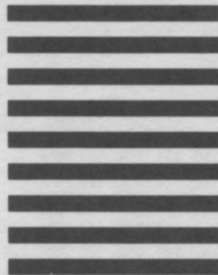
POSTAGE WILL BE PAID BY ADDRESSEE

READER SERVICE DEPARTMENT

LAWN CARE INDUSTRY

POST OFFICE BOX 6080
DULUTH, MINNESOTA 55806-9780

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



**GET
MORE
FACTS**

Nader's credibility not what it used to be

So much for Ralph Nader. That seemed to be the media's response to the Nader organization's alarmist report on lawn chemicals. Despite the cry for stricter regulation screaming off the report's pages, the national press gave it a big ho hum.

It did so partly because the report rehashed previously reported claims by other alarmist groups.

And partly because news directors felt they themselves had cried wolf when they reported on the cyanide-tainted Chilean grapes.

When I asked Tom Adamczyk, chief of the EPA's herbicide section, what he thought of the report, he first and foremost took issue with the claim that the EPA doesn't know much about the pesticides being used.

The EPA has taken products off the market for safety considerations, Adamczyk said, and will continue to do so where concern is warranted.

Adamczyk did, however, share the report's concern about misleading safety claims in lawn care advertising literature. LCOs should too.

If our advertising is misleading the public, let's not wait for Nader and company to demand change.

LCOs do not intentionally mislead consumers, as the Nader report implies. But from a layperson's perspective, many of the safety claims being made are too vague. The products are safe *when applied at recommended rates for recommended uses*. We need to say so.

One charge the Nader report makes is long overdue for a response—that lawn care serves only an aesthetic purpose.

Has the consumer watchdog no compassion for the millions who suffer from ragweed allergies? The countless accidents that could be prevented with thicker turf in play areas? The victims of Lyme disease caused by growing hordes of deer ticks?

Let's state our case, loud and clear. Consumers will listen to reason before they'll listen to Nader.

Nader came to fame in the late 1960s when he warned the public about the unsafe-at-any-speed Chevy Corvair. When he began releasing reports critical of nutrient levels in baby food, people tired of him.

"Ralph Nader? Great guy. Glad we have him. Can we talk about something else?"

I first began questioning Nader's credibility in hearing what he had to say about the

insurance crisis.

Regular readers of this magazine know that we are not fans of the insurance industry. But in trying to make sense out of that mess back in 1986, I couldn't believe what Nader was saying about it.

To recap, the insurance industry got itself in a jam by writing low premiums to generate fast capital, which it reinvested for high returns. When the returns soured, the insurers realized they were carrying lots of bad risks.



ELLIOT MARAS
EDITOR

The scoundrels then forced policyholders to pay for their losses by jacking up premiums.

Nader, lo and behold, somehow managed to scoop the nation's leading business journals. He reported that the

insurers were actually raking in big profits while crying poor, something that even the buyers' lobbyists weren't claiming.

Don't get me wrong. Consumer watchdogs like Nader provide a valuable public service. They help keep industry honest.

But industry needs to keep them honest, too.

The Professional Lawn Care Association of America did its part in providing LCOs with a package correcting the inaccurate and

incomplete information in the Nader group's report. LCOs would do well to hold on to the material.

The report isn't big news, but it isn't being discarded from newsroom files. It could come out at any time.

Not a lot of heed has been paid to Nader this time, and for good reason.

But LCOs must not hesitate to scrutinize their advertising and, more importantly, state the full value of the services they provide.

Elliot Maras



Beaver Creek Resort, Colorado

Get all the yellow nutsedge and none of the innocent bystanders.

Now you can really control yellow nutsedge from sod and ornamental grass* — without damaging the grass.

It's simple. Just put down BASAGRAN® herbicide from BASF. No need for you to be selective. BASAGRAN does that for you.

It's safe to grass and easy to use. And as effective against

yellow nutsedge as anything you can buy.

Always follow label directions.

*Do not use on golf course greens.



BASF Corporation
Chemicals Division

BASF

BASAGRAN is a registered trademark of BASF AG.
© 1988 BASF Corporation.

Circle No. 104 on Reader Inquiry Card

LCOs meet with EPA officials

WASHINGTON, D.C.—Lawn care industry leaders had a chance to share concerns with Environmental Protection Agency officials during a formal meeting near EPA headquarters.

More than 30 members of the newly-formed Council for Lawn Care Information, including LCOs, researchers, suppliers, formulators, distributors and trade press reps,

had an audience with 10 EPA officials. James F. Wilkinson, Ph.D., regulatory affairs director of the Professional Lawn Care Association of America, served as moderator.

The council was formed by the PLCAA to advise the association on issues, programs and standards for the association.

Issues discussed were:

● **Integrated Pest Management**—LCOs said IPM is a methodology within the whole arsenal of pest control, not the only methodology.

● **Pesticide data gathering**—Requirements under the reregistration process

might cause some manufacturers to think the process is not worthwhile for minor uses such as lawn care, some LCOs noted.

● **Agricultural worker protection standards**—EPA officials noted the standards could be extended to include lawn care workers. LCOs would like to see distinctions made between mixers, loaders and applicators.

● **Applicator certification**—Certification could be expanded to three levels, depending on product toxicity. At present, certification is required for restricted use materials only. LCI

Tru Green examines dead lawns

DES MOINES, IOWA—Tru Green Corp. officials suspect sabotage in the deaths of about 200 lawns in the Des Moines area.

A local Tru Green outlet had sprayed the lawns in October, and the dead grass became apparent this spring.

Authorities believe that the herbicide Arsenal, which is used to clear rights-of-way and sidewalk cracks, was applied.

State and federal laws prohibit the use of Arsenal on lawns.

"We feel strongly it was not an accident," said Tru Green Group Vice President Joseph Winland in an interview with *The Des Moines Register*.

He said the Atlanta, Ga.-based company has not experienced a previous problem of this scope. "It's something beyond our foggiest imaginations."

At presstime soil tests were being conducted to determine if Arsenal is indeed the culprit. Authorities said the incident has not created a health hazard.

Tru Green planned to have the victimized lawns reseeded or resodded by June 1. The company estimated that the work would cost \$500,000.

"We've done a complete investigation as to the extent of the problem," Winland said. "Now the thing remaining is to go to the customers and re-establish their lawns." LCI



Handle your grub situation fast, before things get really ugly.

At the very first sign of grub damage, apply DYLOX® insecticide. Nothing kills all species of white grubs faster. Within hours, the grubs are dying and the turf is recovering. When grubs threaten, act fast.

Use DYLOX. And turn an ugly little problem into a lot of beautiful turf.

For more information, contact Mobay Corporation, Specialty Products Group, Box 4913, Kansas City, MO 64120.

Dylox

Mobay Corporation
A Bayer USA INC. COMPANY



Wilhelm customizes program

DENVER—The B.D. Wilhelm Co. has instituted a more customized approach to its lawn care program, one that is designed to enhance plant health.

This can involve additional aeration, more spot spraying, or additional soil enhancements. Properties are inspected regularly.

Customers' lawns may not be the greenest in Denver, but hopefully, they're the healthiest. That's the philosophy behind the company's Yard Life program, according to Duane Moll, manager of B.D. Wilhelm's lawn care division.

Moll spoke on "integrated turfgrass management" at the first annual conference and trade show of the Colorado Association of Lawn Care Professionals.

"I will have no qualms about a two- or three-time aeration instead of or in conjunction with fertilization," Moll said.

Technician training is the most important part of the program, he said. All technicians receive instruction on the importance water and air play in plant health. LCI



Moll: Inspections vital.

Homeowner posting quashed in Maryland

By JAMES E. GUYETTE
Managing Editor

MARYLAND—A proposed law requiring Maryland retailers to provide warning signs with household pesticide products was quashed with the help of the Chemical Specialty Manufacturers Association.

The intent of the law, homeowner posting, has the standing support of the Professional Lawn Care Association of America. A homeowner posting law was passed in Connecticut with the support of LCOs.

The CSMA and retailers' organizations lobbied against the Maryland bill, which was sent back to committee. Maryland statehouse observers doubt that it will be re-introduced.

PLCAA believes that if LCOs have to post signs, homeowners should, too.

"On this issue we'd be at odds with them (CSMA)," says James F. Wilkinson, Ph.D., PLCAA's director of regulatory and environmental affairs.

The CSMA recently established a residential and commercial services division to lobby on behalf of LCOs and structural pest control firms.

CSMA also represents retailers and manufacturers.

CSMA decided to oppose the bill because its negative impact on retailers and manufacturers would be greater than any positive factors for LCOs, said Mike Thompson, associate director of legislative affairs.

"We don't need these kinds of disagreements within this industry," said Thompson.

In Maryland, merchants and chemical manufacturers objected to the proposal, saying that it did not adequately define who, exactly, a retailer is—nor did it clearly state which materials would be covered.

It also was unclear whether homeowners would have to display the warning signs in their yards.

"I'm not sure what all the consequences of it are," said Ennis Dodd, extension agent for urban agriculture in Montgomery County.

A source familiar with the legislation feared that "7-11 would have had to have signs if they had bug spray on their shelves."

It was believed that some stores would need a pile of signs at each checkout station.

The warning sign proposal originated in Montgomery County, an area known for its environmental activists. LCI



With thanks: Dow's Rob Peterson, left, presents the \$10,000 to PLCAA board members Robert Parmley, president, and Russ Frith, immediate past president.

Dow gives to PLCAA issues fund

MIDLAND, MICH.—The Dow Chemical Co. has given the Professional Lawn Care Association of America \$10,000 to counter negative publicity. The donation was made to PLCAA's issues management fund.

"The objective of the fund is to help provide the money needed to counter the negative publicity that has plagued chemical lawn care for the past

few years," says Rob Peterson, turf product marketing manager for Dow and a PLCAA board member.

The PLCAA board of directors has approved the following "issues management" projects for 1989:

- A public relations network consisting of 60 members to promote the industry at the local level;

- A state government affairs effort;

- A national issues program spearheaded by James F. Wilkinson, Ph.D., PLCAA director of regulatory and environmental affairs, in conjunction with federal agencies. LCI

MAKE MORE PROFIT AT EVERY STOP WITH CHIPCO® 26019.

FUNGICIDE

CHIPCO 26019 fungicide stops more lawn diseases... for more days... for more satisfied customers.

In today's lawn care industry, you've got two ways to make more profit. Go out and get more customers. Or get more business from the customers you already have. CHIPCO 26019 fungicide helps you do both.

CHIPCO 26019 fungicide controls most major lawn diseases, including Helminthosporium Leaf Spot and Melting Out, Fusarium Blight, Brown Patch, Dollar Spot and Red Thread. And unlike some other fungicides, CHIPCO 26019 fungicide stops these deadly diseases before they get started.

Better yet, CHIPCO 26019 fungicide provides the month-long protection it takes to get you from one scheduled round to the next. That cuts down on customer complaints and costly call-backs.

You'll also like the fact that CHIPCO 26019 fungicide now comes in a convenient flowable formulation as well as wettable powder. Plus, CHIPCO 26019 fungicide is low in toxicity, for added protection to applicators and homeowners.


So don't stop with just feeding and weeding your customers' lawns. Discover how better disease control can add up to bigger profits with CHIPCO 26019 fungicide.

Rhone-Poulenc Ag Company, CHIPCO Department, P.O. Box 12014, Research Triangle Park, NC 27709.



CHIPCO® 26019

FUNGICIDE

 RHONE-POULENC AG COMPANY

Please read label carefully and use only as directed.
CHIPCO® is a registered trademark of Rhone-Poulenc.

Circle No. 123 on Reader Inquiry Card

Material selection crucial when mixing fungicides

By JAMES E. GUYETTE
Managing Editor

RICHMOND, VA.—Keeping an eye on pH levels and selecting the correct materials is essential when fungicide mixes are being prepared, according to Prof. Houston B. Couch, Ph.D., of Virginia Polytechnic Institute and State University.

"The fungicide is quite commonly used as part of a mixture," says Couch, who spoke at the Virginia Turfgrass Conference in Richmond, Va.

Two or more pesticides, a pesticide and a fertilizer, or a pesticide and an adjuvant are sometimes combined in a tank to save time and money.

The mixing techniques used are often faulty, he points out. "Looking at how these chemicals are used across the board—the kindest word would be 'primitive.'"

A mixing blunder can either render the product useless, or else "you can create the world's best herbicide."

He jokes that in the past, fungicides "killed the fungus by killing the grass and starving it to death."

Preparation skills have improved, but, "there's still a lot of ways to misuse fungicides."

Compatibility with other materials is a key concern.

"When you put them together they become pussy cats or Ferdinand the Bull. When we mix all these things together we wind up with some odd things happening. Find out from your manufacturer's rep how stable these products are."

When combining products, "the only completely reliable method of determining whether or not a specific pesticide can be tank mixed is to check with either the manufacturer of the pesticide or the company that markets the adjuvant. If they are unable to supply this information, then under no circumstances should the mixture be used."

(An adjuvant is anything used in combination with a pesticide to increase its effectiveness. Thickeners, wetting agents, colorants, spreader-stickers, acidifiers and

spreader-extenders are all adjuvants.)

Incompatibility can strike on several fronts.

Physical incompatibility results in an unstable mixture. It can create excessive foaming and/or sediment. "You mix two powders together and you get rocks on the bottom of your tank."

Couch tells of a lawn care company employee in a large Virginia city who mixed incompatible materials in his tank: "It foamed all over the rig and all over Norfolk—he's

now driving a bus in Richmond."

All non-liquid fungicides, whether they are used in tank mixtures or not, should first be added to a small quantity of water, thoroughly mixed, and the preparation then poured into the tank. "This procedure will ensure a more uniform dispersal of the material throughout the main body of water," he says.

Chemical incompatibility is a reaction that results in loss of toxicity to the target pest. "As a general rule,

compounds that cause the preparation to either be alkaline or highly acidic should not be mixed with fungicides.

"Some fungicides are unstable in alkaline and/or strongly acidic preparations. This means that fertilizers that cause the pH of the tank preparation to become either alkaline or highly acidic should never be mixed with fungicides."

When pondering adjuvants, both the adjuvant maker and pesticide manufacturer should be contacted to make sure the

products are compatible.

Phytotoxic incompatibility results in the creation of a product that damages the plants. Such damage may not become apparent until several days or weeks after the application.

"Even when newly innovated tank mixes are tried on a small scale and no phytotoxicity is observed, one cannot be absolutely certain that injury will not occur at the time when the entire stand is sprayed," Couch warns.

The reason for this is that

REMEMBER THE Roundup®



Along driveways

Edging along fencelines

Along flower beds and planters



Couch: Keep checking the pH.

there are a number of factors involved. Air temperature at the time of the spraying, plant genotype, degree of material dilution, level of plant nutrition and degree of soil moisture stress can all play a role.

Recent research has shown that tank combinations of two or more fungicides at less than adequate dosages will not give the same level of disease control as either of the components used alone at its full label rate, Couch says.

"When conditions are conducive to the development of the target disease, tank mixes

of fungicides at less than low label rates will permit a rapid and destructive buildup of the disease," he explains.

"Therefore, in the preparation of a tank mixture of more than one fungicide, it is important to use the manufacturers' label rate for each entry."

Couch emphasizes that tank agitation should be continuous.

"When mixing the materials in the sprayer, put the water in first, then add each component one at a time and allow it to become thoroughly dispersed throughout the tank before adding the next item.

"The fully dispersed mixture should be applied soon

after preparation. This will reduce the likelihood of hydrolysis of the pesticides, and also prevent possible separation, precipitation or caking in the tank," he says.

(Hydrolysis is defined as an irreversible chemical reaction in which the hydroxyl ions in the water interact with the pesticide and break it down into a non-toxic state.)

"What you do is spray as soon as you mix."

Couch says a good rule of thumb to follow is that "when you mix a fungicide in your tank the mixer should be on." If you have to stop for some reason, "leave your tank on until it's empty."

Monitoring pH levels should be standard operating procedure, Couch urges. "This means that owning a pH meter is not a luxury. It is a must if the pesticide spray program is to be carried out properly."

The pH of the water used to prepare the material should be checked weekly.

"This information will enable the operator to assess the water's potential for hydrolyzing the various spray materials," Couch explains.

"The most important pH reading, however, is the one that's made on the preparation itself. The reason for this is that some formulations of pesticides contain buffering

agents that offset the alkalinity that exists in water in some areas."

He adds, "The decision on whether to acidify the preparation, then, should be made on the pH reading of the spray mixture, not the pH of the water alone."

If you need to add acid, Couch says you should use a commercially prepared adjuvant, rather than using muriatic acid.

Throughout North America, a pH range of 7.5 to 8.5 is common in untreated water, according to Couch. Treated water in urban areas can have a pH of 9 to 9.5.

"The pH of the spray solution can have a significant effect on the performance of certain pesticides," says Couch. One company markets a pen-like pH meter for about \$88. Each turf manager should have one, he maintains. "It's a nifty little gizmo." LCI

Tru Green cautioned in drift case

KALAMAZOO, MICH.—State authorities have directed a Kalamazoo, Mich. Tru Green branch to beef up its supervisory tactics following an incident involving insecticide drift.

"Too windy conditions" resulted in a passing vehicle being sprayed during an application, said Robert L. Mesecher, program manager for enforcement in the Michigan Pesticide and Plant Pest Management Division.

Also, "We didn't feel there was proper supervision of the applicator in regard to protective clothing," he said.

"He was not wearing anything other than a normal work uniform."


Mesecher commented on the employee's failure to wear gloves as required by the label: "It's a minor thing, but that's what pesticide labels are for. Those labels aren't put on there to bother the applicator; they're put on there to protect them."

The company had supplied all the required safety gear on the vehicle, but the applicator failed to wear it, according to Kevin J. Vizard, Tru Green division manager. "It was available to him on his truck."

Tru Green was to begin preparing additional supervisory techniques to prevent other incidents, Mesecher said. "We'd like to see what plan they have for that."

