



IT PAYS TO HAND THIS KIND OF WORK TO ROUNDUP[®]

Hand-weeding areas like this doesn't make sense today. Not when Roundup[®] herbicide can do the job faster and better and give you more time to handle more customers.

Here's how: one-shot Roundup controls over 100 weeds right down to the roots, including poison ivy, poison oak and kudzu. One gallon of 2% spray solution can treat up to 30 tree rings for about a nickel each, or 1,000 feet of fence line for less than \$2.00*.

It also pays to use Roundup when you're working around expensive ornamentals—because Roundup won't wash, leach or carryover in the soil. And

Roundup is virtually odorless and environmentally sound.

Use Roundup wherever you've been hand-weeding—around patios, flower beds, curbs, walkways, driveways, mulched areas, fences and steps. The choice is simple. You can spend valuable time hand-weeding. Or you can use Roundup to help you make more money. Now, that's using your head.

*Based on the cost of Roundup only to treat low growing vegetation.

FOR A FREE TRIMMING AND EDGING GUIDE,
FOR ROUNDUP CALL TOLL FREE 800-621-5800.
IN ILLINOIS, CALL 800-972-5858.

ALWAYS READ AND FOLLOW LABEL DIRECTIONS FOR ROUNDUP.
Roundup[®] is a registered trademark of Monsanto Company.
© Monsanto Company 1984 RSP-4-104D



Write 10 on reader service card



HOW TO SELL LAWN DISEASE CONTROL, AND DELIVER IT.



HELMINTHOSPORIUM LEAF SPOT



SCLEROTINIA DOLLAR SPOT



RHIZOCTONIA BROWN PATCH



FUSARIUM PATCH

Turn disease problems into profits with CHIPCO® 26019 fungicide.

Selling disease control is a great way to boost profits and attract new customers.

And CHIPCO® 26019 is the ideal product to help you do both.

The selling proposition: a beautiful, disease-free lawn.

Everything you do for a customer is designed to create a beautiful lawn. Turf diseases look bad...and that can make *you* look bad. A programmed approach includes an effective, long-lasting fungicide like CHIPCO 26019 keeps your customers satisfied.

CHIPCO 26019 is the only fungicide you need.

It can be used safely on all lawn grasses nationwide to control the major turf diseases like leaf spot, dollar spot, fusarium and brown patch. Highly effective and long-lasting, CHIPCO 26019 fungicide fits into your treatment schedule and reduces callbacks.

In short, when you've got CHIPCO 26019 on the shelf, you're ready for *business*.

Send for FREE booklet on how to sell disease control.

We've put together a booklet that details lots of effective techniques and tools for selling disease control to your customers...and delivering it with effective, long-lasting CHIPCO 26019 fungicide.

Turf Fungicide
**CHIPCO®
26019**
TAKING CARE OF BUSINESS

Send to: Rhône-Poulenc Inc.
CHIPCO Fungicide Lawn Care Center
P.O. Box 125 Black Horse Lane
Monmouth Junction, NJ 08852



Please send FREE *How to Sell Lawn Disease Control* booklet to:

NAME _____

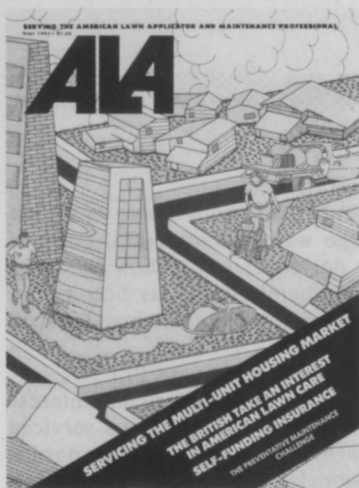
TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Write 37 on reader service card



ALA

SEPTEMBER 1984
VOLUME 5 NUMBER 6

THE COVER

More and more apartment, condo and townhouse lawns are becoming available to lawn care operators with the current building boom. Turn to page 24 and see what you may have been missing. Cover art by Raymond Bugelski.

CALENDAR

Sept. 11

Ohio Turfgrass Field Day, Ohio State University Turfgrass Field Plots.
Contact: Karl Danneberger, Department of Agronomy, Ohio State University, Columbus, OH 43210, 614/422-2001.

Sept. 18-20

Virginia Turfgrass Research Field Days, Virginia Tech, Blacksburg, VA. Contact: J.R. Hall, III, Agronomy Dept., Virginia Tech, Blacksburg, VA 24061, 703/961-5797.

Sept. 30-Oct. 3

Florida Turfgrass Association 32nd Annual Conference and Show, Hyatt Regency Hotel and Curtis Hixon Convention Center, Tampa, FL. Contact: FT-GA Executive Office, 302 S. Graham Avenue, Orlando, FL 32803, 305/898-6721.

Sept. 30-Oct. 3

Society of Municipal Arborists 20th Annual Meeting and Trade Show, Sheraton Gardens Hotel, Freehold, NJ. Contact: Dave Shaw, local chairman, 20 Court Street, Freehold, NJ 07728; 201/431-7903, or Robert Miller, exhibits chairman, 7447 Old Dayton Road, Dayton, OH 45427; 513/854-1338.

Oct. 1-3

Thirty-second Annual Conference and Show, cooperation of the Florida Turfgrass Association, University of Florida, IFAS and the Florida Cooperative Extension Service, held at the Curtis Hixon Convention Center, Tampa, FL. Contact: Bill Nass, FTA, 302 S. Graham Avenue, Orlando, FL 32803; 305/898-6721.

Oct. 7-10

Professional Grounds Management Society 1984 Annual Conference and Trade Show, Marriott Hotel, Worcester, MA. Contact: PGMS, 7 Church Lane, Suite 13, Pikesville, MD 21208; 301/653-2742.

ALA

BUSINESS FEATURES

Servicing the Multi-Unit Housing Market

Everyone lives with a lawn, even if they don't "own" it.

24

Self-Funding Insurance: An Alternative

Stop complaining about insurance. There is another alternative.

32

The British Take an Interest in American Lawn Care

Some British entrepreneurs are investing in lawn care — in their country and ours!