"It's a tough situation," said Vizard, who added that it is often difficult to ensure that employees follow company rules.

Vizard pointed out that the firm was not fined, and that the hearing process "was very informal." LCI



Around tree bases

Along sidewalk cracks

Now's the time to Remember **ROUNDUP®** herbicide for all kinds of jobs around the customer's lawn. Remember that ROUNDUP controls a broad spectrum of weeds, roots-and-all. With no time wasted on retreatment, you'll have more time for new business.

Remember that ROUNDUP stays where you put it...so there's no washing or leaching to harm desirable vegetation. And Remember that ROUNDUP is biodegradable and won't build up

in the soil. That fact gives you the flexibility to use ROUNDUP just about anywhere a trimming, edging or weed problem pops up. Spray with confidence — Remember the ROUNDUP.

Always read and follow the label for Roundup® herbicide. Roundup® is a registered trademark of Monsanto Company. © Monsanto Company 1989. RIP-9-101 DR

Monsanto

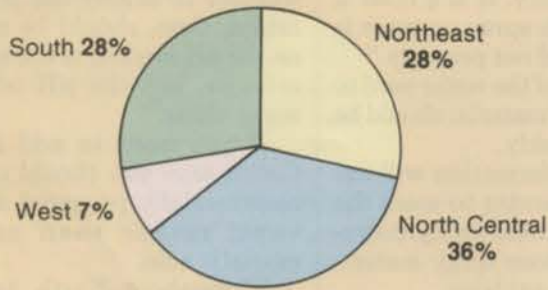
For complete information on the many benefits of trimming and edging with Roundup, call

1-800-225-2883

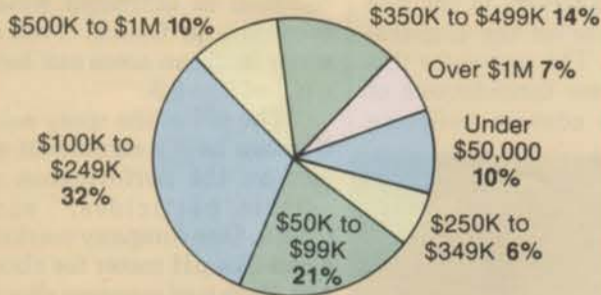
Circle No. 119 on Reader Inquiry Card

Chemical Lawn Care Firms 162 companies

Regional Breakdown:



Revenue Breakdown:



Operating Averages

Labor	27.8%
Fuel	4.36
Fertilizers & Pesticides	19.3
Advertising	6.1
Equipment purchase & maintenance	6.8
Pre-tax profit	8.7
Insurance	6.2
Other	20

Services Provided

	1988	1987
Mowing/trimming	12%	10.8%
Ornamental & shrub care	48	49
Chemical weed control	100	100
Chemical insect control	98	NA
Disease control	87	79.6
Tree care	40	35.6
Dethatching/aeration	82	77
Renovation	57	45.2
Sodding	16	13.3
Irrigation services	9	7
Structural pest control	9	11.4
Integrated pest mgmt.	22	NA
Overseeding	71	NA
Snow removal	14	NA

Chief Executive Officer's Salary

	1988	1987
Northeast	\$52,800	\$38,800
North Central	39,000	32,700
South	46,300	35,500
West	44,250	35,500

Technician's Hourly Labor Cost

	1988	1987
Northeast	\$8.75	\$8.34
North Central	7.13	6.74
South	7.80	6.71
West	7.57	6.75

Benefits Provided Employees

	1988	1987
Paid holidays	82%	74%
Sick leave	54	45
Paid vacation	74	67
Overtime pay	61	59
Life insurance	43	44
Medical coverage	72	65
Dental coverage	16	19
Education/training	55	74
Retirement plan	9	NA

Use a Computer

	1988	1987
	75%	68.5%

Have a Full-Time 2-year or 4-year Agronomy or Horticulture grad:

Companies \$349,000 and over	65%
All companies	42%

Have a Formal Training Program:

Companies Under \$50,000	50%
All companies	69%

Number of Years in Business:

9.5

Customer Loss in 1988:

14%

Customer Gain in 1988:

25.4%

Annual Revenue for Chemical Lawn Care:

	1988	1987
Average:	\$440,000	\$366,700
Projection to LCI readership: (Adjusted for sales for large firms)	\$1.8 billion	\$1.5 billion

Annual Revenue for Mowing/Management:

	1988	1987
Average	\$7,500	\$6,797
Projection to LCI readership	\$29,250,000	\$26,508,300

Number of Single-family Residential Accounts:

	1988	1987
Average:	2128	1,903
Projection to LCI readership:	8.3 million	7.4 million

Number of Commercial Accounts:

	1988	1987
Average:	134	108
Projection to LCI readership:	522,600	421,200

Advertising Tools Used:

Telemarketing	35%	Newspaper ads	48%
Direct Mail	68	Advertising & PR Counselors	5
Billboards	8	Radio Ads	25
Yellow Pages	86	TV ads	17

Expanding into New Services in 1989:

44%

Services:

Ornamental Care	26%	Irrigation	7%
Mowing	19	Ornamental Installation	6
Overseeding	19		

Issues of Greatest Concern:

1	Insurance Costs
2	Liability Costs
3	Gov't. Regulations
4	Customer Retention

Liability Insurance Increased in 1988:

58%

Average increase:	30%
-------------------	-----

More Customers Are Asking About Pesticide Safety:

	1988	1987
	44%	58.8%

Use Low-Volume Spray Technology:

	1988	1987
	57%	66%

Types of Chemical Applications:

	1988	1987
Liquid only	17%	13%
Dry only	15	11.5
Both	68	75

Plan to Invest in Natural Pest Control Products in 1989:

21%

Plan to Invest in "Organic" Soil Stimulants in 1989:

36%

Raised Prices in 1988:

54%

Will Raise Prices in 1989:

73%

Plan to Target More Commercial, Multi-family and/or Industrial Accounts:

58%

Area in Greatest Need of Assistance

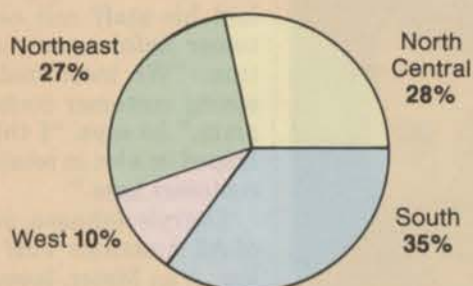
Business Management-	30%
Technical (Agronomic/Mechanical)-	27
Both-	42

Most Common Complaints from Customers:

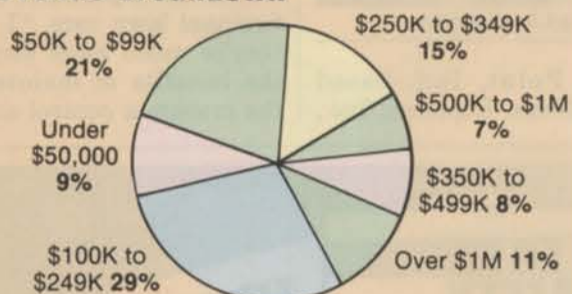
Poor weed control	72%	Prices too high	4%
Poor insect control	9	Tardy service	3
Poor disease control	9	Poor lawn color	3

Mowing/Management Firms 184 Companies

Regional Breakdown:



Revenue Breakdown



Operating Averages

Labor	38.24%
Fuel	6.82
Fertilizers & Pesticides	5.59
Advertising	2.14
Equipment purchase & maintenance	12.7
Pre-tax profit	12.35
Insurance	8.21
Other	13.95

Services Provided

	1988	1987
Mowing/trimming	100%	100%
Ornamental & shrub care	92	89
Chemical weed control	77	55.3
Chemical insect control	60	NA
Disease control	50	48.8
Tree care	41	41
Dethatching/aeration	81	79
Renovation	79	71.4
Sodding	83	67
Irrigation services	38	33.9
Structural pest control	7	3
Integrated pest mgmt.	16	NA
Overseeding	69	NA
Snow removal	54	NA

Chief Executive Officer's Salary

	1988	1987
Northeast	\$35,400	\$33,300
North Central	40,200	28,600
South	42,500	35,900
West	34,900	35,500

Technician's Hourly Labor Cost

	1988	1987
Northeast	\$9.45	\$6.45
North Central	7.74	6.34
South	6.95	6.47
West	7.98	7.09

Benefits Provided Employees

	1988	1987
Paid holidays	72%	65.7%
Sick leave	43	28.3
Paid vacation	72	90
Overtime pay	78	73.7
Life insurance	37	29.6
Medical coverage	67	52
Dental coverage	19	13
Education/training	49	53.3
Retirement plan	12	NA

Use a Computer

	1988	1987
	55%	40%

Have a Full-Time 2-year or 4-year Agronomy or Horticulture grad:

Companies \$500,000 and over	74%
All companies	42%

Have a Formal Training Program:

Companies \$500,000 and over	76%
All companies	44%

Number of Years in Business:

12.2

Customer Loss in 1988:

4.16%

Customer Gain in 1988:

14.5%

Annual Revenue for Chemical Lawn Care:

	1988	1987
Average:	\$20,000	\$8,594
Projection to LCI readership: (Adjusted for sales for large firms)	\$186 million	\$80 million

Annual Revenue for Mowing/Management:

	1988	1987
Average:	\$232,630	\$176,122
Projection to LCI readership: (9300 firms)	\$2.2 billion	\$1.8 billion

Number of Single-family Residential Accounts:

	1988	1987
Average:	62.6	115
Projection to LCI readership:	582,180	1.07 million

Number of Commercial Accounts:

	1988	1987
Average:	42	37
Projection to LCI readership:	390,600	344,100

Advertising Tools Used:

Telemarketing	7%	Newspaper ads	37%
Direct Mail	37	Advertising & PR Counselors	7
Billboards	1	Radio Ads	5
Yellow Pages	72	TV ads	1

Expanding into New Services in 1989:

40%

Services:

Irrigation	35%	Garden center	6%
Ornamental installation	18	Tree care	3
Overseeding	18	Lawn care	3
Installation	9	Structural pest control	3
Nursery	6		

Issues of Greatest Concern:

1	Insurance Costs
2	Liability Costs
3	Vehicle Costs
4	Unethical Competitors

Liability Insurance Increased in 1988:

65%

Average increase:	19%
-------------------	-----

More Customers Are Asking About Pesticide Safety:

	1988	1987
	44%	45%

Use Low-Volume Spray Technology:

	1988	1987
	50%	45.6%

Types of Chemical Applications:

	1988	1987
Liquid only	8%	7.5%
Dry only	37	39
Both	55	53

Plan to Invest in Natural Pest Control Products in 1989:

30%

Plan to Invest in "Organic" Soil Stimulants in 1989:

43%

Raised Prices in 1988:

72%

Will Raise Prices in 1989:

76%

Area in Greatest Need of Assistance

Business Management-	25%
Technical (Agronomic/Mechanical)-	25
Both:	50

Most Common Complaints from Customers:

Prices too High	56%	Poor communication	7%
Service poor	19	Poor disease control	4
Poor weed control	15		

Drought underscored need for customer contact

By **ELLIOT MARAS**
Editor

Looking back on what was the most confusing and nerve-wracking year to date, LCOs say they have learned something—the significance of ongoing customer communication.

With little new customer potential in most of the major markets, LCOs could not afford their customarily high turnover rates to begin with in 1988. When the hot, dry weather hit in mid-May, many knew it was time to do more than they had to keep existing customers.

Many LCOs saw to it that every customer was called at least once. Some customers were called four or five times throughout the season.

Those LCOs that reported the best results credit their success to customer communication—not the windfall of renovations that followed the drought.

"It takes quite a labor force to do a bunch of it (renovation)," notes Doug Baker, president of Dayton, Ohio-based Leisure Lawn, Inc. Besides, profit on renovations is much less than chemical applications.

The drought was most severe in the Midwest, where high temperatures and little rain lasted from mid-May to late July. Companies were slightly affected in the Northeast, and almost unaffected in the South and West.

"For people in the eastern corridor, we've had several (minor droughts)," says Russ Frith, president of Matawan, N.J.-based Lawn Doctor, Inc.

But the bulk of the chemical lawn care firms, being in the Midwest, were affected.

Most Midwest firms had a third of their customers skip the third round, resulting in a 7 percent revenue loss.

Even companies that took on 100 times the normal amount of renovation work did not make up for lost revenue in the severely afflicted regions. Such was the case at Kapp's Green Lawn, Munster, Ind., where nearly a fifth of the customers skipped a round.

"What they (LCOs) got back in volume covered all the fixed expenses," says lawn care business consultant Ed

Wandtke of Columbus, Ohio. "We may have brought in the same gross dollars, or grown them, but the profit volume (on renovations) was between a half and a third what it would have been on chemical lawn care."

Barefoot Grass Lawn Service, Inc. focused on trying to convince customers not to skip service rounds, says President Pat Norton. The Worthington, Ohio-based firm had its best year ever.

"We were impacted by the drought, but not that dramati-



Baker: Renovation helped.



Frith: Used to droughts.



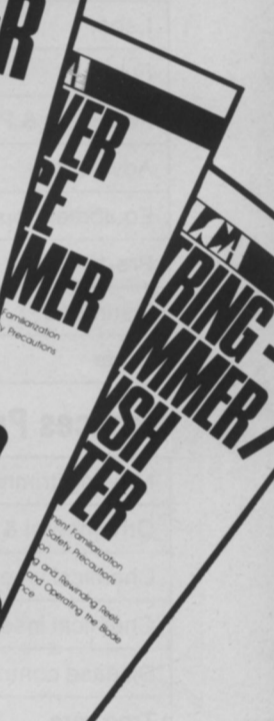
ically," says Norton. Tom Jessen, president of

Crown Point, Ind.-based Perma Green Supreme, Inc.,

was one of many LCOs who had his staff call each customer before every application. "We instituted a very strong customer contact program," he says. "I think that helped us a lot in retaining the customer base."

Darryle Johnson, president of All American Turf Beauty, Inc., Van Meter, Iowa, thinks the drought helped customers realize the importance of professional lawn care. "I think they're much more aware of the benefits of maintaining the crabgrass control and in-

MAINTENANCE TRAINING VIDEO SERIES

The Associated Landscape Contractors of America is proud to announce the availability of the Maintenance Safety Video Series. These maintenance training programs are designed to promote sound safety procedures. The videos were produced in an attempt to help reduce the growing number of unnecessary accidents occurring each year among power equipment operators. The programs provide basic training in the care and preventive maintenance integral to equipment dependability and longevity.

The seven individual programs consist of reference guides, with the exception of "Safety -- Everyone's Concern" -- and all programs have a Program Retention Test. The seven programs are:

- Safety -- Everyone's Concern
- Stringtrimmer/Brushcutter
- Trim Mower
- Power Hedgetrimmer
- Mid Mower
- Backpack Power Blower
- Power Edger

These in-depth programs cover essential points such as: equipment familiarization, proper safety precautions, machinery operation, capabilities and maintenance, as well as injury prevention, and basic yet effective accident prevention.

PRICES:	Set of 7 Videos	Individual Videos
Members	\$400	\$65
Non-Members	\$600	\$95

ORDER FORM

___ YES, I would like to order the set of Maintenance Training Video Series consisting of 7 programs, reference guides and employee retention tests.

___ Number of Sets ordered @ _____ = \$ _____

Add 5% for shipping & handling + \$ _____

TOTAL OF ORDER = \$ _____

___ YES, I would like to order the following videos:

1. _____
2. _____
3. _____
4. _____

___ Number of Videos ordered @ _____ = \$ _____

Add 5% for shipping & handling + \$ _____

TOTAL OF ORDER = \$ _____

NAME: _____

COMPANY: _____

STREET ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

TELEPHONE: (_____) _____

___ I am paying by check made payable to "ALCA" or

___ Charge this order to my: ___ Mastercard or ___ Visa

Account # _____

Expiration Date: _____

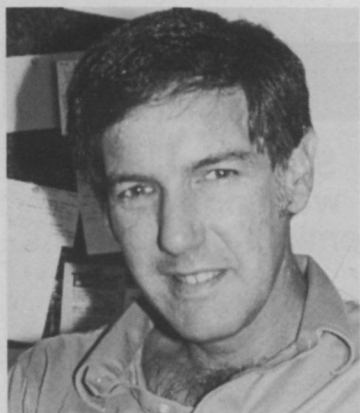
Signature: _____

Mail this form with payment to:

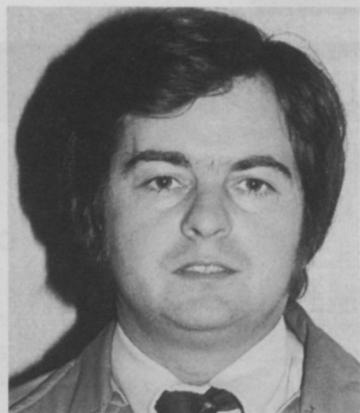
ALCA
405 N. Washington Street, #104
Falls Church, VA 22046
(703) 241-4004



Erbaugh: Contracts help.



Cohen: West isn't ready.



Berry: No chemicals.

sect control during the drought," he says.

Johnson's company recovered lost revenues with extra fertilizations, renovations

and aerations in the fall. "It surprised us because it looked pretty weak in July and August," he says.

"There was so much aware-

ness about it (the drought) that people listened (to their LCO)," says Leisure Lawn's Baker.

Contracts helped

LCOs who are serious about better customer communication will consider customer contracts. Companies that are using contracts say they make for more realistic customer expectations.

"It forces the sales person to be more detailed in closing the sale," says J. Martin Erbaugh, president of Akron, Ohio-based Erbaugh Corp. He says service calls dropped by as much as 20 percent in 1988.

Orkin Lawn Care, based in

Atlanta, Ga., has added customer service reps in addition to having customer contracts. "I think the industry realized the customer turnover had to be stopped," says Gordon Crenshaw, vice president.

Some bad apples

Quality of service did not improve uniformly, however.