35

TECHNICAL ARTICLES

Response of Weeds in Bermudagrass Turf

All weeds do not respond the same way to all herbicides.

36

The Course of Lawn Turf Research

Richard Hull takes us on a tortuous journey through the world of lawn turf research.

41

Cooperative Extension "Services" Lawn Care Needs

Lawn care operators are not taking advantage of their extension agents.

43

The Preventative Maintenance Challenge

Wayne Scheppele fills us in on the value of preventative maintenance.

44

DEPARTMENTS

Advertiser's Index

58

Classified

58

Inside Story

8

News in Brief

10

People

20

PLCAA Update

18

Products

50

Publisher's Feedback

6

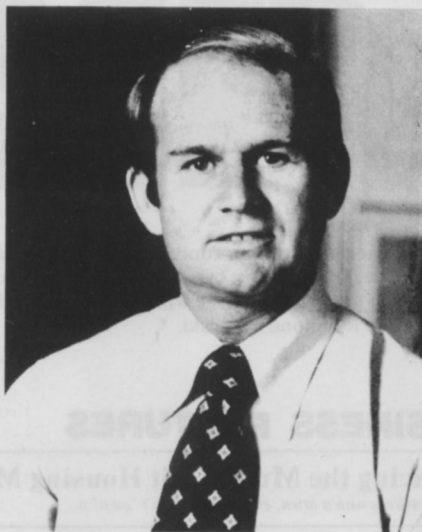
ALA (USPS 65747000) is published eight times per year. Copyright 1984 Gie, Inc. Publishers, 4012 Bridge Ave., Cleveland, OH 44113. All rights reserved. No part of this publication may be reproduced or transmitted by any means without permission from the publisher. One year subscription rates: \$12.00 in the USA and Canada; Single copy rate: \$1.25; Foreign subscriptions: \$30.00 per year. Second class postage paid at Cleveland, Ohio and additional mailing offices. Postmaster: Return Form 3579 to ALA, 4012 Bridge Avenue, Cleveland, Ohio 44113.

ALA PUBLISHER'S FEEDBACK

The majority of our telephone inquiries from readers this past month have been about the upcoming PLCAA Conference and Trade Show (Tampa, FL, November 11-15). This gives us a good indication that operator attendance will be up significantly again this year — continuing the pattern of strong annual growth of PLCAA's annual business convention. Interestingly enough, many of our calls have come from the landscape maintenance and commercial mowing segment of our readership — a market segment that has not previously been well represented at our industry's national convention.

To get a clearer picture of anticipated attendance numbers of maintenance businessmen, I called Jim Brooks, PLCAA executive director. Although he was not able to give me hard numbers on maintenance personnel attendance figures or projections, he was able to give me exhibitor information that supports my feeling of strong movement in this business category of the market.

Thirty six new suppliers have contracted for exhibit space in this year's trade show — many of which are mowing/maintenance equipment companies. Major suppliers, including Toro, Jacobsen, Cushman, Hahn, Bunton, Smithco, National Mower and Exmark have made important commit-



ments to booth space, several of whom will use the show as a platform to introduce new commercial equipment and programs tailored specifically for the lawn service operator.

This year's PLCAA exhibitor mix makes it clear to me that the character and direction of our industry, represented by PLCAA, is changing dramatically from one originally oriented to the chemical applicator to one that now embraces the broader scope of the professional lawn service market today — specifically the inclusion of mainte-

nance services.

PLCAA's first convention only five years ago was for applicators, but it is clearly no longer just a show for spray rigs and chemicals. It has become an important show place for maintenance equipment.

During the last year, PLCAA leadership has demonstrated an interest and willingness to expand its services to embrace lawn maintenance professionals. Their new membership category for maintenance companies and the inclusion of maintenance educational seminars at this year's conference are both positive examples of a broadening vision for PLCAA. However, we encourage our association's leadership to put this subject at the top of their business agenda during the upcoming Tampa meeting and move boldly to embrace this large and important business segment of the lawn service industry.

Publisher

Richard J.W. Foster

Associate Publisher

Maureen Mertz

Managing Editor

Tim Weidner

Assistant Editor

Vivian Fotos

Art Director

Charlotte Goerss

Production Manager

Fran Franzak

Circulation Manager

Amy Sheldon

Reader Service

Nancy Ingalls

Editorial Office

ALA

**4012 Bridge Avenue
Cleveland, Ohio 44113
216/961-4130**

Advertising Office

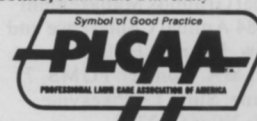
ALA

**42480 Park Ridge Road
Novi, MI 48050
313/348-9636**

CONTRIBUTING TECHNICAL AUTHORS

T. Abernethy, Ohio State University
Don Blasigame, Mississippi State University
Prasanta C. Bhowmik, University of Mass.
Bruce Branham, Michigan State University
Cynthia L. Brown, Tru-Green Corporation
Edward A. Brown, University of Georgia
Stephen Brown, New England Green, Inc.
Steve Carr, Dorf Public Relations
Nick Christians, Iowa State University
Patricia P. Cobb, Auburn University
H.L. Cromroy, University of Florida
Karl Danneberger, Michigan State University
Peter H. Dernoeden, University of Maryland
Glenn Dudderar, Michigan State University
Gary A. Dunn, Michigan State University
Thomas W. Fermanian, University of Illinois
Ray Freeborg, Purdue University
T.E. Freeman, University of Florida
Stephen G. Fushtey, Agriculture Canada
Jean E. Haley, University of Illinois
John R. Hall, Virginia Polytechnic Inst.
Lloyd Hahn, Hahn, Inc.
Marc C. Hirrel, University of Illinois
Clinton F. Hodges, Iowa State University
Neal Howell, Iron Man Fertilizer Specialties
Richard J. Hull, University of Rhode Island
Norman W. Hummel, Jr., Cornell University
Noel Jackson, University of Rhode Island
John A. Jagschitz, University of Rhode Island
B.J. Johnson, University of Georgia
Keith Kennedy, ChemLawn Corporation
E.L. Knake, University of Illinois
K.N. Komblas, Louisiana State University
Philip Larsen, Ohio State University

Leon T. Lucas, North Carolina State University
M.T. McElroy, Michigan State University
M.D. McGlamery, University of Illinois
Michael C. McKee, New England Green, Inc.
Landon C. Miller, Clemson University
William Mitchell, University of Delaware
Harry D. Niemczyk, Ohio State University
A.D. Oliver, Louisiana State University
Robert E. Partyka, Chemscape
A. Martin Petrovic, Cornell University
Daniel Potter, University of Kentucky
Richard C. Rathjens, Davey Tree Expert Co.
Eliot C. Roberts, The Lawn Institute
W.H. Robinson, Virginia Polytech Inst.
Patricia L. Sanders, Penn State University
Wayne Scheppele, Deere and Company
E. (Dick) Schmidt, Virginia Polytech Inst.
Mark Sears, University of Guelph
D.E. Short, University of Florida
John F. Shoulders, Virginia Polytech Inst.
Malcolm Shurtleff, University of Illinois
John R. Street, Ohio State University
Herbert T. Streu, Rutgers University
J.H. Strong, Strong Enterprises
Mike Tolley, Ohio State University
J.R. Vaccaro, Dow Chemical Company
Joseph M. Vargas, Michigan State University
T.L. Watschke, Penn State University



WHEN LAWN CARE IS YOUR BUSINESS, DEPEND ON THE BEST IN THE BUSINESS.

Tough, durable, and reliable, the best in the business. That's SNAPPER's heavy duty lawn and garden equipment for you. More than a quarter of a century of innovative American craftsmanship goes into every machine we build. So you know you can depend on them year in and year out to make you look good on each and every job. That's why over the years SNAPPER's reputation for excellence has continued to grow and gain the respect of more and more professionals in the lawn care

business. They know SNAPPER's versatility and durability has withstood the test of time. They know SNAPPER's built tough to work long and hard. So if lawn care is your business, why not go with the best in the business. SNAPPER's commercial lawn and garden equipment. Write SNAPPER Power Equipment, McDonough, GA 30253, Dept. for further information.



EXTRA TOUGH WALK

- Push or self-propelled
- 4 HP Extra Tough 4 Cy. engine
- Ball bearing steel wheels
- 2½ bu. grass catcher
- 21" Hi-Vacuum steel deck



COMMERCIAL WALK

- Push or self-propelled
- 5 HP 4 Cy. I/C engine
- Ball bearing steel wheels
- 3½ bu. grass catcher
- 21" Hi-Vacuum steel deck



COMMERCIAL RIDER

- 41" side discharge or 33" Hi-Vac deck
- 11 HP I/C engine
- Long life transmission
- On-the-go shifting



LAWN TRACTOR

- 11 HP engine or 16 HP twin Cy. engine

- 33" Hi-Vac, 41" and 48" discharge optional rotary mowers

- Dual Range transmission. 12 forward speeds, 2 rev.



SNAPPER POWER EQUIPMENT McDonough, Georgia 30253



Write 41 on reader service card

ALA INSIDE STORY

This month our cover story concerns "Servicing the Multi-Unit Housing Market." Multi-unit housing such as apartments, condominiums and townhouses are generally surrounded by lawns and ornamentals, just like residential dwellings, but many lawn care operators have yet to take advantage of this segment of the marketplace. This is especially perplexing since the economic forecasters at the United States Commerce Department tell us that more new apartments and condos are being built than ever before.

Still, lawn care businessmen have found reasons for holding back. Some say the market demands total property maintenance, which they do not offer. Others claim the profit margin is inadequate and would rather avoid bidding situations. But the biggest gripe among lawn care people who dislike multi-unit housing service is the prospect of attempting to please the dozens of people who reside in condos.

The lawn care operators who have grown to love the condo/apartment



market can also cite drawbacks, but they feel the pitfalls are far outweighed by the benefits. Since condos are in the habit of buying goods and services with contracts, operators can sleep easier knowing that a certain amount of work will be available for at least a year. Many also feel more secure with condo associations as debtors and claim they have never lost a dime from a condo. Turn to the cover story and choose sides.

Another topic that is somewhat controversial and certainly much less uti-

lized by lawn care businessmen is self-funding insurance. Assistant Editor Vivian Fotos tackles this subject in her article, "Self-Funding Insurance: A Standard Policy Alternative." This story may provide a solution for those of you who have been grumbling about a lack of insurance policies suited to the lawn care industry's unique needs.

This month we also have a feature on a "British invasion" of the American lawn care industry. One English company has made a major acquisition in this country and another is attempting to introduce lawn care in its own country. We wish them both the best of luck. After all, a little cultural exchange never hurt anybody.

For our technical feature offering this month we have "Response of Weeds in Bermudagrass Turf to Tank-Mixed Herbicides," by B.J. Johnson; "The Course of Lawn Turf Research," by Richard Hull; "Cooperative Extension 'Services' Lawn Care Needs," by Steve Carr; and "The Preventative Maintenance Challenge," by Wayne Scheppele. Enjoy!





Model PCR200



Model PCR300



Model PCR100



Model PC500



Model PC1200



Model PC800

GOOD THINGS COME IN 3'S

THE TUFLEX MANUFACTURING PROCESS ALLOWS A FIVE YEAR WARRANTY ON ALL FIBERGLASS TANKS.

TUFLEX, the only manufacturer to specialize in seamless fiberglass spray tanks engineered specifically for the Pest Control and Lawn Care industry offers three variations of our popular PC line of spray tanks. Models PCR100, PCR200 and PCR300 make most efficient use of available space in pick-up trucks, enclosed vans, flatbed trucks and trailers. Models PC500, PC800 and PC1200 are suitable for truckmounting for larger jobs. Whatever the need, Tuflex supplies the spray tank. Whether you require the three smaller versions, or the three larger versions, remember at Tuflex good things come in threes!