Dave Murphy, president of the Professional Lawn Care Association of Mid-America, says lowballing was common in the Kansas City area. "We've got an awful lot to be embarrassed about," says Murphy, who is president of Green Valley Co., Shawnee Mission, Kansas.

Customers appeared to be more concerned about their lawns' color in 1988 than what harm pesticides might pose.

Less pesticide phobia

LCOs reported fewer questions about pesticide risks in 1988 than in 1987 or 1986, and there was less state legislation pertaining to pesticides.

The Davey Tree Expert Co., which implemented a reduced pesticide program nationwide in 1988, didn't get as great a response as they hoped for, notes Ken Celmer, vice president of operations.

"We're going out of our way to do it (reduce pesticides)," he says. "It's too bad it wasn't recognized." He says response to the program was best in the Northeast, where environmental concerns are strongest.

While 21 percent of the LCOs expressed interest in buying natural pesticide products in 1989, the concern is not immediate.

"I really don't think there's that much concern (about pesticide safety) in the Chicago market," says Bob Kapp, owner of Kapp's Green Lawn.

"It seemed like they (the media) let up a little bit (on pesticides)," says Tom Hofer, president of Naperville, Ill.-based Spring Green Lawn Care Corp.

South keeps growing

New customer growth was greatest in the South in 1988, followed by the Northeast. Little was reported in the Midwest, which is saturated, or the West, where landscape gardeners continue to dominate the market.

"Not a lot of people yet have figured out all the nuances of doing business in the western region," says Consultant Wandtke.

Bob Cohen, president of Tarzana, Calif.-based The Green Scene, Inc., concurs. "We find it very difficult to sustain growth in maintenance (lawn care) because of the popularity of maintenance gardeners in southern California. The people are not 'lawn care' people out here."

Cohen points out that the immigrant Mexican population includes a large number of landscape gardeners.

Contractors more competitive

LCOs posted about 24 percent growth in the commercial sector in 1988. Concurrently, mowing/management firms increased their chemical application revenues by more than 100 percent.

This marks a dramatic switch from 1987, when mowing/management firms reported using less chemicals than in 1986. In 1987, many cited concerns about liabilities associated with pesticide use.

"They did get away from it for a while because they saw the liabilities and it was easier to use a lawn care service,"

BOOKSTORE

Instructional and technical material designed to aid you in your work.

- 010 - ADVANCES IN TURFGRASS PATHOLOGY \$27.95
- 665 - ARBORICULTURE: THE CARE OF TREES, SHRUBS AND VINES IN THE LANDSCAPE \$56.00
- 220 - CONTROLLING TURFGRASS PESTS \$36.00
- 345 - COST DATA FOR LANDSCAPE CONSTRUCTION 1989 \$35.00
- 410 - DISEASES & PESTS OF ORNAMENTAL PLANTS \$37.95
- 800 - THE GOLF COURSE \$35.00
- 510 - HORTUS THIRD \$135.00
- 415 - INNOVATIVE APPROACHES TO PLANT DISEASE CONTROL \$52.50
- 690 - INSECTS THAT FEED ON TREES & SHRUBS \$49.95
- 300 - LANDSCAPE DESIGN: A PRACTICAL APPROACH \$41.00
- 305 - LANDSCAPE MANAGEMENT \$29.95
- 370 - LANDSCAPE OPERATIONS: MANAGEMENT, METHODS & MATERIALS \$38.00
- 365 - LANDSCAPE PLANTS IN DESIGN \$58.95
- 375 - RESIDENTIAL LANDSCAPES \$43.00
- 230 - LAWNS \$25.95
- 235 - LAWN CARE: A HANDBOOK FOR PROFESSIONALS \$36.00

- 810 - LIABILITY AND LAW IN RECREATION, PARKS AND SPORTS \$33.00
- 645 - MANAGEMENT OF TURFGRASS DISEASES \$26.70
- 400 - NATIVE TREES, SHRUBS, AND VINES FOR URBAN AND RURAL AMERICA \$79.95
- 500 - 1989 PESTICIDE DIRECTORY \$75.00
- 125 - SCIENTIFIC GUIDE TO PEST CONTROL OPERATIONS \$49.95 Domestic All Others \$60.00
- 720 - SHRUB IDENTIFICATION \$12.95
- 755 - TREE DETAILING \$32.95
- 750 - TREE IDENTIFICATION \$14.95
- 760 - TREE MAINTENANCE \$49.50
- 225 - TURFGRASS MANAGEMENT \$42.00
- 640 - TURF IRRIGATION MANUAL \$27.25
- 615 - TURF MANAGEMENT FOR GOLF COURSES \$52.75
- 620 - TURF MANAGEMENT HANDBOOK \$25.25
- 110 - TURF MANAGERS' HANDBOOK \$32.95
- 630 - TURFGRASS SCIENCE AND CULTURE \$42.00
- 405 - WOODY ORNAMENTALS \$32.50

INSTRUCTIONAL VIDEOS

- 01 - PROFESSIONAL SOD LAYING TECHNIQUES \$85.00
- 02 - PLANTING AND STAKING LANDSCAPE TREES \$85.00
- 03 - SUCCESS WITH BEDDING PLANTS \$85.00
- 04 - WORKING WITH PESTICIDES 2 videos \$143.95 total
- 05 - PROFESSIONAL TURF MANAGEMENT \$85.00
- 06 - LANDSCAPE IRRIGATION \$85.00
- 07 - PLANT PROPAGATION 2 Videos \$85.00 each
- 08 - ELEMENTS OF PRUNING \$89.95

Use
this
coupon
to place
your
order.

Mail this coupon to: Book Sales, Edgell Communications
One East First Street, Duluth, MN 55802

Name _____

Street Address _____

P.O. Box Number _____

City/State/Zip _____

Phone Number (____) _____

Purchase Order Number _____

Signature _____ Date _____

Please send me the following books. I have enclosed payment* for the total amount.
Please charge to my Visa, MasterCard or American Express (circle one)

Account Number _____ Expiration Date _____

BOOK NUMBER AND TITLE	QUANTITY	PRICE	TOTAL PRICE

Domestic—*Please add \$3.00 per order plus \$1.00 per additional copy for postage and handling.

All others—*Please add \$5.00 per order and if ordering multiple copies, also add \$2.00 per additional copy to cover postage and handling.

(postage & handling)

Please allow 6-8 weeks for delivery.

Prices subject to change.

Quantity rates available on request.

Total Enclosed

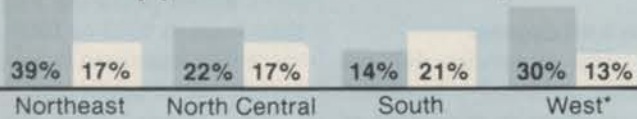
Questions? Call 218-723-9471 or 9472

LCI

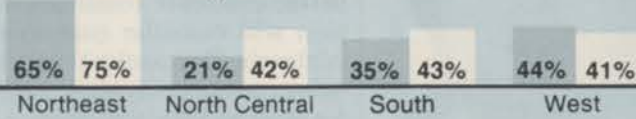
STATE OF THE INDUSTRY

Chemical lawn care firms

Plan to post warnings for chemical applications voluntarily



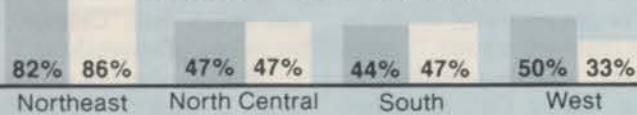
Pesticide legislation passed by state in 1988



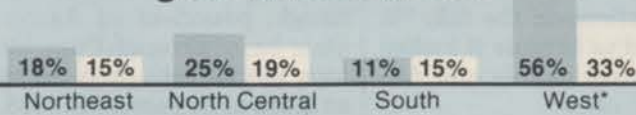
State requires warnings for chemical applications

	1988	1987
Northeast	74%	50%
North Central	12	3
South	21	21
West	10	0

Pesticide legislation introduced at state level in 1988



Pesticide legislation passed by local government in 1988



KEY

1988 1987

* = Small sampling

says Bill Davids, vice president of operations for Clarence Davids & Sons, Inc., Blue Island, Ill.

Davids says many contractors have since realized they make more money doing everything themselves—as well as having more control over the scheduling of services.

The Brickman Group, Ltd.,

based in Langhorne, Pa. used to subcontract 90 percent of its chemical work. The company now does 60 percent of that work, says Don Synestvedt, vice president.

"I think they (mowing/management firms) may be reacting to competition," notes Erbaugh. "It's something that we notice more so than in the past."

Ron Kujawa, president of Cudahy, Wis.-based KEI Enterprises, Inc., agrees. "Chem-Lawn is trying to get into commercial work and so is Tru Green," Kujawa says. "As a result of that, people who used to use them don't want to use them anymore."

Not all mowing/management firms will do chemical work, however.

"Our company is staying away from it as much as possible," says Bob Berry, president of Lancaster Landscapes, Inc., a major contractor in Arlington, Va.

Berry is one of many contractors who doesn't want the hassles of greater government scrutiny and higher liability costs that chemical use entails. LCI

SURVEY

from Page 1

set the 5 to 10 percent revenue loss caused by the drought. Close to a third of the LCOs' customers skipped one round of service.

Mowing/management firms' profits, on the other hand, averaged a healthy 12.35 percent—only a marginal drop from 1987. The mowing/management industry is largest in the West and South—regions that were not as affected by the drought.

For LCOs, price increases averaged between 5 and 10 percent—the largest ever. These increases were implemented to offset higher marketing and labor costs. Product costs were not significantly higher in 1988.

Additional billings for renovations, and to a lesser extent, aerations, boosted LCOs' revenues by an additional 10 percent nationwide. These billings were highest in the Midwest.

LCOs' profits suffered because margins on aeration and seeding are not as high as on chemical applications—which were skipped.

The drought's main benefit was that it forced companies to communicate more with customers. As a result, many LCOs feel customers now have a better understanding of what to expect from a lawn care service.

Notable trends among LCOs include less customer concern about pesticide safety, and a willingness to invest in natural pest control products and organic soil biostimulants.

Mowing/management firms reported doing more chemical work in 1988. LCOs and mowing/management contractors alike see this as a response to a perceived threat from chemical lawn care firms for commercial accounts.

Insurance costs and liability costs continued to be the greatest concerns of both LCOs and mowing/management firms.

Government regulation remains an important concern for LCOs. LCI

Projected 1989 expenditures in millions

	1989	1988	Change		1989	1988	Change
Granular fertilizer	157.4	102.1	54%	Spray tanks	10.3	7.5	37%
Liquid fertilizer	43.5	57.4	-24	Sprayers, pumps, hoses, etc.	18.7	9.3	101
Pre-emergence herbicides	44.6	55.1	-19	Broadcast or drop spreaders	8.9	2.9	207
Post-emergence herbicides	33.7	32.9	2	String trimmers	10.1	4.3	135
Insecticides	38.3	30.4	26	Tree care equipment	9.9	6.5	52
Fungicides	15.28	20.1	-24	Aeration equipment	9.1	7.4	23
Soil amendments	12.1	10	22	Irrigation equipment	41	14.9	175
Plant growth regulators	3.1	1.4	121	Walk-behind mowers	48.1	25.9	86
Grass seed	52.7	31.1	69	Riding mowers	40.1	28.7	40
Tractors	49	35.7	37				

The Brouwer difference...

"dollar for dollar there is no better triplex mower on the market today"



BROUWER TRIPLEX-376... designed from "the grass up" for the professional. Compare the high quality engineering, rugged reliable performance, and you will be convinced that in the long-run your equipment investment should include a Brouwer Triplex-376. It is the perfect mower for a wide range of applications where grass requires the best in routine maintenance.

SOME OUTSTANDING FEATURES:

- 5.8 m.p.h. (9.4 Km/h) transport speed
- 74 in. (188 cm.) width of cut
- Rear reel can be operated independently
- Height of cut: 1/2 in. to 3 in. (1.3 cm. to 7.6 cm.)
- Transport width only 69 in. (175 cm.)
- Low center of gravity
- Differential lock

Call your Brouwer dealer for more information... TODAY

Woodbine Ave., Keswick,
Ont., Canada L4P 3E9
Tel. (416) 476-4311
Fax. (416) 476-5867

BROUWERTM
TURF EQUIPMENT LIMITED
An Outboard Marine Corporation Company

7320 Haggerty Rd.,
Canton, MI. 48187
Tel. (313) 459-3700
Fax. (313) 459-8778

Dedication
and
Commitment
—since 1923

Lofts Seed Inc.

Dedication and Commitment have made us – **The world's largest market**

Dedication

Since 1923 we've enjoyed a rewarding relationship with the turf industry. We've aimed our efforts at fulfilling the needs of professionals working in every aspect of turf. One of our most important functions has always been developing new and improved varieties to reflect those needs as they continue to change.

For example, in recent years environmental concerns have challenged us all. Lofts welcomes the challenge, and has responded with varieties that require less chemical treatment.

The turf business is expanding, and Lofts' future growth depends on continuing to meet the industry's needs . . . in product and in service. We've got our finger on the pulse of the industry and we're committed to steering our company wherever those needs may lead us.



A handwritten signature in dark ink, appearing to read "Jon Loft". The signature is fluid and cursive, with a large loop at the end.

Jon Loft,
President and Chairman

Service

Commitment extends itself to Lofts' branches. There the support goes well beyond sales. Lofts personnel respond professionally and promptly to client requests and special problems — even, when possible, with a personal visit.

With experience and agronomic expertise, Lofts' professional sales and backup personnel are qualified in each turf market segment. For example, they are well-qualified to recommend varieties suitable for roadsides and ecologically sensitive areas, such as wetland re-establishment. Lofts' Professional Turf Division, formed to personally respond to the special needs of turf professionals, offers the services of an experienced staff of Certified Professional Agronomists.

Lofts' Annual Field Days, at the company's NJ research headquarters, allow industry members to see the newest varieties, and discuss the latest developments in turf research. There they can see many varieties in use, and question specialists about various aspects of turf management. Furthermore, visits to Lofts' test plots are encouraged year 'round.

Research

Throughout its long history, Lofts has developed an exceptional line of fine turfgrass varieties. To date Lofts has developed and holds plant protection rights to over 20 turfgrass varieties. There are always new varieties in each phase of development at Lofts.

Lofts is the only east coast seed company with its own in-house breeding facilities. Additional research facilities are located on the west coast.

At Lofts' research headquarters in New Jersey, programs extend beyond turfgrasses. Test plots can be seen for meadowgrasses and ornamental grasses, as well as numerous wildflower species which are part of the National Wildflower Test Program.

Facilities

The Lofts enterprise covers every phase of turfgrass seed handling, from variety development and production through marketing and delivery.

Lofts has extensive production of proprietary varieties, with seed grown in the U.S., Europe, Australia and New Zealand. And Lofts is the only seed company with complete facilities for research, blending *and* warehousing on both coasts — its New Jersey headquarters and west coast division, Lofts/Great Western.

At Lofts' New Jersey corporate headquarters, a specially designed room (the "sod cell") ensures that only top quality seed goes into mixtures for sod growers. Lofts participates in the NJ Interagency Seed Certification program and, under strict guidelines, state inspectors observe the entire blending process. It's another tedious step, but it helps guarantee that Lofts' customers get what they've ordered.

Within the next few years, Lofts plans additional facilities to keep pace with the industry's demands.

Lofts has developed, produces, markets and holds

ter of turfgrass seed

Commitment

During the 60+ years of Lofts' history, the industry's needs have constantly changed. Most recently, turf professionals have been faced with greater environmental pressures and shrinking maintenance budgets. Lofts has kept up with these changes by developing varieties to meet each challenge: with more drought tolerance to address a critical water shortage, and improved resistance to insects and disease for fewer chemical applications.

Many of Lofts' research projects are conducted jointly with major universities. From the

sales of proprietary varieties Lofts pays royalties to universities like Rutgers, Clemson, the University of Rhode Island and Virginia Polytechnic Institute. These royalties, in turn, help perpetuate research of future turf varieties. Fortunately, as sales of these varieties increase, the royalties increase proportionally.

Lofts' extensive contributions to the turf industry include support for landscape architects, golf course superintendents and architects, sod growers, lawn care operators and others. Lofts is actively involved in

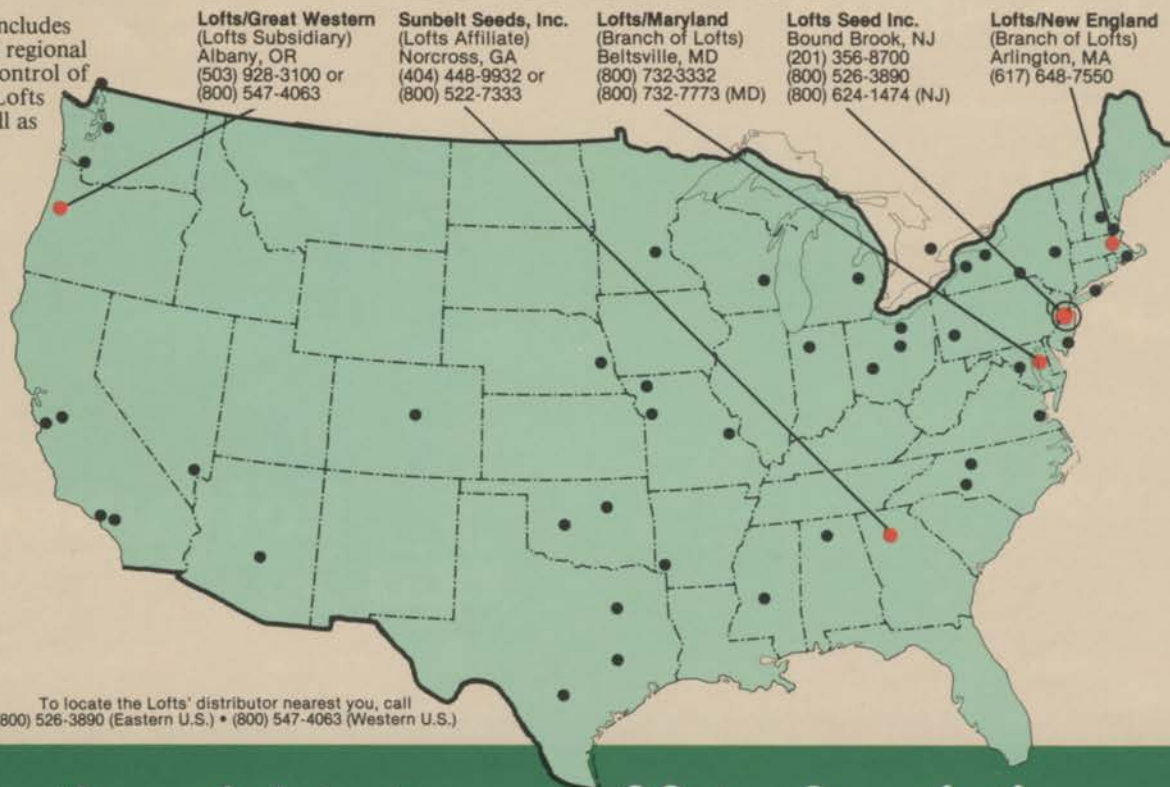
several organizations, including ASLA, GCSAA, ASGCA, ASPA, PLCAA and ALCA.