For economy prices, and more information on our complete line of tanks, write or call now:

Tuflex MANUFACTURING COMPANY

1406 S.W. 8th Street
Pompano Beach, Florida 33060

FLA. RES. (305) 785-6402 COLLECT
TOLL FREE
(800) 327-9005



Powerful new medicine for turf diseases

VORLAN™ is Mallinckrodt's newest, toughest turf fungicide.

Enough experience has been gained with Vorlan by now — on golf courses and in university trials — to confirm that it establishes new standards of performance. Against Leaf Spot, Red Thread, Dollar Spot (even resistant strains!), and Pink Snow Mold, Vorlan delivers more effective control than any other fungicide available.

Vorlan's effectiveness — because it takes so little and lasts so long — also makes it economical, too.

If you haven't yet tried Vorlan, you should. Call Mallinckrodt toll-free, or contact your Mallinckrodt Turf Products distributor. No prescription is needed!

Mallinckrodt®

P.O. Box 5439
St. Louis, MO 63147
(800) 325-7155

Write 12 on reader service card

LAWN INSTITUTE CITES CULTIVARS

Forty proprietary lawngrasses have been recognized for excellence this year by the Lawn Institute's Variety Review Board. According to Dr. Jerry Peppin of Pickseed West, chairman of the board, 14 bluegrasses, five fine fescues, 12 perennial ryegrasses, six turf-type tall fescues, two bentgrasses and one specialty grass were selected following extensive evaluation during 1983.

The 1984 list includes fewer bluegrasses and fine fescues and more turf-type perennial ryegrasses and tall fescues. This reflects the increasing popularity and improved performance of these cultivars throughout the country. Those turfgrasses selected for 1984 with their sponsoring firms are as follows:

J&L Adikes, Inc., Jamaica, NY. Kentucky bluegrass —

Adelphi; perennial ryegrass — All Star.

E F Burlingham & Sons, Inc., Forest Grove, OR. Kentucky bluegrass — Sydsport; chewing fescues — Banner, Koket; turf-type tall fescue — Falcon; perennial ryegrass — Pennant.

Full Circle, Inc., Madras, OR. Kentucky bluegrass — Merit.

International Seeds, Inc., Halsey, OR. Creeping red fescue — Ensylva; turf-type tall fescue — Hounddog; perennial ryegrasses — Derby, Elka, Regal; *Poa trivialis* — Sabre.

Jacklin Seed Company, Post Falls, ID. Kentucky bluegrasses — Glade, Fylking, Nassau.

Lofi's, Inc., Bound Brook, NJ. Kentucky bluegrass — Ram I; hard fescue — Reliant; turf-type tall fescues — Clemfine, Rebel;

Perennial ryegrass — Repell. *Mangelsdorf Seeds, Inc., St. Louis, MO.* Kentucky bluegrass — Arboretum.



Northrup King Company, Minneapolis, MN. Turf-type tall fescue — Galway; perennial ryegrass — Delray.

Pickseed West, Inc., Tangent, OR. Kentucky bluegrasses — America, Nugget, Touchdown; turf-type tall fescue — Mustang; perennial ryegrasses — Blazer, Fiesta;

colonial bentgrass — Exeter. *Pioneer Hi-Bred, Turf and Forage Division, Savage, MN.* Kentucky bluegrass — Monopoly; chewing fescue — Waldorf.

Rothwell Seeds Ltd., Lindsay, Ontario, Canada. Creeping bentgrass — Prominent.

Seed Production and Introduction Corporation, Minneapolis, MN. Kentucky bluegrass — Rugby.

Stanford Seed Company, Denver, PA. Perennial ryegrass — Manhattan II.

Turf Cultivars Associates, Post Falls, ID. Kentucky bluegrass — Eclipse.

Turf-Seed, Inc., Hubbard, OR. Perennial ryegrasses — Citation, Omega.

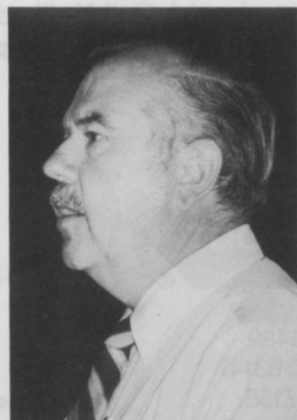
For more information on these lawngrasses, contact The Lawn Institute, P.O. Box 108, Pleasant Hill, TN 38578 or the sponsoring seed producer.

THE TURF SCOOP FROM HARRY NIEMCZYK

Lawn care professionals got the latest turf information at a recent Professional Lawn Care Association of America (PLCAA) regional seminar from Dr. Harry Niemczyk, professor of turfgrass entomology at Ohio State University's Ohio Agricultural Research and Development Center, Wooster, OH. Niemczyk gave his "what's new" presentation at the PLCAA's Hudson, OH seminar.

First came an update on the improved status of Triumph®, Ciba Geigy Corporation's broad-spectrum turf insecticide. "There have been problems, but we are talking about a new product that has never been registered for anything in the United States,"

Niemczyk said. Triumph has not had the regulatory luxury of originating in the agricultural market with applications already labeled. However, Niemczyk's sources tell him that the product has recently cleared



Dr. Harry Niemczyk

the Environmental Protection Agency's toxicology testing requirements.

"In the foreseeable future, maybe by the beginning of next year, we should see the material," Niemczyk says. "The first thing that will come out is a four-pound-per-gallon formulation for professionals only."

Niemczyk notes that Mobay Chemical Company's Mocap® has recently been registered for grub control in turf. He says the product is a 10 percent granular which is very effective against grubs, has rapid kill, a short residual and moves well through thatch.