Perhaps in no better way could Lofts have promoted turfgrass research than by memorializing its former Chairman Peter S. Loft. A scholarship fund has been established in his memory at Rutgers University. To date the Peter Selmer Loft Memorial Scholarship Fund has awarded over 15 turfgrass students with scholarships. In addition, the fund is enhanced by royalties from the sales of Lofts' new tall fescue, Tribute, named to honor the memory of Peter Loft.

Distribution

The Lofts domestic network includes four branches and nationwide regional distributors. By maintaining control of every phase of its operation, Lofts ensures superior quality as well as exceptional service.

DOMESTIC NETWORK



plant protection rights to over 20 turf varieties...

Some of Lofts' proprietary varieties:

Kentucky Bluegrasses:

Baron	Mystic	Princeton (P-104)
Ram 1	Nassau	1757
Georgetown	Suffolk	

Turf-type Perennial Ryegrasses:

Palmer	Yorktown II	Repell
Prelude	Cowboy	

Turf-type Tall Fescues:

Rebel	Tribute	Barnone
Rebel II	Clemfine	

Hard Fescue:

Reliant

Overseeding Mixtures:

Marvelgreen®

Chewings Fescue:

Jamestown

Poa trivialis:

Laser

Wildflowers:

Pinto®

Pasture Mixture:

Mustang®

Varieties to be released
in the near future:

Kentucky Bluegrasses:
Baron II, Baron Plus

Chewings Fescue:
Jamestown II

Creeping Bentgrass:
Southshore

Turf-type Tall Fescue:
Rebel Jr.



Lofts Seed Inc.

World's largest marketer of turfgrass seed

Bound Brook, NJ 08805

(201) 356-8700 • (800) 526-3890 • (800) 624-1474 (NJ)

● **Lofts/New England**
(Branch of Lofts)
Arlington, MA
(617) 648-7550

● **Lofts/Maryland**
(Branch of Lofts)
Beltsville, MD
(800) 732-3332
(800) 732-7773 (MD)

● **Lofts/Great Western**
(Lofts Subsidiary)
Albany, OR
(503) 928-3100 or
(800) 547-4063

● **Sunbelt Seeds, Inc.**
(Lofts Affiliate)
Norcross, GA
(404) 448-9932 or
(800) 522-7333

To locate the Lofts' distributor nearest you, call
(800) 526-3890 (Eastern U.S.) • (800) 547-4063 (Western U.S.)

Mowing boom—no end in sight

Commercial property owners have a greater appreciation for quality landscape work than ever before. Demand for mowing/management services is at an all-time high.

Thus the continuing boom of the landscape maintenance industry, major contractors say.

"People are finally beginning to appreciate the value of landscaping," says Bill Davids, vice president of operations for Clarence Davids & Sons, Blue Island, Ill.

Mowing/management revenue, that which is billed for mowing, trimming, and cleanup services, jumped 22 percentage points in 1988. Profits averaged 12.35 percent.

Mowing/management firms primarily service commercial, multi-family and industrial accounts, unlike LCOs, who primarily service single-family, residential customers.

Davids says property owner and management organizations are promoting the benefits of high curb appeal, higher property value and better employee satisfaction.

Other factors come into play as well.

Don Synnestvedt, vice president of Langhorne, Pa.-based The Brickman Group, Ltd., says installation contractors are realizing that ongoing maintenance is the only way to make good on their plant material guarantees. Such guarantees, usually for one year, are common in the installation business.

"It's much more practical to offer a maintenance service so that you can guarantee that plant material," he says.

Maintenance also gives a company good cash flow.

Synnestvedt says maintenance jobs are typically paid for in 30 days compared to 60 days for installation jobs. Capital investment is much less for maintenance, too.

Still another factor is the multi-family properties' move from in-house maintenance to maintenance contracting. "There is definitely a move from in-house to contract maintenance," Synnestvedt says. **LCI**



Davids: Clients seeing value.

Weeds still major customer complaint

Poor weed control remains the number one complaint LCOs receive from customers, according to the State of the Industry Survey.

Another survey by the Dow Chemical Co. shows that the single most important factor in selecting a herbicide is the percentage of broadleaf weeds the product controls.

Control of broadleaf weeds accounted for 27 percent of LCOs' purchase decisions for herbicides used in broadcast applications and 34 percent of the chemicals used for spot treatments.

The second most important consideration, accounting for 18 percent of the decision for broadcast chemicals and 20 percent of the spot chemicals, was the spectrum of weeds controlled. In both instances, LCOs preferred herbicides which provide total control of both hard- and easy-to-con-

trol weeds to those only giving partial control.

The third most important factor cited was the chemical's ability to reduce callbacks, accounting for about 12 percent of their decision to buy broadcast and spot herbicides.

In both cases, LCOs preferred chemicals that reduce callbacks by at least 30 percent. Their preference fell off as the percentage reduction declined.

A chemical's ability to reduce cancellations is of paramount importance, the survey showed. This factor accounted for 11 percent of their decisions for broadcast and 10 percent for spot chemicals.

As with callbacks, the LCOs preferred herbicides which reduce cancellations by 30 percent, and their preference declined as the cancellations did.

Another factor was safety to off-target plants. **LCI**

BEFORE WE DEVELOPED THESE PROBLEM-SOLVING TURFGRASS MIXTURES, WE MARCHED THROUGH ACRES AND ACRES OF PROBLEMS.

Nobody knows the troubles we've seen.

Our Northrup King turf specialists and researchers have hoofed through salt problems, soil compaction, disease, starved turf, baked turf, cleft-to-shreds turf, and dormant winter turf—all depressing sights. But it was a road well worth our travels.

The result is a complete line of Medalist® turfgrass formulas that meet the demands of the professional turf manager.

If you've been staring down at a turf problem, look up your solution here. And if you think it's a turf problem we haven't seen, just let us know.

Our business is putting your problems behind us.



MEDALIST TURF PRODUCT	MAJOR AREAS OF USE	SPECIAL FEATURES
Athletic Pro and Athletic Pro II	For athletic turf.	Well suited for new seeding or overseeding. Fast establishing, traffic tolerant, rapid recovery. Both provide good footing.
Boulevard Mix	Any area with high pH (roadsides, sidewalks, boulevards, alkaline soils, etc.).	Contains 'Fults' and Dawson red fescue for beautiful salt-tolerant turf. Performs at low to high fertility levels.
Landscape Pro Mix	School grounds, cemeteries, golf course roughs, home lawns.	Establishes fast. Adapts to broad range of conditions and management levels. Low to moderate fertility needs.
Overseeder II Mix	Fairways, tees, athletic fields.	Rapid germination and establishment. Withstands heavy traffic and resists diseases. Penetrates compacted soils.
Medalist North Mix	Fairways, tees, cart paths, wear areas.	Quality turf for high traffic areas. Clean mowing and disease resistant.
Premium Sod Blend	Commercial sod production.	Exceptional dark green color. Tolerates light shade. Superior disease resistance. Rapid sod producer.
Renovator Pro Mix	Problem solver for heavy traffic areas (athletic fields, golf tees, and fairways).	Penetrates compacted soils and combats <i>Poa annua</i> . Adaptable to most geographic regions.
Medalist Brand Overseeding Products	Winter overseeding of dormant bermudagrass.	Establishes rapidly and evenly. Tolerates traffic while providing a superior putting surface. Smooth spring transition.

Ask your Northrup King distributor about Medalist Turf Products to solve your turf problems. Or write Northrup King Medalist Turf Products, P.O. Box 959, Minneapolis, MN 55440.

Estimating maintenance costs—Part II

Accurate landscape cost estimating need not depend on years of experience or volumes of historical production data. It is a skill that can be learned.

In Part I of this series, we examined the theory which states that correctly measured quantities can be converted to time and hours by dividing the quantities by an applicable production factor.

Production factor is defined as "the amount of work produced by one person in one hour." Production factors are

usually expressed in square or linear feet per hour.

For example, the production factor for a 21-inch, push-type rotary mower used under normal circumstances is 10,000 square feet per hour. The production factor may be modified by the estimator to fit the exact conditions of the specific job.

Column 3 of the maintenance labor estimating form represents the time required to perform the activity once. Multiply column 3 by column 4, frequency, or the times per

year that the activity will be performed, and that will equal the total labor hours required to complete that activity.

The frequency of the activity may be specified by the property owner, or set by the custom or need in your market.

To fill in the hourly price, column 6, we must go through a labor-hour cost analysis for the company.

Hourly cost analysis

Hourly cost analysis is the subject of next month's col-

umn. We will briefly discuss it here so that we can complete the estimating formula.

The hourly price is the price your company must charge the customer for maintenance services performed on their property. The hourly price includes labor, equipment, overhead, and your profit.

It may vary depending on the skill and equipment required to perform the specific activity. This price is determined by the corporation, and is usually given to the estimator.

We have simplified the example by using a constant hourly price of \$25. Note that all of the numbers used in the sample forms are for example only, and are not applicable to your business in your market.

Multiply column 5, total hours per year, by column 6, the hourly price. That will equal the total cost per year for that activity, which is entered on column 7.

Each project is estimated as if it were located next door to the shop or office.

Line 20 on the estimating form is the line to estimate the total travel time for the year. We know the number of people who will be traveling, so we can calculate the travel time from the branch to the project.

Travel time is charged one-way so that when the project is put into a route, the project carries its own weight in travel cost. If you know the exact route, you may calculate the travel time from one project to another.

Estimating the number of trips to the project in one year is done by adding the activities: mow, edge, and weed control, 30 trips; mulch, two trips; prune, two trips; overseed, one trip; spring cleanup, one trip; leaf removal, one trip.

The total is 40 trips per year.

It is important to keep travel time separate so the estimator does not modify or change the known production factors or hourly prices to compensate for projects located close by or far away from the shop location.

Material estimating

One of the basic rules in estimating is to separate the materials from all other costs for landscape maintenance. Material quantities can be accurately calculated, including a waste factor, delivery cost, and the appropriate taxes.

The material price may be influenced by quantities pur-



DON'T PLAY GAMES WITH CRABGRASS!

Safe, effective crabgrass control.

Here is what lawn care professionals need for controlling crabgrass. Here is Acclaim® IEC Herbicide—a rescue treatment that is truly effective, yet easy on turf.

Unlike the old arsenates, Acclaim is effective with just one treatment. Acclaim won't harm turf, and it can even be applied to new or reseeded turf.

Be ready for rescues anytime.

The best time to be ready for rescue treatments

is early, beginning within 2 weeks of July 4th,—but Acclaim controls emerged crabgrass up to 5 tillers anytime. So you should plan ahead by putting Acclaim on your trucks.

That way you can take care of little crabgrass problems along borders and sidewalks before your customers even see them. And you'll keep them happy without complaints or costly callbacks.



Read and follow label directions carefully. Acclaim is a registered trademark of Hoechst Celanese Corporation. The name and logo HOECHST are registered trademarks of Hoechst AG. The name and logo ROUSSEL are registered trademarks of Roussel Uclaf S.A.

Hoechst
Roussel

ACCLAIM®

Because your turf is always on display.



About the Author

Philip D. Christian, III, is a business consultant based in Alpharetta, Ga. He was chief of ChemLawn Service Corp.'s maintenance division in the 1970s.

chased, time of the year the purchase is made, and the method used for material delivery.

The material estimating form uses the same quantities taken from the property analysis report. The general to change from quantities in square feet to yearly cost in dollars is very similar.

The area in square feet is divided by the area that is covered by one ounce, pound or cubic yard of material.

For example

For example, take 1200 square feet of area to be mulched, three inches thick. It is divided by the square footage covered by one cubic yard of mulch, or 108 square feet. 1200 square feet divided by 108 square feet equals 11.1 cubic yards of mulch.

The 11.1 cubic yards of mulch is multiplied by the frequency, or the number of times that mulch will be applied to the area. If that is two times per year, then multiply by two. That will equal a total of 23 cubic yards of mulch per year.

Multiply the yearly requirement of 23 yards by the cost of one yard of mulch, maybe \$20. That will equal a total cost of \$460 per year for mulch.

The total material cost, including waste factor, delivery cost, tax and markup is added to the bottom line of the estimating form to total the sales price for that project.

Most maintenance contractors divide the annual sale price by 12 months and quote the potential customer a monthly fee for landscape maintenance.

Parts I and II of this series introduced an efficient estimating theory that is quantity-based and time/price related. The theory is the important part. When it is understood, one can quickly adjust the forms, factors, frequency and prices to fit a particular company's need.

Accuracy is the quality test in an estimating process. In estimating, the "first time" is the only opportunity. **LCI NEXT MONTH—Hourly cost analysis.**

Cushman prints how-to booklet

LINCOLN, NEB.—A 24-page manual on aeration and overseeding for lawn care professionals is available from the Cushman/Ryan Division of Outboard Marine Corp.

The Dawn of a New Age in Lawn Care includes topics such as grass selection and techniques for overseeding, procedures and benefits of precision core aeration, and how to profitably price and market aeration and renovation services.

Contact Lawn Care Manual, Cushman Div., PO Box 82409, Lincoln, Neb. 68501; or call (800) 228-4444. **LCI**

MAINTENANCE LABOR ESTIMATING FORM						
PROJECT:	DATE:		ESTIMATOR:			
CLEAN UP:	1	2	3	4	5	6
	QUANTITIES	FACTOR	HOURS	FREQUENCY	HOURS	\$/YEAR
1. SURFACE TRASH	SF +	SF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
2. DEBRIS	SF +	SF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
MOWING TURF:						
3. RIDE	SF +	SF/HR =	HRS			
4. PUSH	SF +	SF/HR =	HRS			
5. TRIM	HRS (X)	RD/HR =	HRS			
6.	MOWING TOTAL =		HRS (X)	FREQ'CY =	HRS (X)	PER MH =
7. OTHER	SF +	SF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
8. WEDEATER	SF +	SF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
9. EDGING	LF +	LF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
WEED CONTROL:						
10. CRACK GRASS	LF +	LF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
11. BEDS (PRE)	SF +	SF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
12. BEDS (POST)	SF +	SF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
13. MULCH	SF +	SF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
14. PRUNE	SF +	SF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
15. OTHER	SF +	SF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
16. OVERSEED	SF +	SF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
17. SPRING CLEANUP	SF +	SF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
18. LEAF REMOVAL	SF +	SF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
19. OTHER	SF +	SF/HR =	HRS (X)	FREQ'CY =	HRS (X)	PER MH =
			TOTAL =	HRS (X)	PER MH =	
20. TRAVEL	TIMES PER YEAR (X) MH/TRIP				HRS (X)	PER MH =

PGMS releases new booklet

COCKEYSVILLE, MD.—The Professional Grounds Management Society is issuing a revised edition of its *Grounds Maintenance Forms & Job Descriptions Guide*.

The manual has been expanded to 48 pages of information.

The booklet is free to PGMS members; \$12 for non-members (\$15 if billed).

The PGMS headquarters is at 12 Galloway Ave., No. 1E, Cockeysville, Md. 21030; (301) 667-1833.

Two other manuals also are available from the PGMS. **LCI**



Give grubs an inch and they'll take a whole yard.

Grubs feed at many levels in a yard, but it's at 1" to 1½" below the surface where they do their real damage. And because grubs are constantly moving from one level in the soil to the next, a single treatment of most insecticides will only get the ones closest to the surface.

But with OFTANOL® insecticide, you have the strength to knock out those grubs closest to the surface now, and the staying power to deal with grubs, rising up from the depths, in the future.

So take away that inch. And keep the whole yard.

Oftanol.

Mobay Corporation
A Bayer USA INC. COMPANY



Specialty Products Group
Box 4913, Kansas City, MO 64120

Oftanol is a Reg. TM of Bayer AG, Germany. ©1989 Mobay Corp. 62901

WATER

from Page 1

cisco Bay Area Chapter.

Studies on plant water usage and other factors will be prepared, and water conservation techniques will be passed on to the membership.

"One of the things we're working on is educating the green industry. We have to be better at managing what we have because it's for the long haul," McGilvray says. "We're trying to approach this on a logical, long-term basis."

Lobbying efforts will be directed at state and local officials who are considering watering restrictions.

Because it's so visible, landscape watering is usually the first to get cut, and that is particularly annoying in light of the economic contributions made by green industry members, according to Consultant Efraim Donitz of EFCO, Inc. in North Hollywood.

"It bothers us that an industry with \$8 billion in payroll doesn't get more consideration," says Donitz, who is an international expert on irrigation and water management. "They don't regulate beer makers, why should they regulate us?"

Meanwhile, turf managers are using a number of methods in an effort to cut down on the

amount of water that is being used.