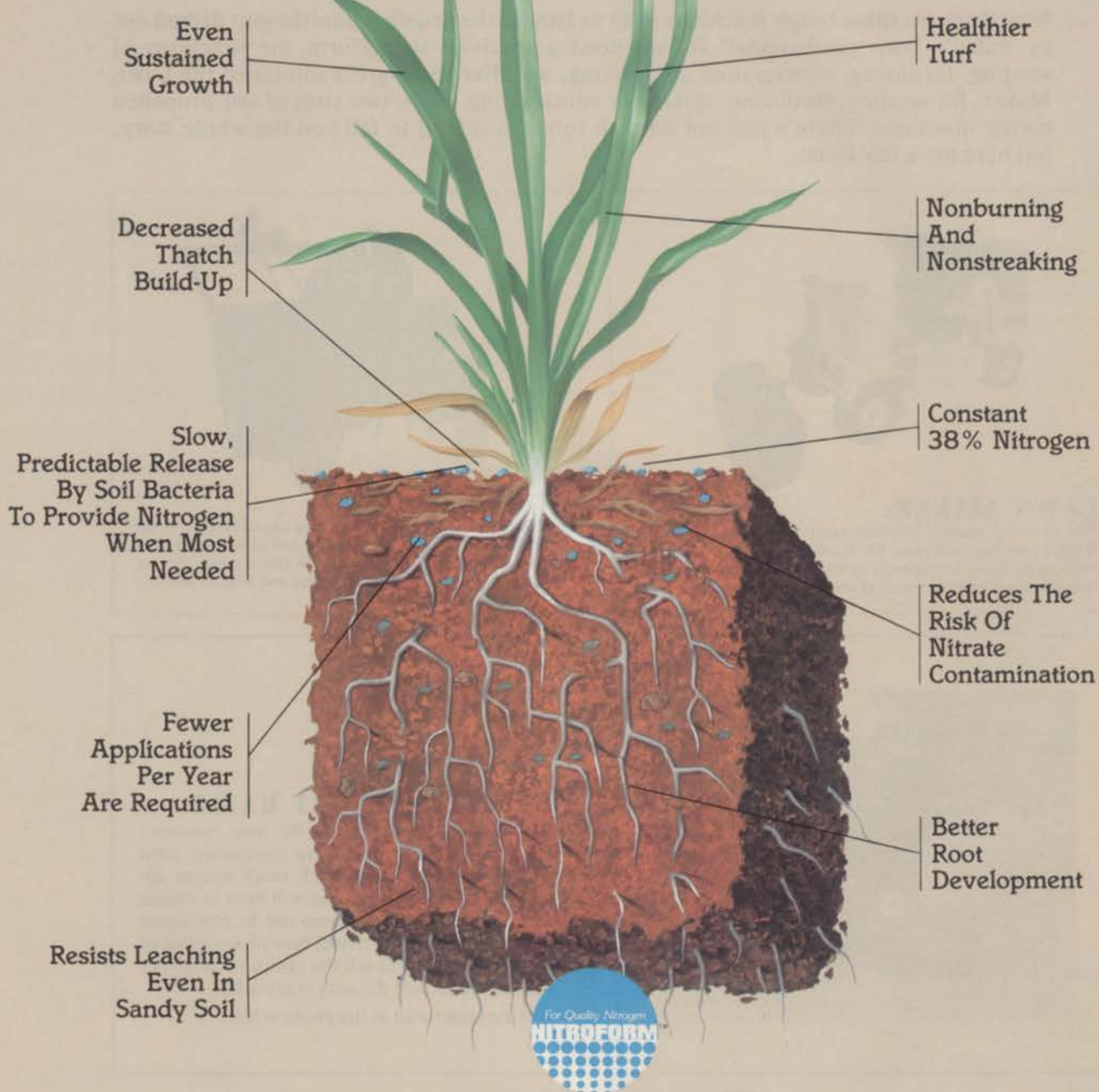
Niemczyk will soon be able to provide even more insight on Mocap, Triumph and other turf insecticides when he gears up for work at his new laboratory in Wooster. He will be aided by two full-time assistants.

Niemczyk wishes other universities across the country would take a similar interest in turf insect research. "Someday we are going to have to have better answers to the questions you folks have."

In the meantime, he and Ohio State University doctorate graduate student Mike Tolley have begun a research project on the frit fly, *Oscinella frit*, with partial support from the Ohio Turfgrass Foundation. The frit fly is a small black fly which is a nuisance on golf courses and can cause damage to turfgrass. The adults lay eggs that hatch into small maggots which tunnel into grass stems to feed on growing tissues. Research on this insect, which has never been studied in the United States, will concentrate on biology, seasonal life history and distribution.

On a considerably less
(continued on page 15)

Don't Simply Fertilize Your Turf...Nourish It With Quality Nitroform® Nitrogen



Always look for the NITROFORM logo
It's your assurance of a high quality Nitrogen



NOR-AM Chemical Company, 3509 Silverside Road, P.O. Box 7495, Wilmington, DE 19803

*Registered trademark of Schering AG West Germany

Write 13 on reader service card

Before you buy any other machine that fertilizes, seeds, coreaerates and spikes, **READ THIS AD!**

Now there are **three** tough machines built to handle the grueling punishment dished out by today's lawn professional! If you need a machine to perform the functions of seeding, fertilizing, coreaerating and spiking, we offer three great solutions: the Lawn Maker, for seeding, fertilizing, spiking or coreaerating. Also, two sizes of self-propelled coring machines. There's just not enough room in this ad to tell you the whole story, but here are a few facts:



LAWN MAKER.

The all-in-one seeder/fertilizer/coreaerator for riding operation. Welded construction/Weight, 625 lbs./Seeds, fertilizes and aerates 4,000 sq. ft. in only 9 minutes/11 hp Briggs and Stratton electric start motor/Easy to transport/Variety of attachments/1-year warranty.



COREAERATORS.

Self-propelled walk-behind units coring up to 30,000 sq. ft. per hour. This unit comes in two sizes, 36- and 30-inch width, both machines give penetration of 2-3/4-inches using 5/8- or 3/4-inch tines. Five horsepower Briggs and Stratton standard or IC engines available.



NEW! TRANSPORT RAMP.

SALSCO INTRODUCES its new transport ramp for loading lawn care equipment onto trailers or truck beds. Each ramp weighs approximately 35 pounds and will hold in excess of 1,000 pounds. Each ramp can be positioned to accommodate the wheel base of any piece of equipment. We will sell the ramps for \$225 per set and immediate delivery is available.

A ramp is pictured in the photo at left.

Due to tremendous nationwide response, dealer inquiries now invited.

SALSCO

Welding & Fabrication, Inc.

196 Clark Street, Milldale, CT 06467

To find out more about how you can turn a greater profit in seeding and aeration, call us collect today — 203-621-6764.

Write 29 on reader service card

SALSCO NOW OFFERS IMMEDIATE DELIVERY ON BOTH MODELS OF CORE-AERATORS

Made-to-spec loading ramps available for all models.

NEWS

(continued from page 10)

exotic note, Niemczyk says lawn care operators should be on the look out for a large Japanese beetle grub crop. He says the beetle population has been heavy this year and last winter's hard freeze did not substantially lessen the problem. "They are physiologically very well-equipped to survive the winters. Even if the mortality goes to 20 or 30 percent, you still have plenty of survivors."

GROWTH PRODUCTS ACQUIRES NITRO-26 MARKETING RIGHTS

Growth Products, Ltd., White Plains, NY, has acquired the national manufacturing and marketing rights to Nitro-26 CRN. This liquid methylene-diurea product is widely used in the lawn care industry as a controlled-release, non-burning nitrogen source, according to the company. Growth Products will make Nitro-26 CRN available through a network of regional distributors, including Agri Turf, South Deerfield, MA; Moyer and Son, Souderton, PA; Benham Chemical, Detroit, MI; Blakley Chemical, Springfield, DE; and J. Mollema, Grand Rapids, MI. For more information, call 914/428-1316.

PENN STATE WINS REGIONAL TURF AWARD

The Turfgrass Management Program at Pennsylvania State University, University



Accepting the \$7,000 NASDA/Reynolds award for Penn State are Dr. Thomas Watschke, professor of turfgrass science (center), and Dr. James L. Starling, head of the agronomy department (right). The award was presented by Tom Smeading of Service Systems Corp., an institutional foodservice company of Reynolds Industries.

Park, PA, won the Northeastern Regional Award for Excellence in Agricultural Technology Instruction. The \$7,000 award is granted each year in four regions by R.J. Reynolds Industries, Inc. and the National Association of State Departments of Agriculture (NASDA). The award was presented at the NASDA summer conference in Rehoboth Beach, DE in June.

The Turfgrass Management Program, within the Department of Agronomy, cooperates with 11 departments in the College of Agriculture and four other colleges at Penn State, to offer a strong, professional curriculum for students interested in the turfgrass industry. Since it began in 1957, the two-year program has graduated nearly 800 students from 33 states and three foreign countries. To be admitted, students must have had some previous turfgrass experience and be recommended for further study by their supervisors.

About half of each year's class has had some previous college education. All students work as interns in the industry for six months between their first and second year. The program has established close

working relationships with employers to offer internships with golf courses, athletic fields, lawn care industries, sod farms and technical turf sales.

Dr. Joseph M. Duich, professor of turfgrass science is chairman of the program and Drs. Donald V. Waddington, professor of soil science and Thomas L. Watschke, professor of turfgrass science, are principal coordinators. They plan to use the \$7,000 award to increase student library resources, computer facilities and audio/visual teaching materials.

As winners of the regional award, Penn State will compete against the other regional winners for

an additional grant, which is a national award sponsored by R.J. Reynolds. The Reynolds Company is a major producer of food products and has sponsored the awards program for five years.

CONDITIONS ARE RIGHT FOR PYTHIUM BLIGHT

The weather is now right for the summer turf disease, Pythium blight, according to a report by Dr. Philip Larsen, professor of Plant Pathology, Ohio State University, in the university's Cooperative Extension Service newsletter *Plant Pathology Notes*.



Dr. Philip Larsen

Pythium blight becomes more severe as night time temperatures consistently exceed 70 degrees Fahrenheit and there are extended periods

(continued on page 16)

BURROUGHS B 20 Lawn Care Management System

A Software Management Tool to Control Costs and Improve Productivity



PRACTICAL SOLUTIONS, INC.

100 East Wilson Bridge Road
Worthington, Ohio 43085
614-436-9066

Write 36 on reader service card

NEWS

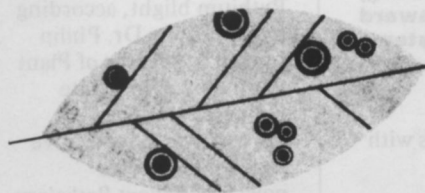
(continued from page 15)

of relative humidity greater than 80 percent, according to Larsen.

Symptoms of the disease first appear as small, isolated spots approximately two to three inches in diameter which rapidly enlarge if high temperatures and high humidity conditions continue. These spots take on a bluish-green, greasy appearance at the edges. Large patches of turf can be damaged in a short period of time if no fungicides are applied.

fungicides, Banol and Subdue 2E are available to commercial applicators for control of this disease. They do an effective job for as long as two to three weeks, according to Larsen.

Long range cultural practices that can be used to minimize Pythium blight include improving soil drainage through aeration and thinning out shrubbery around the problem turf areas to improve air movement and lower the humidity. The fungus which causes Pythium blight is capable of moving in surface drainage water,



PLANT PATHOLOGY NOTES

Pythium blight is especially severe in low lying areas that have poor soil drainage and poor air movement. The disease is hard on home lawns that have a high proportion of perennial ryegrass and fine fescue. Two new systemic

but it can also be dragged about by mowers and other equipment. These things should be kept in mind when attempting to prevent or suppress movement of the fungus from diseased to healthy areas, notes Larsen.

ENGLAND MAY BEAT U.S. TO PP333 PGR

Imperial Chemical Industries, the British division of ICI Americas Corporation, is working on ICI's PP333 plant growth regulator formulation at the company's Fernhurst, England laboratory, 60 miles southwest of London. According to an *Associated Press* report, scientists at Imperial, the largest industrial company in England, believe they have developed a chemical which stunts the growth of grass without injuring it.

British lawn maintenance operators' worst fears were realized when the London newspaper *Observer* reported that the PP333

compound would spell the demise of the domestic lawnmower. The London weekly said PP333 not only keeps the grass short, but also apparently makes it



ICI Americas Inc.

more lush. Only time will tell what effect the experimental compound, being tested in both the United States and England, will have on lawn maintenance businessmen. The *Observer* reports that British government approval for sales of PP333 is expected by the end of 1985.