The use of moisture sensors on customers' properties to eliminate any unnecessary watering continues to increase, observes Earl M. Sacks, chairman of the board at Water Conservation Systems, Inc. in Claremont.

The devices are required on some new developments in Carpinteria.

At Gardeners' Guild, Inc. in San Rafael, "We hired a full-time environmental and resource manager," reports Linda J. Novy, president.

Steve Ash is conducting water audits of the clients' properties to detect waste and

to fine-tune irrigation programs.

"I think that's a huge savings right there," says Novy.

"Most of our jobs were aerated and dethatched," Novy explains, and customers are opting for turf-type tall fescues. "Where they had bluegrass we came in with fescues."

Using improved fescue seed or sod is the way to go, maintains Larry Chiaravalle, facility manager at ChemLawn Services Corp. in Concord. "They're still going to have to water tall fescue, but not as much as bluegrass."

Chiaravalle stresses alternatives, education and aware-

ness when it comes to the future of lawn care in the Golden State. "We need to recognize that this is a long-term problem. People need to look at the opportunities."

Lawns should be aerated at least once a year, and there are also opportunities to apply fertilizers and treat diseases, insects and crabgrass, he points out.

While "some people opted to just let their lawns go last year," Chiaravalle says renovation work this year made up for that lost business.

The wise LCO will involve the clients in overcoming difficulties with the lawn, he advises. "We're trying to educate our customers toward a long-term cure. The drought is almost an annual occurrence here."

Water audits are "a major thrust" at Environmental Care, Inc., headquartered in Calabasas, says Robert L. Scofield, vice president of corporate relations. "We try to get our clients to have us perform a water audit on their property."

Customers' lawns are being planted with tall fescues or hybrid bermudagrass.

The political climate demands that steps be taken to conserve as much water as possible when it comes to lawn care. "We have people here who would like to see all lawns removed."

And, Scofield says, xeriscape does not have to be a dirty word to turf managers.

When customers use water-efficient ornamentals, they have more water left over to keep their turf green!

When making such plans, a good first step is a soil test of the area, says J. Randall Ismay, owner of Landscape and Water Management Consultants in Los Angeles. "Don't change the soil. What you do is find the plant that fits the soil."

Ismay, who spoke at the California Landscape Contractors Association convention in Long Beach, offers a different definition of xeriscape.

People tend to perceive xeriscaping as gardens made up of rocks and cacti, or they think that it involves using "drought tolerant" plant material.



Novy: Do water audits.

IF YOU THINK ABOUT IT... YOU CAN'T DO WITHOUT THE NEW AEROSOL FORMULATION OF WEDESTROY® TRIAMINE™ HERBICIDE!

Think about all the times you had to hassle with back-pak and pump up sprayers just to spray a few escape broad-leaf weeds in your turf areas...

Think about all the times you've worried about drift when you had to spray up close to your ornamentals...

Think about the fear of injury from soil-absorbed dicamba to your valuable ornamental trees and shrubs...

Now, stop thinking about those problems, because...

that kind of thinking has changed with the introduction of the new 23 ounce, hand-held aerosol:

TRIAMINE™ JET-SPRAY

- **FOAM MARKER**—so you know what you sprayed.
- **JET-SPRAY ACCURACY**—so you can spot treat near ornamental beds.
- **DICAMBA-FREE**—so there is less worry about soil-absorbed injury.
- **CONVENIENT**—so you can be ready to spray at anytime.
- **ECONOMICAL**—so each of your applicators can carry a can.
- **CONTAINS TRIAMINE™**—so you get dependable weed control.



PROFESSIONAL PRODUCTS FOR THE PROFESSIONAL APPLICATOR!

IT'S EASY TO GET THE BEST IN WEED CONTROL PRODUCTS, JUST CONTACT YOUR NEAREST RIVERDALE DISTRIBUTOR...

OR Contact Us At:

425 West 194th Street, Glenwood, IL 60425-1584
312-754-3330

RIVERDALE CHEMICAL COMPANY
"We have what you need"

©COPYRIGHT 1989

Circle No. 124 on Reader Inquiry Card

for the Landscaper NORTH AMERICAN SPECIAL REPLACEMENT ENGINES

ON SALE NOW NATIONWIDE AT YOUR LOCAL PARTICIPATING TECUMSEH SERVICE DEALER

REPLACES ORIGINAL 8-10-11-12 H.P.
RIDING MOWER AND LAWN TRACTOR ENGINES

OVXL120 - 12 H.P.

Overhead Valves
Cast Iron Sleeve
Ultra-Balanced
Recoil Start
Electronic Ignition
3 Qt. Rust Proof Fuel Tank
Multi-Stage Air Cleaner
Oil Pump Lubrication
2'N10 Year Warranty

812701A **\$370²⁵**
& FACTORY FREIGHT

REPLACEMENT FOR SNAPPER AND MANY OTHER BRANDS OF ROTARY MOWERS

TVXL840 4 H.P.

2 Year Warranty
Electronic Ignition
Dual Air Cleaner

\$192³⁵
& FACTORY FREIGHT **800109A**

ASK ABOUT THE MANY OTHER MODELS AT YOUR PARTICIPATING TECUMSEH SERVICE DEALER

TECUMSEH PRODUCTS COMPANY
ENGINE & TRANSMISSION GROUP SERVICE DIVISION

Look For Your Nearby Tecumseh Service Dealer In The Yellow Pages Under "Engines, Gasoline"



Circle No. 125 on Reader Inquiry Card

To Ismay, a xeriscape merely fits plants to the environment. He prefers the term "water-thrifty" to "drought tolerant."

If you have a wet spot on your property, that's where you plant a tree that thrives on water. If you have dry spots, that's where you place plants that can survive with less watering.

"Everything sold in the green industry today can be used in a xeriscape," Ismay proclaims. "Water-thrifty implies that whatever water you give them will be used to the plant's best advantage. These plants will use what water you give them."

In Ismay's view, the best way to save water is to make sure that every drop is used by the plant. "Most tall fescues are drought tolerant but not water-thrifty," he notes. "Bluegrass is water-thrifty but not drought tolerant."

Ismay elaborates that it takes more water to make most tall fescues look as good as a bluegrass lawn. (He says some brand new tall fescue varieties may eliminate that problem.) However, when drought hits, the tall fescue lawn will hold on longer than a bluegrass lawn.

Whenever possible, warm season grasses such as bermudagrass should be used when water is in short supply, says Ismay. He carries this concept as far north as possible—if customers object to the winter brown-out, the lawns can be overseeded with annual ryes or bluegrasses. Or green dye can be applied.

Brown-out can even be marketed as a plus to transplanted customers who miss the snows of their home towns.

"It's a nice way to come up with at least a semblance of a winter season," Ismay says.

Educating your clients is the key, Ismay points out, especially as political pressure builds to restrict turf areas and the necessary watering.

"We waste water—not plants. If we're going to get into this conservation business we have to do it on a people level. You want to be at a point where people understand *how* to save water."

'Everything sold in the green industry today can be used in a xeriscape.'—
Ismay

A turf manager in an area facing a water shortage needs to focus on knowing the proper levels of watering. "Learn to irrigate according to plant needs. Don't irrigate just because it's Tuesday."

Learn to use the controller. Turn on the water and watch for puddling and runoff, use no more water and no less water.

"Irrigate only when the grass says it needs it," he adds. "Look for a slight wilt or color change. Give an irrigation but don't flood it."

A stronger stand of turf will result if it is oh-so-close to being drought stressed, Ismay believes. "Any grass will do better if it is kept on the edge all year."

When it comes to pressure to reduce landscape watering use, perhaps Santa Barbara County reigns as an example of an area on the edge.

Several communities there are facing mandatory water supply cutbacks of 15 to 20 percent.

Lake Cachuma, a major local reservoir, is at 44 percent capacity. The area averages only 18 inches of rain a year.

"It won't rain from now (April) until October," reports Steve Berta, news editor at South Coast Community Newspapers. Berta has kept a close eye on the drought situation—which has been going on for several years.

"They're drawing water out (of the lake and local wells) faster than Mother Nature can replace it, and so the water table is going down. We've had below-average rainfall for the past five years."

The community of Montecito restricts how much water residents can use. People using extra water pay through the nose—chronic offenders can pay fines up to 10 times the amount of the bill.

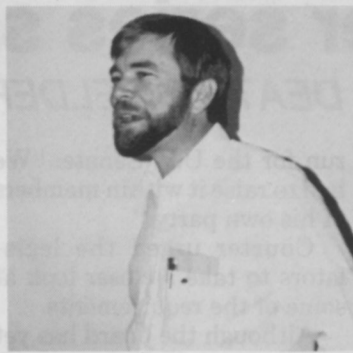
One wealthy landowner was socked with a \$32,000 water bill for his seven acres of beautiful turf. "He was just keeping his lawn green," Berta explains.

In Golita, a mandatory plan to reduce water use by 15 percent gives single-family homes a 268 gallon-per-day base allowance. If the residents are currently using more than that, they will be allotted 55 percent of that excess use.

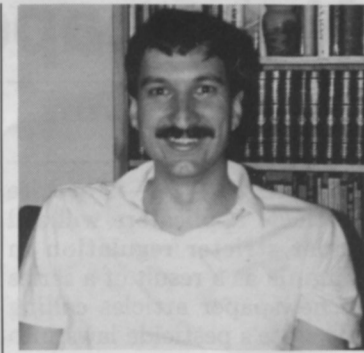
"That's not enough, I think, to keep your lawn alive," Berta observes, noting that "the word is that brown lawns are going to be 'in' in Golita this year."

"I've heard that said," agrees Owen Dell, president of County Landscape and Supply in Santa Barbara. "I have about 10 houses in Golita right now where I am taking out the front lawns and putting in xeriscapes."

However, these homeowners are keeping their backyards in turf. Dell says he's



Ismay: Educate clients.



Berta: Educate yourselves.

using Marathon tall fescue sod almost exclusively.

Towns throughout the region are making community-wide efforts to conserve water, Berta notes.

Among the many efforts, new development is on hold, restaurants are being urged not to serve water unless eaters ask for it, low-use shower heads and toilets are being promoted and landlords are required to repair leaking pipes within a day.

The *Golita Sun* publishes the evapotranspiration number each week so residents can better plan their sprinkling.

The Montecito Water District has hired Debra Wilkinson as a full-time water moratorium/resources specialist. "What we're trying to do is educate the general public, particularly our customers, on proper water usage," she explains.

"You'll look out the window during a rainstorm and see sprinklers running," Berta points out.

Trees can be trimmed back to help them conserve water, he says.

Berta believes that professional turf managers could use some classes on water usage, and the California Landscape Contractors Association recently set up such a program.

Wilkinson says that often the turf managers are under

pressure from their wealthy clients to just pour the water on. "They're being paid to keep the lawn green."

It's still too early to gauge the economic impact of the rationing on the local green industry, according to Berta and Dell, but Walter S. Barrows, Sr., Ph.D., is not so shy.

"We're going to get fat on all the money we'll make," predicts Barrows. He owns Landscapes by Barrows in Carpinteria and is "Dr. Dirt" on a local radio gardening show.

"Peer pressure isn't going to let people let their lawns go to hell. People will find a way to care for it."

Barrows goes on to discuss Montecito, which is home to a number of famous and wealthy people such as Kenny Loggins, Jonathan Winters, Steve Martin, Jane Russell and Burl Ives. "You're not going to tell people like that not to use water—they'll truck it in here" if necessary.

Property owners may resort to using "gray water," which is waste water from household washing.

Barrows discussed the rationing situation with one elderly customer: "I mentioned it to her, and she said, 'I'll bring my dishwasher out.'"

"Right now that's illegal," Berta says, "but they're thinking of changing that." **LCI**

One Of America's Best Run Companies Gives 95% Of Its Money To Charity.

CARE was recently named the best run, best managed charity in America.

We aren't surprised.

95% of every dollar we receive goes to help impoverished people. Only 5% goes to run


our organization.

No other company could survive on margins like that. But a lot of starving people can.

CARE We're Helping People
Learn To Live Without Us.

1-800-242-GIVE

SIMPLIFY YOUR PRUNING!

MAIBO 
**The Fastest, Lightest,
and Strongest Tree Trimming
Equipment in the World**

MAIBO, INC. MANUFACTURERS
Rt. 1, East Stone Drive
Kingsport, Tennessee 37660

1-800-331-2306

California

1-800-543-8694



FINANCING AVAILABLE
DEALERSHIPS AVAILABLE

**COMPLETE
SYSTEMS START
AT \$99900**

**Our Two Year Warranty Only
Applies When Sold By Our
Authorized Distributors.**

International Patent



Newspaper series sparks Virginia pesticide reform

By JAMES E. GUYETTE
Managing Editor

RICHMOND, VA.—For-hire pesticide applicators will fall under stricter regulation in Virginia as a result of a series of newspaper articles calling the state's pesticide laws into question.

The state legislature formed an 11-member Virginia Pesticide Control Board in response to public outcry and action by the governor.

Posting proposals are expected, but would not be effective until next season.

"The Pesticide Control Board would have the authority to regulate posting," says Mary Bishop, a reporter for the *Roanoke Times and World-News*.

Bishop wrote a series of stories detailing regulatory shortcomings in regard to people who conduct structural pest control.

The stories were sparked by an incident during which two elderly people in Galax died when they entered their home following a pesticide treatment.

"The publicity following the death of the Galax couple during a fumigation really got things stirred up," reports J. Carlton Courter, III, president of the Virginia Agribusiness Council.

Industry agrees

The situation made public the "lack of regulation and lack of action" on the part of Virginia authorities, Bishop says.

Courter agrees. "The pest control industry had very lax standards. If Joe Blow came to your door with business cards he could spray your house with kerosene or water and take your money and run."

Those days came to an end as Gov. Gerald L. Baliles stepped in. "He's an activist governor," Courter says. "He's had a remarkable record getting his issues through the General Assembly."

New laws will cover farmers and LCOs.

State officials recently devised the Pesticide Control Board.

Courter says he had to move fast to avoid having the board being staffed with too many environmentalists who may "believe what they want to believe" and who "don't pay attention to facts and figures."

A proposed 9-member board was replaced by an 11-member body following heavy lobbying by Courter and others in the industry. "We talked to a lot of our legislative supporters."

That was touchy because the majority of politicians currently in power in the Old Dominion State are Democrats—same as the governor.

And the governor aspires to

DEATH OF ELDERLY COUPLE TIED TO FUMIGATION

run for the U.S. Senate. "We had to raise it within members of his own party."

Courter urged the legislators to take a closer look at some of the requirements.

Although the board has yet to be appointed, Courter is confident that a negative vote on green industry issues can be avoided. "If it got down to brass tacks it would be a vote of 6-5."

Courter says that at this point LCOs have not expressed great concern over

posting. However, farmers were upset over a proposal that involved advanced notification of neighbors.

That was unacceptable because of insects that can quickly ravage tobacco. "They're literally like The Plague of Locusts in Biblical days, and it happens in hours."

A proposal to enact posting for lawn care would involve public hearings, but Courter notes that the board does indeed have clout. "They have

broad powers to appoint committees."

The board will consist of two agricultural production people, two commercial pesticide applicators or sales people, two state employees involved in environmental/health issues, three citizens, the dean of agriculture at Virginia Tech, and the state forester.

The original proposal called for three environmental/health people. The green in-

See **SERIES** Page 27



Bishop: Regulation overdue.

With DOW, you have over

Dow covers the country with more qualified people than any other company in the business. The people you see here play key roles in implementing the philosophy we call The PartnershipSM services.

In a nutshell, The Partnership is everything Dow offers you, above and beyond the products themselves. It represents Dow's commitment to you and your industry... a commitment of both human and material resources

to the goal of helping you succeed and furthering the interests of your industry.

Dow field sellers support you.

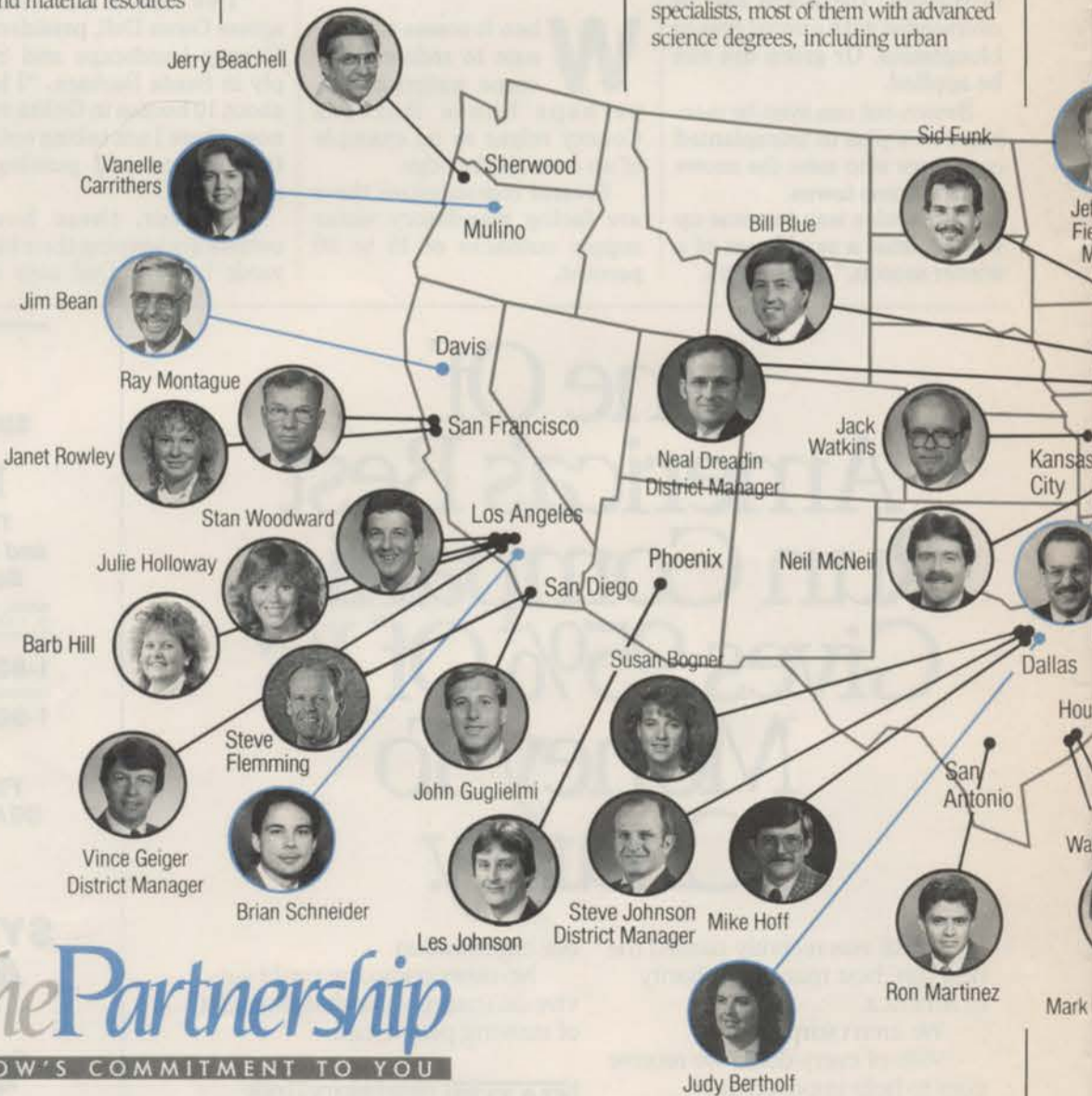
Your Dow representative is your key to all the benefits of The Partnership. He or she can put on sales, business and technical training seminars for your staff. Help you answer customer questions. Recommend sound marketing strategies. Provide sales support

material. Even speak at local meetings. And what's the benefit to you? Information and support services that can help you run your business more efficiently and profitably.