JACKLIN SEED CONSTRUCTS NEZPERCE STORAGE FACILITY

Jacklin Seed Company of Post Falls, ID has constructed a new 22,500 square foot warehouse in Nezperce, ID, according to Duane Jacklin, general manager. The new steel and concrete warehouse is part of the Jacklin long-range plan to care for current and future growers' seed production.

Future plans call for a two-story, 3,600 square foot office facility to be constructed inside the warehouse, and the addition of a new mill line for seed conditioning. Garco Construction of Spokane, WA was low bidder on the new building. "It is our intention to work closely with our Pacific Northwest producers to help make grass seed production as profitable as possible," Jacklin says. "We're exploring markets in every corner of the world to help make that happen. The new building will help provide warehousing for seed to be marketed throughout the world."

OFF-THE-WALL LAWN CARE NEWS

From the more-than-slightly-bizarre department, comes a report in a recent issue of the national newspaper *USA Today* on the harmful effects of applying pesticides in the nude. David Kurtz of Penn State University presented his "bare" facts at a news conference during the annual meeting of the American Chemical Society in St. Louis, MO. Applying pesticides while nude, Kurtz

said, allows about 16 milligrams of the chemicals to accumulate on the body, while the protection of ordinary clothing will prevent the accumulation of all but one milligram. Keep this report in mind the next time you go on a service call at the nudist colony.

Also out of left field comes a report from *Advocate*, the newsletter of the National Fertilizer Solutions Association. Under the headline "Barefoot In The Park," is a note on a vegetarian group called the Fruitarian Network that is campaigning to let lawns go wild because "grass has some sort of consciousness, it feels pain when mowed." I wonder if they think grass feels manipulated when it is fertilized?

MERIT BLUEGRASS RANKED NUMBER ONE

Merit Kentucky bluegrass was ranked number one in quality in three year uniform turfgrass variety trials at the University of California deciduous fruit station, San Jose, CA, in which 43 varieties were entered. Trials began in 1978 and were completed in December, 1981. Of the 43 entries only 28 rated a score of six or better on a 1-9 rating basis.

Merit earned a rating of 6.8 to top the field. Plots were sown at a rate of two pounds per 1,000 square feet.

In other trials at a wide variety of other locations Merit has proven an outstanding performer. Merit was ranked above some of the better known Kentucky bluegrasses in trials in Missouri, Ohio, New York and New Jersey as well as in an eight-year Purdue study and the 1972 NE-57 tests.

NEW

Mec Amine-D™



THE 3-WAY COMPOUND THAT'S 3 WAYS BETTER!

New Mec Amine-D from Clean Crop® is the effective Dicamba/Mecoprop/2,4-D formula you've used and trusted for years. Now it's better because it comes to you more economically, faster, and in more sizes than you ever got it before! Like its predecessor, Mec Amine-D controls tough broadleaf weeds safely and without repeated treatments . . . it's biodegradable and vapor free after application . . . it's easy to use, temperature tolerant, stays stable for years. Be Clean Crop Confident with Mec Amine-D.

For more helpful information call 1-800-228-0096, or 1-800-642-TURF in Nebraska.



Special Products
P.O. Box 37800
Omaha, NE 68137



a ConAgra company

Write 14 on reader service card

ALA PLCAA UPDATE

“You’re in an industry that is in a whirlwind,” Jim Brooks, executive director of the

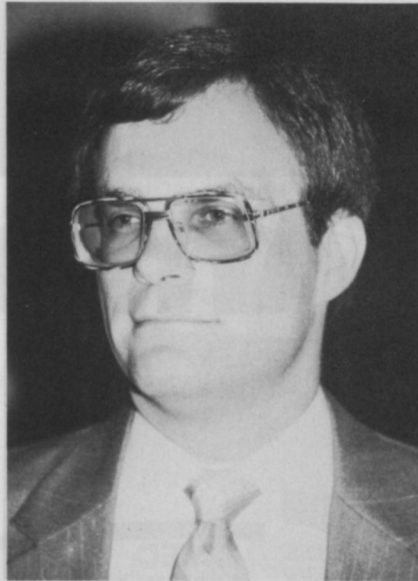
Professional Lawn Care Association of America (PLCAA), told a group of turf specialists at the recent PLCAA seminar in Hudson, OH. “Since 1977, we estimated that the total sales in this industry were \$660,000,000. We now estimate this industry to be a \$2.2 billion market.”

Brooks was one of many speakers who addressed the group of over 60 lawn care businessmen on various topics, ranging from thatch management to soil and trunk injection. He specifically discussed the state of the industry, its youth, its growth and its legal issues, as well as the image-building process the PLCAA organization is trying to undertake.

It is estimated that between five and six million customers comprise the current residential lawn care market, Brooks said. That’s against a total customer universe of 21 million, based on 1980 census figures, he added. “Think of where we are and what is still out there.”

Brooks quoted figures from an issue of *USA Today*, reporting that housing starts are up 5.3 percent and certain sectors of the country are up as much as 40 percent. “This is a good signal for our industry,” he said. He quoted another article which discussed maintaining low unemployment through the ’80s, saying, “The GNP would continue to grow at a greater rate than it has been growing. People’s wages would go up 7.7 percent.”

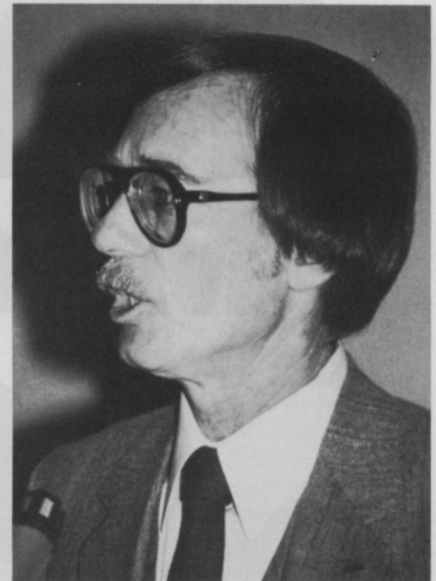
All of these are good signs for a young, growing industry such as the



Don Gibson

professional lawn care market. But obviously youth has its disadvantages as well, like being heard in government. “We are trying to get an opinion in Illinois from the attorney general which basically says that local communities or entities cannot supersede those regulations and laws already at the state and federal level,” Brooks said, referring to the case in Wauconda, IL, where pesticide application ordinances may conflict with existing state laws. “We don’t mind being regulated,” he said. “It’s being regulated at the proper levels in the proper ways that’s important.”