No other company in the business has so many highly trained people in its field sales staff. And they all work for you in The Partnership.

Technical help when you need it.

There are over ten Dow Technical Services and Development (TS&D) specialists, most of them with advanced science degrees, including urban



the Partnership
DOW'S COMMITMENT TO YOU

BUSINESS SENSE

Better ways to utilize your sales people

Now that your spring inquiries are winding down, many LCOs are inclined to give their sales people production jobs.

Putting sales people to work in this way is not always right. In many companies, sales people have not long been a permanent part of the staff. Determining the most effective utilization of their capabilities will be a challenge.

Sales people generally have the following skills: 1) effective listening; 2) effective communicating; 3) persuasiveness; 4)

ability to overcome objections; 5) sympathy for people who are apathetic about making a decision; 6) ability to assess a prospective customer.

There are several ways in which people with such skills can be put to good use in a lawn care company.

Perhaps the most obvious is to give them customer service responsibilities.

Since 1984, all of our clients have designated an employee as customer service representative. The customer service representative is respon-

sible for assuring customers that you are delivering what they expected. Customers should be called every two weeks following two applications to see if they are satisfied.

Several firms have found this position so effective in retaining accounts that they've added one or two more customer service representatives.

Another possibility is to designate a salesperson as a field sales/service coordinator. This person evaluates customer properties to see how

well they are being cared for by the company.

In 1988, one national company instituted this position on a trial basis. It was so successful that in 1989, they will expand this position nationwide.

A salesperson need not be an experienced field sales/service coordinator to do well at this position.

Another possibility is to have a salesperson responsible for commercial sales. Commercial sales requires a lot of personal contact. This contact

takes place in the spring and summer right after the residential soliciting is done.

The commercial salesperson must ascertain the following information on a prospective account: the contact people, the purchasing sequence the client uses for contracting lawn care, pre-qualifications for soliciting a bid, and time needed to evaluate the property.

Acquiring all this information can take as many as four visits.

Another role sales people are good at is in communicating training information to service personnel. They can hold sessions designed to improve the sales and listening skills.

Finally, the sales people can handle the marketing of add-on services. Services such as aeration, overseeding, grub control, disease control, liming and power raking can be sold more successfully by making personal contact with the customer.

Experienced sales people are much more effective in marketing new services to current customers. **LCI**



About the Author
Ed Wandtke is a senior partner with All Green Management Associates, Columbus, Ohio.

50 partners in the field.

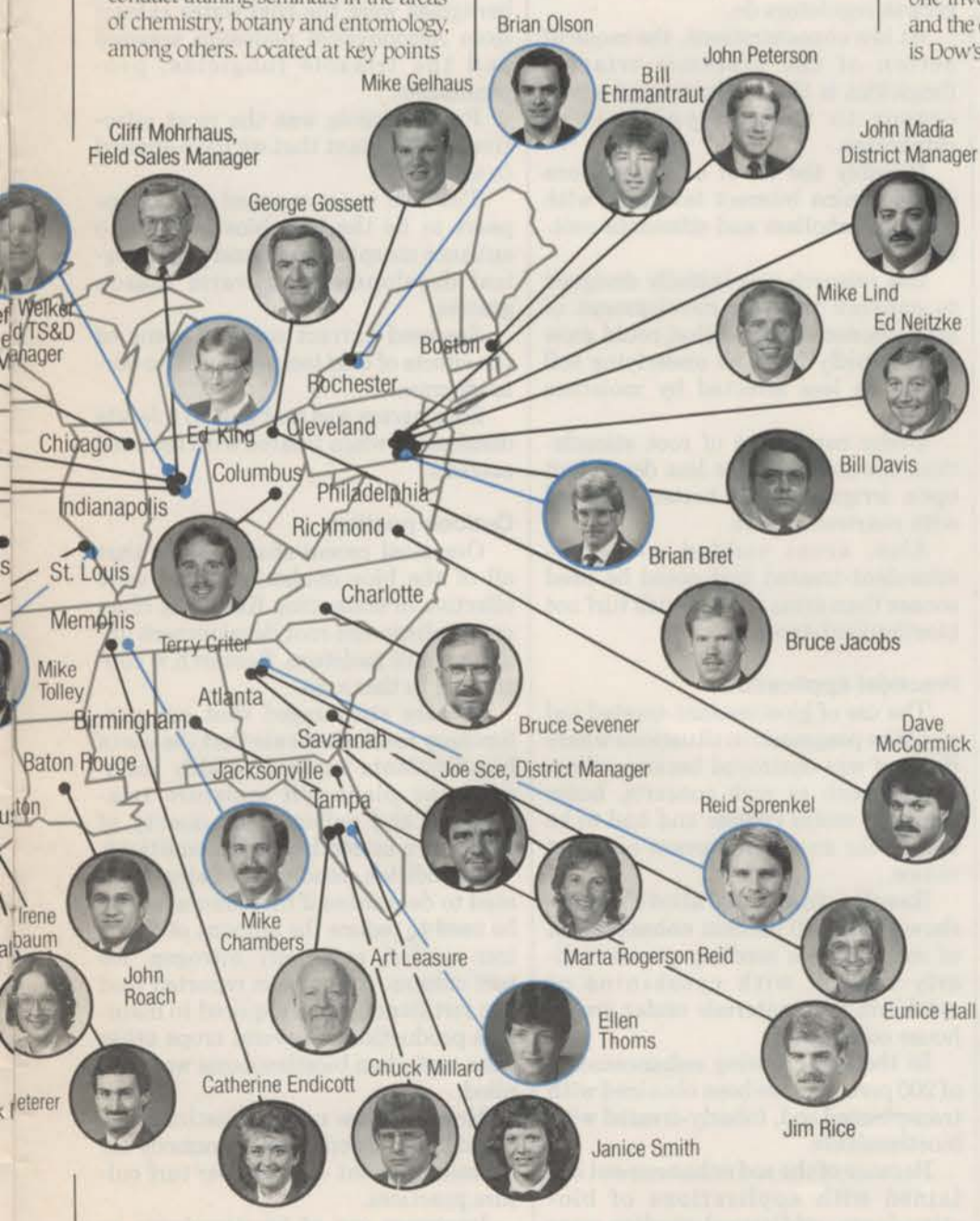
entomology. One of their major functions is to conduct continuing studies on Dow products and how they work in actual practice. They relay their findings to you and other operators so you will have the most up-to-date technical information. As experts on insects, weeds, and their control, they conduct training seminars in the areas of chemistry, botany and entomology, among others. Located at key points

throughout the country, these TS&D specialists provide technical information and application advice that specifically pertains to serving your customers.

The Partnership is More...
It's continual research and testing, to assure both safety and efficacy. It's

training, workshops and seminars, on business management, on selling, on products. It's informational literature on a variety of subjects.

Your success is the goal of every aspect of The Partnership. That's because we believe the more successful your business is, the better for everyone involved... you, your customers, and the entire industry. The Partnership is Dow's commitment to you.



SERIES

from Page 26
dustry supporters were later able to add the pesticide representatives, the state forester and the ag dean. They lost one ag production person.

The green industry avoided having the board fall under the environmental/health department. "We were able to keep it within the agriculture department," says Courter.

That is a positive move because the ag people are more likely to be in tune with industry needs, he says.

Courter is happy with the final result, noting that the situation is "not a political knee-jerk reaction to the death of an elderly couple." **LCI**

'We were able to keep it within the agriculture department.'

BIO-CONTROL UPDATE

Biostimulants can enhance turf growth, hardiness

By R.E. SCHMIDT

EDITOR'S NOTE—In response to growing interest in biological turfgrass management methods, LAWN CARE INDUSTRY introduces "Bio-Control Update." The 1989 State of the Industry Survey reveals a large number of LCOs plan to invest in soil biostimulants and natural pesticides. Several lawn care firms, including Chem-Lawn and Tru Green, are presently experimenting with these alternative methods, as are most of the major chemical manufacturers. In this first installment, Prof. R.E. Schmidt discusses research in biostimulant materials at Virginia Tech.

Interest in biostimulant materials for turfgrass management has grown in the past few years as research has shown that biostimulants enhance turf growth and tolerance to certain environmental stresses.

Results obtained from the fertilizer-biostimulant studies will have economic as well as environmental impact on the turfgrass industry.

Although research pertaining to the use of biostimulants for turfgrass culture is limited, the results are positive. As more knowledge is obtained, biostimulation will become an important cultural practice in producing and maintaining modern turfgrass facilities.

The main biostimulants that are

under study on turfgrass at Virginia Tech are cytokinins (plant regulating hormones) and cytokinin-like materials.

In the mid-fifties, cytokinins were first identified as a constituent of plants and have since been isolated in at least 40 plant species.

At first, the cytokinins were thought to be associated with cell division and differentiation. More recently, cytokinins were implicated in reducing plant aging, thus indirectly enhancing plant growth.

Although cytokinins occur naturally in plants, concentration varies with species. Cytokinin concentration in seaweed is high and extractions may be used for exogenous applications to other plants.

In addition, seaweed also contains low concentrations of other biostimulants such as auxins, gibberellic acid and micronutrients.

Seaweed extract

Seaweed extract containing cytokinins at approximately 175 ppm and applied at 1 gallon per acre has stimulated turfgrass foliage and development.

From our experience, it appears that seaweed extract via a cold water process is more active than when extracted with a hot water process. Evidently, high temperatures denature

some of the biostimulants.

In addition to the hormonal activity of seaweed cytokinins, seaweed has been thought to play a role in chelation of metals to give soluble complexes and increase plant uptake of micronutrients.

One of the most biologically active synthetic cytokinins is an adenine derivative known as benzylaminopurine, referred to as BA. We have obtained enhanced turfgrass growth with BA applications less than one ounce per acre.

In our studies, BA was more effective as an anti-aging material than an agent for promoting turfgrass growth.

Possibly by delaying chlorophyll degradation, the increased efficiency of photosynthesis caused what enhancement of growth was associated with BA.

Triazole fungicides

In our work, too, systemic triazole fungicides, propiconazole and triadimefon, applied at 4 to 20 ounces of active ingredient per acre, have produced turfgrass growth responses similar to turfgrass treated with natural or synthetic cytokinins.

Therefore, we refer to these fungicides as cytokinin-like materials. However, these triazole fungicides have been reported to act as inhibitors; that is, they affect plants as plant growth regulators do.

At low concentrations, the mode of action of the systemic triazole fungicides is the production of a precursor to the biosynthesis of cytokinins.

Possibly the lower concentrations of cytokinins interact favorably with plant metabolism and stimulate rooting.

Our research was initially designed to enhance the root development of transplanted sod. Sod that could grow roots rapidly into the underlying soil would be less affected by moisture stress.

Under conditions of root stimulation, the sod would be less dependent upon irrigation and better supplied with nutrient uptake.

Also, areas sodded with biostimulant-treated turf could be used sooner than areas sodded with turf not biostimulant-treated.

Practical applications

The use of biostimulant-treated sod would be pragmatic in situations where the turf was destroyed because of activities such as rock concerts, home shows or motor crosses and had to be sodded for an athletic event on short notice.

Results from our studies have shown over 500 percent enhancement of rooting from seedling grasses foliarly-treated with cytokinins or cytokinin-like materials under greenhouse conditions.

In the field, rooting enhancements of 200 percent have been obtained with transplanted sod, foliarly-treated with biostimulants.

Because of the sod enhancement obtained with applications of biostimulants, additional studies were designed to ascertain if sod strength enhancement could be also achieved with biostimulant treatment to enable



About the Author

R.E. Schmidt, Ph.D., is professor of agronomy at Virginia Tech.

early sod maturing.

Our studies showed root mass difference between biostimulant-treated turf and non-treated sod, but not until four to six weeks after treatment.

An additional four weeks was necessary to obtain an increase in the sod strength.

Responses differ

Turf species responded differently to different biostimulants. The biostimulants we worked with increased root and shoot weight, number of leaves per plant, total number of buds initiated and photosynthetic rate of Kentucky bluegrass and creeping bentgrass.

Materials that most consistently enhanced growth and development of Kentucky bluegrass and creeping bentgrass were the cold water extract from *Ascophyllum nodosum* seaweed and the triazole fungicide, propiconazole.

Propiconazole was the most effective biostimulant that we have applied to tall fescue.

The cold water seaweed extract appears to be the best biostimulant to enhance morphological and physiological development of warm season grasses.

Seaweed extract negated some of the effects of cold temperatures on bermudagrass.

Zoysiagrass was best able to tolerate desiccation when treated with seaweed extract.

Outlook positive

Our most recent studies show that all of the biostimulators tested were effective in enhancing Kentucky bluegrass foliage and root development under low soil moisture. Research is continuing in this area.

We are encouraged that our preliminary results indicate that the use of biostimulants could favorably influence the plant-soil moisture relationship and enhance the quality of turf grown under droughty conditions.

In addition, studies are being initiated to determine if biostimulants can be used to reduce the amount of fertilizer needed, especially nitrogen, for turf culture. It has been reported that less fertilization was required to maintain production of several crops other than turf when biostimulants were applied.

However, the use of biostimulants should not be considered a remedy for mismanagement or improper turf culture practices.

Improper use of biostimulants or anticipation of unrealistic results will likely cause dissatisfaction to the turfgrass manager. LCI

Are you fully equipped to do the job?



We are.

When your livelihood depends on your equipment, you can depend on Maruyama.

Whether pest control, landscape maintenance, nursery or greenhouse operating, produce growing or farming, you can count on Maruyama equipment for durability, quality and performance.

A Complete Line of Equipment:

- **Sprayers** — Manually or gas engine operated; backpack, cart, or frame mounted.
- **Brushcutters** — 5 models to choose from — 18.4cc to 40.2cc — low vibration, lightweight.
- **Trimmers** — Dual reciprocating blades 15.9cc or 24.1cc Mitsubishi drives, clean cuts.
- **Water Pumps** — Three models, 32gpm to 132gpm for irrigation or moving murky water.

- **Mist Dusters** — Handles liquid spray, dust, or granules.
- **Granule Spreader** — 18 ft. range, dry chemical or seed, with tank agitator to bust up clumps.
- **Blowers** — Powerful air blast makes cleanup jobs easy.
- **Soil Injectors** — For precise injection of chemicals.
- **And much more.**

Choose an International Leader.

Maruyama — producing the very best since 1895.
 U.S. Office: Maruyama U.S. Inc.
 15436 NE 95th St.
 Redmond, WA 98052
 (206) 885-0811
 Head Office: Maruyama Mfg. Co. Inc.
 4-15 Uchi-Kanda 3 Chome
 Chiyoda-Ku, Tokyo 101, Japan



CONVENTION REPORT

Tips offered for more effective customer education

By JAMES E. GUYETTE
Managing Editor

Homeowners need to be educated on proper cultural practices for turf managers to achieve desired results.

"It's something you in the lawn care industry need to do—give the homeowner more personal attention," says Clark S. Throssell, Ph. D., assistant professor of turfgrass science at Purdue University. Too often programs conducted by contractors fail to properly reach the customers, according to Throssell, who spoke at the Maryland Turfgrass Conference in Baltimore.

Some brochures are too long-winded and too technical, or they are presented as self-promoting advertising material typically ignored by consumers.

"We need to do a better job of educating them."

The poor cultural habits displayed by some clients are mainly a problem of not knowing the proper procedures—a situation that can be remedied by personal instruction or a suitable brochure.

"Have the homeowner work *with* you instead of *against* you," he urges.

"You need a small flyer, right to the point, written in words they can understand," says Throssell.

"I'm not talking about a 4-page essay," he emphasizes, "that won't work—the homeowner won't read it."

For LCOs, instructions on proper mowing habits should be discussed with the clients. Blade height, sharpness and the selected mowing day can have an impact on the treatment program.

"Most people mow on Friday, Saturday or Sunday," Throssell points out.

To ensure the proper length of cut, the LCO can leave behind a sheet about setting blade heights—or perform the task for the customer: "Most people think those (numbered) wheel adjustments are in inches."

Keeping the blade sharp is an important factor. Most LCOs can't stop to sharpen blades, but Throssell notes that "it does have an impact on your results."

Everyone involved can benefit if turf managers keep a close eye on customers' irrigation systems.

"It's worth your time to help them program it," says Throssell.

"They spend all that money on an irrigation system—and they're going to use it six or seven days a week."

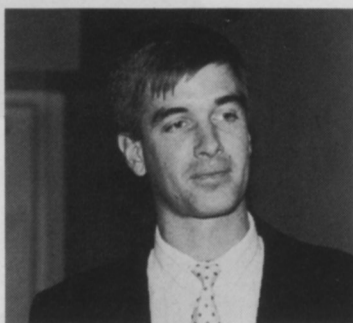
Crabgrass and other drawbacks can result from overwatering, which is more likely

to occur if the built-in sprinklers are somewhat new to the residents.

"The irrigation system that they expect to be the savior of their lawn has instead caused the lawn problems."

Verbal advice should be accompanied by a watering guide for irrigation and hose-mounted sprinkling that discusses the correct frequency, amount, rate and time-of-day.

Realistically, most people are willing to water from 8 p.m. to 10 p.m. Few will arise early in the morning to do it.



Throssell: Get involved.

"Maybe one in 15 people is going to get up at 5 a.m. to water their lawn."

Thatch is another issue

that turf managers need to address.

"I view thatch as a by-product of an attractive lawn," says Throssell, calling it "a necessary evil."

The wise lawn care professional will have his or her crews keep an eye on thatch depth. "Monitor the buildup of the thatch—I guarantee you the homeowner won't do that," Throssell observes.

"Address the thatch issue *before* it becomes a problem."

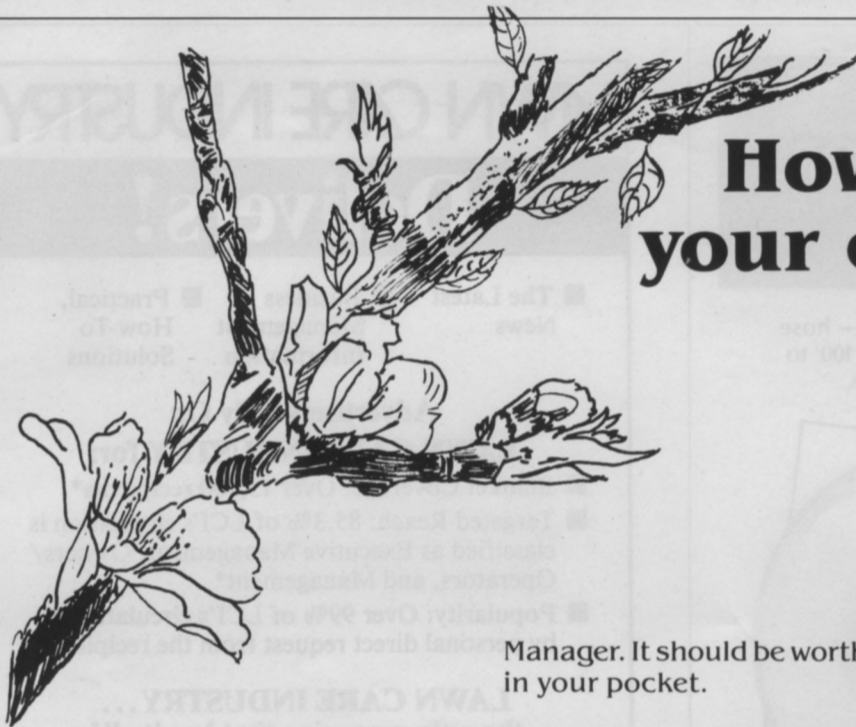
For customers who do their own seeding, some advice on

sane seed selection can avert future difficulties.

"To too many homeowners, grass seed is grass seed," Throssell laments. "They don't read the label. If they did read the label they wouldn't understand it."

Homeowners should be urged to avoid overseeding a bluegrass lawn with tall fescue: "The end result is a mess."

And any seeding should take place in the fall, even though homeowners "are still in the spring rut" of working when the weather breaks. LCI



How to make your career grow.

Join PGMS.

GROUNDS MANAGER: The Professional Grounds Management Society treats your career with loving care.

• **SHARE KNOWLEDGE AND IDEAS** at the Annual Conference and Trade Show. This yearly forum brings together grounds managers, top speakers and suppliers to give you ideas to grow on.

• **DISCOVER NEW IDEAS EVERY MONTH** through the newsletter mailed to members.

• **RECEIVE PROFESSIONAL CERTIFICATION:** A peer review earn you the title of Certified Grounds

Manager. It should be worth money in your pocket.

• **GET SMARTER.** The Society conducts surveys on operational practices. These surveys are made available to members only.

• **GET ADDITIONAL INSURANCE AT NO ADDITIONAL COST.** Your membership entitles you to \$5,000.00 accident and dismemberment insurance.

• **GET RECOGNIZED.** Be one of those good enough to receive an award for outstanding achievement in grounds management.

• **LEARN.** Workshops all over the country give you management skills covering all aspects of grounds management.

• **SAVE MONEY.** Members receive discounts on Hertz, Avis and Alamo rental cars and on the horticultural publications you need to grow.

• **MAKE YOUR PERFORMANCE SUPERIOR** with

- the Grounds Maintenance Estimating Guide
- the Grounds Maintenance Management Guidelines
- the Grounds Management Forms and Job Descriptions Guide. They're free to members.

Join today. Your career will take root and grow.

Clip and mail to **PROFESSIONAL GROUNDS MANAGEMENT SOCIETY**, 12 Galloway Avenue, Suite 1E, Cockeysville, MD 21030 or phone (301) 667-1833.

**Professional
Grounds
Management
Society**

TO: PROFESSIONAL
GROUNDS MANAGEMENT
SOCIETY
12 Galloway Avenue
Suite 1E, Cockeysville, MD 21030

YES! I want to give my career a green thumb. Please send more information on what PGMS can do for me.

Name _____

Company _____

Street _____

City & State _____ Zip _____

Area Code and Telephone Number _____

NEW PRODUCTS



Pull-behind aerator new from Feldmann
 Feldmann Engineering and Manufacturing Co., Inc. is introducing a new 48-inch pull-behind aerator.
 The device aerates 47 percent faster than a 25-inch aerator and 33 percent faster

than a 32-inch aerator, according to the company.
 The lift handles on the Feldmann machine pop the 10-inch pneumatic tires into position for plugging or transport.
 Penetration is up to two-and-a-half inches. LCI
 Circle No. 130 on service card.



Scott's plastic packet contains preemergent
 Pendimethalin is now available in water-soluble plastic packaging from O.M. Scott & Sons Co. in Marysville, Ohio.
 ProTurf Weedgrass Control 60 WP provides pre-

emergent control of six grassy weeds and nine sprouting broadleaf weeds.
 Each package contains two one-and-a-fourth-pound packets that can be dropped in a spray tank. LCI
 Circle No. 131 on service card.

New electric sprayer designed for quiet areas
 Maruyama U.S., Inc. in Redmond, Wash. has a new electric sprayer designed for use in areas where quiet is required.
 The cart-mounted MS055MC has a 15-foot power cord and a 66-foot hose.



The unit features a duplex piston pump that produces up to 1.3 gpm and 357 psi. The pump has all stainless steel cylinders, discharge valves, springs and seats.
 The 6-gallon tank has a convenient drain plug for easier cleaning and flushing, according to the company. It also has a double filter basket positioned in a wide lid. LCI
 Circle No. 132 on service card.

No. 1 CHOICE OF TOP OPERATORS
Heavy Duty Aluminum HOSE REELS

- Single pedestal base for easy mounting.
- Equipped with Green Garde Extra-Duty swivels.
- 3 Popular Sizes — hose capacities from 100' to 300' of 1/2" hose.



green garde
 At Your Distributor or Call Us at (312) 593-6464.
ENCAP PRODUCTS COMPANY
 P.O. Box 278, Mt. Prospect, IL 60056

Circle No. 109 on Reader Inquiry Card

LAWN CARE INDUSTRY Delivers!

- The Latest News
- Business Management Information
- Practical, How-To Solutions

Advertisers Rely On LAWN CARE INDUSTRY for:

- Blanket Coverage: Over 13,500 recipients*
- Targeted Reach: 85.3% of LCI's circulation is classified as Executive Management, Owners/Operators, and Management*
- Popularity: Over 99% of LCI's circulation is by personal direct request from the recipient*

LAWN CARE INDUSTRY... the only magazine that has it all!
 To reserve space, call Group Vice President Bob Earley at (216) 826-2856 or contact your LCI representative today.

LAWN CARE INDUSTRY
 7500 Old Oak Boulevard, Cleveland, Ohio 44130 • (216) 826-2856

*SOURCE: December 1988 BPA Statement

THE BPA COMMUNICATIONS

Overseeding? for perfect germination put the seed where it belongs...in the soil,



Also available as Model LS24 seeder

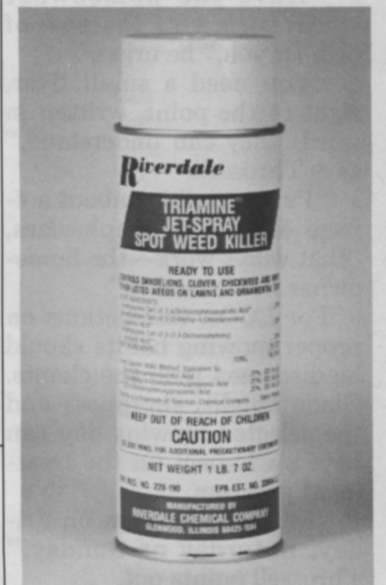
The overseeding attachment is quickly and easily replaced by a trailing heavy-duty open mesh steel roller that covers the seed and firms the soil.

For more information on this and other fine turf care equipment from Brouwer, contact your dealer... today.

Woodbine Ave., Keswick, Ont., Canada L4P 3E9
 Tel. (416) 476-4311
 Fax. (416) 476-5867

BROUWER
TURF EQUIPMENT LIMITED
 An Outboard Marine Corporation Company

7320 Haggerty Rd., Canton, MI. 48187
 Tel. (313) 459-3700
 Fax. (313) 459-8778



Spot weed killer comes in spray can
 The Riverdale Chemical Co. in Glenwood, Ill. is marketing Triamine Jet-Spray Spot Weed Killer.

The three-way selective broadleaf herbicide comes in a spray can. It contains the amines of 2,4-D, Mecoprop and Dichlorprop.

A foam tracer tells where weeds have been treated.

Triamine Jet-Spray Spot Weed Killer is handy for use in hard-to-reach areas or places where broadcast spraying may be harmful, according to the company.

It controls dandelions, chickweed, plantain, oxalis, spurge and other weeds on cool and warm season grasses, according to Riverdale.

For promotional use, private label programs are available for specialization, according to the company. LCI
 Circle No. 133 on service card.

Circle
the
Reader
Service
numbers
of those
items of
interest
to you.

For rapid response, use the peel-off label from the front cover

NAME _____	
TITLE _____	
FIRM _____	PLACE COVER LABEL HERE
ADDRESS _____	PRINT PHONE NUMBER BELOW
CITY _____	
STATE _____	ZIP _____
PHONE () _____	

101	116	131	146	161	176	191	206	221	236	251	266	281	296	311	326	341
102	117	132	147	162	177	192	207	222	237	252	267	282	297	312	327	342
103	118	133	148	163	178	193	208	223	238	253	268	283	298	313	328	343
104	119	134	149	164	179	194	209	224	239	254	269	284	299	314	329	344
105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345
106	121	136	151	166	181	196	211	226	241	256	271	286	301	316	331	346
107	122	137	152	167	182	197	212	227	242	257	272	287	302	317	332	347
108	123	138	153	168	183	198	213	228	243	258	273	288	303	318	333	348
109	124	139	154	169	184	199	214	229	244	259	274	289	304	319	334	349
110	125	140	155	170	185	200	215	230	245	260	275	290	305	320	335	350
111	126	141	156	171	186	201	216	231	246	261	276	291	306	321	336	351
112	127	142	157	172	187	202	217	232	247	262	277	292	307	322	337	352
113	128	143	158	173	188	203	218	233	248	263	278	293	308	323	338	353
114	129	144	159	174	189	204	219	234	249	264	279	294	309	324	339	354
115	130	145	160	175	190	205	220	235	250	265	280	295	310	325	340	355

LAWN CARE INDUSTRY

JUNE 1989

This card void after Aug. 15, 1989

1. CHECK BELOW YOUR PRIMARY BUSINESS AT THIS LOCATION:

A. LAWN CARE COMPANY: Read each choice before answering.

- 10 Chemical lawn care company
 20 Mowing/management lawn care company and/or landscape contractor
 30 Both chemical lawn care company and mowing/management lawn care company and/or landscape contractor

B. SUPPLIER

- 50 Chemical and equipment dealer and/or distributor

C. OTHER (specify) _____

2. WHAT IS YOUR TITLE? _____

I would like to receive (continue receiving)
 LAWN CARE INDUSTRY each month: Yes No

Signature: _____ Date _____



BUSINESS REPLY MAIL
 FIRST CLASS PERMIT NO. 665 DULUTH, MINNESOTA

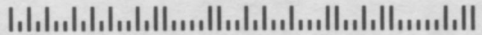
POSTAGE WILL BE PAID BY ADDRESSEE

READER SERVICE DEPARTMENT

LAWN CARE INDUSTRY

POST OFFICE BOX 6080
 DULUTH, MINNESOTA 55806-9780

NO POSTAGE
 NECESSARY
 IF MAILED
 IN THE
 UNITED STATES



**GET
 MORE
 FACTS**

ACTION

from Page 1

of them."

The report is entitled, *Keep Off The Grass*. It was released in two parts by author Laura Weiss of the Public Citizen's Congress Watch.

Part I was *A Review of the Health Effects of Pesticides Most Commonly Used by the Lawn Care Industry*. Part II was *An Analysis of State Regulations Governing the Commercial Lawn Care Industry*.

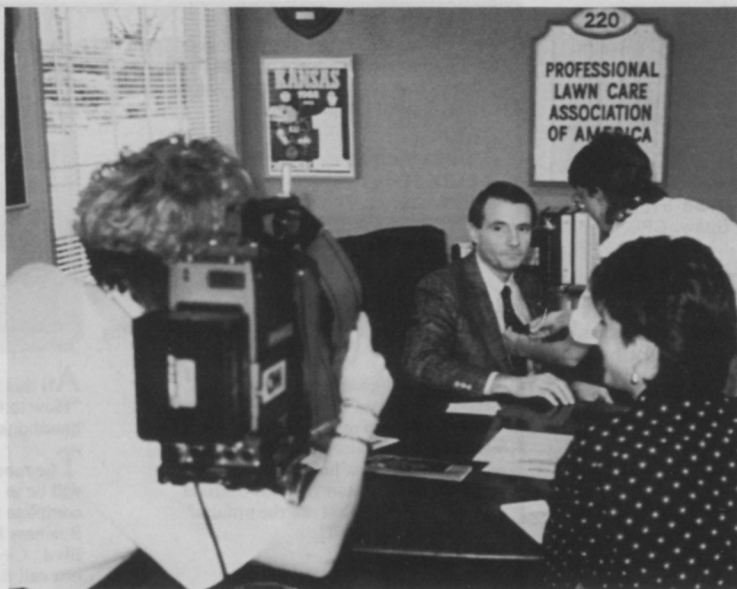
The report essentially says that a number of chemicals used by LCOs are health hazards, and that the industry is under-regulated.

Damage to LCOs was minimized by the lawn care industry's prompt response to the report, says Troutman. "It died very quickly."

Also, the previous fuss over the use of Alar on apples had the public less inclined to get excited over the matter, he believes.

"Our feeling is that the report received much less publicity than it would have before the Alar thing," says Troutman.

Concern over two con-



On camera: Wilkinson prepares to be interviewed on the nationwide Cable News Network.

taminated grapes from Chile—which turned out to be a non-issue—contributed to the nation's blasé attitude.

"I think the public wanted to hear that food was safe. I think by the time this report came out people were sick of scare stories. I think the press was looking at it more critically," Troutman observes.

Damage control efforts played a big role, too, he points out.

LAWN CARE INDUSTRY Editor Elliot Maras obtained a

copy of the report the day before its release. He FAXed it to PLCAA, and PLCAA officials FAXed it to others.

James F. Wilkinson, Ph.D., director of regulatory and environmental affairs, flew to PLCAA's Marietta, Ga. headquarters from his home in Rhode Island to help prepare a united response.

He wrote a "guest columnist" piece opposing Weiss in *USA Today* and he was interviewed by the Cable News Network.

PLCAA officials also made themselves available to field phone calls from the media.

"We were flooded with calls when the first half came out," Troutman recalls. By the time Part II was released, reporters were apparently convinced that the story was a bust. "We got just a half dozen calls when the second half came out."

PLCAA issued press releases denouncing Weiss' report, her poor research techniques and the incorrect information that she published.

A PLCAA bulletin notified members of the report and urged them to refer local reporters to the headquarters for comment.

PLCAA also sent members a point-by-point response to the first part of the Public Citizen report, with a response to Part II to come.

The Chemical Specialty Manufacturers Association also issued a press release taking issue with Weiss' conclusions.

Meanwhile, Maras at LAWN CARE INDUSTRY interviewed an official at the Environmental Protection Agency, who disputed the claims cited in Weiss' report.

Maras moved the comments

on the PR Newswire Service distributed nationwide by the Associated Press.

The lawn care industry's efforts resulted in fairer stories for the most part.

The coverage in New Jersey was nothing like 1986, when the media went crazy over the pesticide issue, says Russ Frith, president of Lawn Doctor, Inc., based in Matawan, N.J.

"I think the media people are getting a little more receptive" to the fact that these claims may be questionable, Frith observes. New Jersey radio programs handled the report evenhandedly.

Weiss' report gave Iowa a C-minus for its regulatory efforts, and that was reported in the *De Moines Register*.

Darryle Johnson, president of American Turf Beauty, Inc. in Van Meter, Iowa, reports that he got only three cancellations.

"What concerns me is how many didn't call in to get (service) started," he adds.

Tom Jessen, president of Perma Green Supreme, Inc. in Crown Point, Ind., heard nothing from his customers after the local papers carried stories on the report.

Industry Consultant Philip E. Catron lives in the Baltimore-Washington area, and he reports that the public has had its fill of the Exxon Valdez, grapes, apples and the ozone. "I think people are just kind of dazed and muted right now."

Some commercial clients of Clarence Davids & Sons in Blue Island, Ill. expressed concerns over the chemicals used after stories appeared in the local papers.

Bill Davids, vice president of operations, told them that for all the potential risks there are many more benefits. LCI

ORKIN

from Page 1

Shipp, president of Western Farm. "It (Yearound) was not part of our base of business." He notes that all of the other seven Western Farm divisions are involved in agriculture.

"We are happy to welcome the employees of Yearound to the Orkin Lawn Care family," says Gordon Crenshaw, vice president. "The company has excellent employees and we're excited about the fact that this

creates a truly national market for our company."

The eight Yearound branches make a total of 63 for the Orkin Lawn Care network.

Orkin Lawn Care is a division of Orkin Exterminating Co., which is owned by Rollins, Inc. of Atlanta, Ga.

According to Rollins' 1988 annual report, Orkin Lawn Care is the third largest owner-operated lawn care firm in the country, meaning its 1988 sales were in excess of \$30.9 million. LCI

Pennsylvania ponders posting

HARRISBURG, PA.—A proposal is in the works to require Pennsylvania LCOs to pre-post 48 hours before an application and display 18-by-24-inch warning signs afterwards.

The bill has a number of sponsors, but at presstime it had not been introduced to the legislature.

The post-application sign requirements include that it contain the Mr. Yuck symbol, a copy of the label, the phone

number of the local poison center and the applicator's name.

The Chemical Specialty Manufacturers Association is objecting to the complicated regulations. "It is a big ball of wax," said Bob Pearce, chairman of CSMA's commercial/residential division.

The bill targets structural pest control firms especially hard. Hospitals and hotels would also be affected. LCI

Call Now to See PERFCO'S Full Line of 4-COLOR LAWN CARE AND LANDSCAPING BROCHURES



NOW YOUR COMPANY CAN AFFORD BEAUTIFUL, 4-COLOR BROCHURES... AT 2-COLOR PRICES!

- Lawn Care & Landscaping, Many different styles and sizes to choose from.
- 4-Color Aeration & Disease Doorhangers.
- Project a professional image.
- Personalized to fit your company's needs.
- Large order custom designs.
- Eliminates costly agency fees!

PLCAA Booth # 825, 924

PERFCO

85 Quick Rd.
New Carlisle, OH 45344

FOR FREE SAMPLE PACKAGE
CALL OR WRITE TODAY

1-800-543-0900
Ohio 1-513-845-3897

ONLY THE PRICES ARE UNBELIEVABLE!

The Brouwer Trash-Pik™

The Trash-Pik™ is the innovative method for picking up litter at municipal locations, theme parks, airports, shopping malls, car parks and such places.

Some outstanding features:

- 18 h.p. two cylinder Kohler gas engine
- Closed loop hydraulic hydrostatic drive
- 200 degree nozzle operating arc
- Reverse air-flow to remove hose blockages or blow leaves or litter for easy pick-up
- The 8 cu. ft. litter container bag tilts back for easy unloading
- Heavy-duty, corrosion free fibre-glass body



Solve your litter collection problems, fast, efficiently.

Call your Brouwer dealer for more information or a demonstration...TODAY.

Woodbine Ave., Keswick,
Ont., Canada L4P 3E9
Tel. (416) 476-4311
Fax. (416) 476-5867

BROUWER™
TURF EQUIPMENT LIMITED
An Outboard Marine Corporation Company

7320 Haggerty Rd.,
Canton, MI. 48187
Tel. (313) 459-3700
Fax. (313) 459-8778

CLASSIFIED

RATES: \$1.00 per word (minimum charge, \$35). Boldface words or words in all capital letters charged at \$1.25 per word. Boxed or display ads charged at 1X \$85; 3X \$80; 6X \$75; 9X \$70; 12X \$65 per column inch (one inch minimum). (Frequencies based on a calendar year). Agency commission allowed only when camera ready art is provided by agency. For ads using blind box numbers add \$15 to total cost of ad. Send ad copy with payment to: DAWN NILSEN, LAWN CARE INDUSTRY, 1 E. First St., Duluth, MN 55802. (218) 723-9505. Fax Number (218) 723-9615.

BOX NUMBER REPLIES: Mail box number replies to: LAWN CARE INDUSTRY, Classified Ad Department, 1 E. First St., Duluth, MN 55802. Please include box number in address.

BUSINESS OPPORTUNITIES

CURB-MATE-THE MONEY MACHINE. Patented, electrically driven and self-propelled machine produces beautiful continuous concrete landscape edging. Simplifies the installation of concrete borders between lawns and flower beds, along driveways and sidewalks, etc. Applications for residential and commercial settings, golf courses, etc. Turn \$5,000-\$10,000 equipment purchase into \$50,000-\$100,000 potential annual income. (801)273-3938. 6/89

CURB KING: Curbing machine that lays continuous concrete landscape borders. Low investment, high returns. For information call 303-434-5337 or write PO Box 40567, Grand Junction, CO 81504. 9/89

FOR SALE

HANNAY HOSE REELS: New in the box. E1526's and E1530's - \$349.00 We will ship and pay freight anywhere in the U.S.A. and Canada. Immediate delivery. Other size reels and parts available at fabulous savings! Call 313-543-2200, in Michigan. Outside Michigan - 1-800-843-LAWN. TF

ROYER DIRT SHREDDER Model 182. In Excellent Condition. \$9,000 or B/O. 313-243-3382 or 313-243-8522 Evenings. Jack's Lawn Service, Monroe, Mich. 6/89

USED CHIPPERS, BUCKET TRUCKS, BOOM TRUCKS: Stump grinders, stake bodies, tree trucks and dumps. New Morbark and Woodchuck Chippers. Rayco stump grinders at discount prices. We also buy trucks and equipment. Opdyke, Inc., Hatfield, PA (Phil. area) 215-721-4444. 7/89

FREE PARTS CATALOG - If you own a 32-36-48-52-61" walk-behind or riding mower and feel you're paying too much for your parts and equipment call PRECO DISTRIBUTORS today. We have BELTS, BLADES, WHEELS, GRASS CATCHERS. Replacement parts that fit Bobcat, Buntun, Kees, Exmark, Scag & others. Engines and Parts for Honda, Kawasaki, Briggs & Stratton and more. Order your free catalog 24 hours a day. TOLL FREE 1-800-428-8004, US, in Mass. 1-800-421-3900. Preco Distributors, 97 Center St., Ludlow, MA 01056. TF

Bowie Hydromulcher 1100: Trailer mounted with extra duty suspension and extra wide tires, Kubota Diesel powered with heavy duty clutches and powertrain, centrifugal pump and electric hose reel with hose. Well maintained. No rust. \$12,900. Call Gary at (317)873-5231. 6/89



HELP WANTED

Excellent positions in the irrigation & landscape industry are available now. Call **Florapersonnel**, the international employee search firm for the ornamental horticulture industry. Completely confidential. Employer pays fee. **Florapersonnel**, P.O. Box 1732, 1450 S. Woodland Blvd., Suite 201, DeLand, FL 32721-1732. (904)738-5151. Jim Bambrick, Jeff Brower, David Shaw, CPC, Bob Zahra, CPC. TF

MAJOR LAWN CARE COMPANY needs to fill middle management field staff position in the Dallas area. Related degree preferred, but must have hands-on experience in lawn and ornamental care. Must have strong communications skills and be willing to travel. Good benefits. Resume and salary history to LCI Box 210. TF

SALES MANAGER

Turf Ornamental supply business seeks a motivated person to direct sales in the Mid-Atlantic area. Applicant should have sales training and market planning experience. Competitive salary, benefits, with opportunity for professional growth. Send resume to:

Moyer & Son, Inc.
P.O. Box 198
Souderton, PA 18964
Attn: Ken

Lawn Care \$20M-\$50M

Career opportunities coast-to-coast. Employer retained. Experts in personnel since 1968.

USA Careers 515-394-2556
New Hampton, IA 50659

MISCELLANEOUS

LANDSCAPE TRAINING VIDEOS

Intermediate mower maintenance field and shop repair; efficient/profitable mowing techniques; professional shrub trimming, plant installation, basic landscape plan drawing, etc. **ENGLISH AND SPANISH.** Write for free brochure.

C.D. Anderson Landscape Videos
515 Ogden Avenue
Downers Grove, IL 60515
1-800-937-0399

WANTED

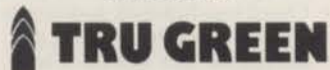
Wanted to Buy - Lawn care companies of all sizes anywhere in U.S. wanted to purchase by national corporation. If interested, please respond to LCI Box 197. Strict confidentiality maintained. TF

WANTED TO ACQUIRE

Lawn care companies of all sizes in U.S. and Canada being sought by national corporation. Complete buy out or stay and grow with us. If interested, please call me directly:

Don Karnes
Senior Vice-President
TRU GREEN CORPORATION
(404) 442-8700

STRICT CONFIDENTIALITY
MAINTAINED



A new handbook from the editors of Lawn Care Industry—Hundreds of ideas from industry experts... This book is loaded with hands-on tips to improve your...

- HIRING
- ADVERTISING
- MARKETING
- MANAGEMENT
- CUSTOMER RELATIONS
- PROMOTIONS
- BUYING
- LIABILITY KNOWLEDGE

Here are only a few of the subjects you can dig into...

- Ways to find good employees
- How to motivate workers at \$5 an hour
- Expanding into mowing/management work
- Off-season options
- Marketing to new homeowners
- How to write a snow removal contract
- Joint bidding—what are the pitfalls?
- To sell or not to sell?
- To buy or rent?
- Contractors liabilities



All this and much, much more in the new "How to Grow Your Lawn Care Business" handbook. Get yours now for only \$35.

The more you use this book, the more useful it will be to you. To order your copy, simply complete the attached card and mail it to Business Information Services, 7500 Old Oak Blvd., Cleveland, OH 44130. Or for rush service just call BIS at (216) 826-2839.

YES I want _____copy(s) of the Lawn Care Industry's "How to Grow Your Lawn Care Business". My payment is enclosed. Check payable to BIS

Charge my credit card: VISA Master Card American Express

Card # _____ Exp. Date _____

Signature _____

Name _____

Company _____

Address _____

City/State/Zip _____

Phone _____

ADVERTISERS INDEX

NO.	ADVERTISER	PAGE	NO.	ADVERTISER	PAGE
101	Americalist	34	118	Mobay/Oftanol	14-15
102	American Cyanamid	29	119	Monsanto	10-11
103	Andersons	4	120	Northrup King	4
104	BASF	7	121	O.M.C. Cushman	2-3
105	Brouwer/Triplex-376	16	122	Perfco	33
106	Brouwer/Trash Pik	33	123	Rhone-Poulenc	9
107	Brouwer/Seeder	30	124	Riverdale	24
108	Dow Chem	26-27	125	Tecumseh	24
109	Encap	30	New Products		
110	Hochst Roussel	22	130	Feldmann/aerator	30
111	Lesco	36	131	O.M. Scott/Pendimethalin	25
112	Lofts	17-20	132	Maruyama U.S./electric sprayer	30
114	Maibo	25	133	Riverdale/weed killer	30
115	Maruyama	21			
116	Mobay/Dylox	8			
117	Mobay/Oftanol	23			

This index provided as an additional service. The publisher assumes no liability for omission or error.

IT'S A JUNGLE OUT THERE...

Without a good guide the direct mail maze can swallow you up! Get the right list and state-of-the-art mailing services from Americalist! We've been helping people like you market to America by mail ever since 1932.

- Up to the minute mail and telephoning lists we compile ourselves
- Labels, cards, self-mailers, mag-tape or diskettes
- Verification and updating for your list
- Personalized mailers on our new laser printing facilities



For good guidance call us toll free at 1-800-321-0448
(in Ohio) 1-800-321-4911



Will southern species grow in the North?

Will warm season grasses grow in cool season climates? Do people even want them to?

Could planting bermudagrass throughout the nation be the lawn care industry's answer to areas that are under drought-induced watering restrictions?

These questions are being raised by J. Randall Ismay, owner of Landscape and Water Consultants in Los Angeles, Calif.

Randall recently conducted a fascinating hour-and-a-half seminar—without notes—at the California Landscape Contractors Association convention in Long Beach.

His ideas on water conservation include the belief that warm season grasses should be planted wherever possible—and that includes northern climates!

Randall acknowledges that his concept is controversial, but he says it can be an effective cure for water-starved turf.

The idea that southern grasses are harder to take care of just doesn't wash with Randall. "When people say warm season grasses are harder to maintain, what they really mean is that they don't want to buy a reel mower."

Breeders continue to make improvements in warm season grasses, and Randall says they could become popular throughout the country. "I feel that they will be the rule, not the exception."

Bermudagrass does particularly well under limited moisture conditions. "It is by far the superior turf for the environment," he notes.

"It needs less than half the water" that bluegrass requires. It needs far less fertilizer and far less maintenance. Except for Florida, bermuda has few disease or insect problems.

Plus, bermuda is tough. It resists traffic damage and it can repair itself.

Turf managers can see this happening in areas where they battle bermuda or other southern grasses as pesky weeds. "Rather than fooling around with the cool season grasses they should let the warm season grasses take over."

Warm season grasses can survive under cold weather conditions, Randall states, referring to some stands of bermuda that he's observed in different regions of the country. "I've seen it grow in Denver and do quite adequately well."

Even in harsher climates, "it would not do extremely

well, but it would survive."

One big benefit is that other species can be adapted for certain climate conditions. "Where one warm season grass leaves off another one picks up," says Randall. "For most of the Plains states buffalograss is the superior turf to use on mowed areas."

Okay, Randall, what about Cleveland, Ohio?

"There are zoysiagrasses that would do quite nicely in your area."

Of course, the big problem



JAMES E. GUYETTE
MANAGING
EDITOR

with trying to market warm season grasses is that they go brown at the first hint of winter. Most people in the North would find that unacceptable, right Randall?

Not to worry, says he. "They can overseed with

annual rye or annual bluegrass; if they're really upset they can spray it green" with a dye product.

Others remain skeptical that warm season grasses will survive northern winters.

Bermuda won't cut the mustard, says Kent W. Kurtz, Ph.D., professor of turf management and ornamental horticulture at California State Polytechnic University in Pomona. But he knows zoysia will grow in Chicago. "My father bought the plugs out of the

newspaper."

And he has seen a patch of bermuda growing just outside of Cleveland Municipal Stadium. Kent wanted myself and colleague Ron Hall to dig some up so it could perhaps be bred into a super bermuda.

We couldn't find it, but we must have made a fine impression: Two guys in coats and ties carrying shovels, walking along staring at the lawn.

Were we looking for nightcrawlers, a buried treasure or Jimmy Hoffa?

James E. Guyette

Your Business Partner

...Helping grow your business

As a busy lawn care professional, you can't be personally involved with the many critical details that go into making your business successful, details ranging from developing staff safety training programs to keeping abreast of the latest regulatory issues. That's why it is vital that you have the timely information that allows you to be proactive rather than reactive. That's why you need your Business Partner — The Professional Lawn Care Association of America. Let your Business Partner go to work for you on such assignments as:

- Issues Management
- Training programs for pesticide management
- OSHA Hazard Compliance
- An effective telemarketing program
- Preparing a marketing plan
- Update on small business law
- Group Health/Life/Major Medical
- A Credit Collection Service
- A Liability Insurance Program
- A newsletter on lawn care issues
- A public relations program
- Gather major suppliers of lawn care products and services

As the only international trade association of lawn care professionals, PLCAA has a strong history of providing the right information at the right time for the lawn care industry. Our staff and Board of Directors are dedicated to providing you with the professional business assistance you need to stay strong and informed.

To learn more about how to put your Business Partner to work — for less than a dollar per account per year, contact the Professional Lawn Care Association of America today. Clip and mail the return coupon, or call toll free 1-800-458-3466.



PROFESSIONAL LAWN CARE ASSOCIATION OF AMERICA

1000 Johnson Ferry Road N.E., Suite C-135
Marietta, Georgia 30068-2112
1-404-977-5222 FAX: 404-578-6071

I'm interested! Send me more information on membership in PLCAA

NAME _____
TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____
TELEPHONE _____

CLIP AND MAIL TO:
Professional Lawn Care Association of America, Suite C135
1000 Johnson Ferry Rd NE Marietta GA 30068-2112 LCI

Get ready to profit from fall lawn renovation with a special price

proven performance. Purchase a renovator by

THE PROVEN PROFIT-MAKER.

and excellent payment terms on the LESCO Renovator 20. It's the easy-to-operate slicer/seeder with built-in maneuverability and

June 30, 1989 and pay just \$2495.00. With no payment due until September 1, 1989.

Powered by an 8-HP Honda engine, the LESCO Renovator 20 features exclusive hydraulic drive with 0 to 2 mph forward speed control.

Spring-loaded reverse gives the unit greater maneuverability in tight areas and simplifies trailer loading and

unloading. A compact, low-profile design provides excellent hillside stability.

Last year, the renovator supply did not meet demand. It could happen again. Prepare now to profit this fall by taking advantage of this special price and extended payment terms.

We're ready to deliver. Contact your LESCO sales representative, visit the nearest LESCO Service Center or call toll free (800) 825-3726.

Special pricing in effect from May 10 through June 30, 1989. Payment for all orders booked during promotion is due net September 1, 1989.

LESCO

LESCO, Inc., 20005 Lake Road,
Rocky River, Ohio 44116
(216) 333-9250



**Special Price
And Terms.
Order by June 30, 1989.**