It became clear to the PLCAA that it could not keep track of all the Wauconda-type cases or have a strong



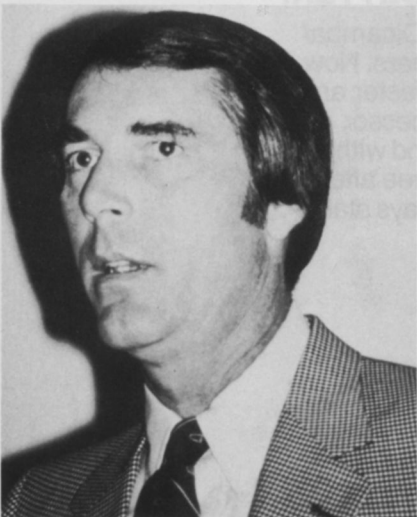
Dr. Bobby Joyner

influence in controlling such situations on its own, so the association has tried to combine interests with other organizations. “We felt we needed a mechanism whereby we could begin networking and bringing organizations together at the state and local levels,” Brooks said.

A product of their endeavors is the Pesticide Public Policy Foundation (3PF), which was established in September, 1983. Brooks hopes that the foundation will not always have to play a reactive role, but instead deal with legislation and politics as a part of daily business. He encouraged seminar attendees to help keep the foundation strong by making donations. Checks can be sent to the Pesticide Public Policy Foundation, 1511 K Street N.W., Suite 623, Washington, D.C. 20005, 1-800-438-7773.

Aside from political pursuits, the PLCAA is working hard to promote the professionalism of the lawn care market. “We are seriously looking into a national yellow pages campaign among PLCAA members in major markets across the country,” Brooks said. “In this public awareness program, we need to begin educating the public and letting them know you belong to a national, professional organization to be better businessmen and to serve them better.” Brooks reminded the audience to use the PLCAA Symbol of Good Practice, a member benefit which informs consumers of their professional status.

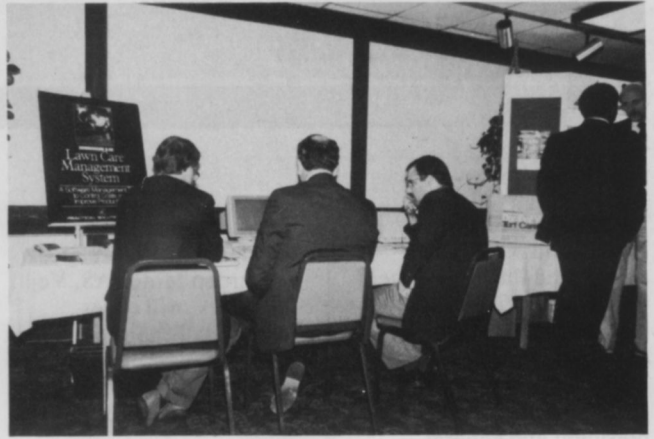
In addition to reports and documents already offered by the association, such



Jim Brooks



Art Wick



Attendees expressed keen interest in the pest control wares displayed and demonstrated by seminar exhibitors.

as the bi-monthly *Turf Talks* publication, the *Safety Manual* and the new Management Monograph Series which begins with a booklet called *Wage and Hour Regulations*, the PLCAA is about to embark on a major market research program, consisting of two parts. One will provide information on the lawn care market to other industry, and the other will gain insights on customers' perceptions of the lawn care field.

Several other speakers presented material at the seminar. Among them were: Dr. Harry Niemczyk, professor

of turfgrass entomology at Ohio State University's Ohio Agricultural Research and Development Center, who presented Review and Update: Turf Insects; Lauren S. Lanphear, vice president of Lanphear Supply, who talked about Tree and Shrub Care—Soil and Trunk Injection; Don Gibson, co-owner of Custom Communicating, who discussed Graphics and Visuals—Tools for Training and Marketing; Dr. Bobby Joyner of Chemlawn, who presented Review and Update: Disease Problems; Dr. Karl Daneberger of

Ohio State University, who discussed Thatch Management; and Art Wick of Lesco, who talked about Lawn Renovation with Round Up.

During coffee breaks and at the close Turf specialists had the opportunity to visit with exhibitors and view their displays. Exhibiting at the seminar were Bulkem Corp.; Lebanon Chemical Corp.; Hawkeye Chemical; W.A. Cleary Chemical Corp.; Spray Products/Ohio Oil Equipment; Lesco; Rhone-Poulenc, Inc.; Lanphear Supply; and The Andersons. — *Vivian Fotos*



Winter Overcoat — Anti desiccant
GP-20 Power Back Pack Sprayer
PTP 20 Knapsack Sprayer



15-8-5 Tree/Shrub Root Food
Injection Deep Root Feeder
Complete Pickup/Van Sprayers

PORTABLE FIELD IDENTIFICATION MACROSCOPE

Handy unit for making precise "On Sight" field diagnoses. Identify insects, fungus and diseases easily and professionally. Compact unit only 6" long also converts to scope for estimating distances and tree heights. Comes with 10 day money back guarantee.



"COMPLETE INSTRUCTION FOR ALL FALL SERVICES"

FALL IS FOR PROFITS

Horticultural Products • Soil Testing
Spray Equipment • Business Services

(800) 645-6464

NYS (516) 538-6444

GREEN PRO COOPERATIVE SERVICES

NEW

ELECTRONIC DIGITAL METER

The perfect way to monitor all of your liquid applications. Now you can know exactly how much volume you or your applicator has sprayed on each service call. Installs easily on your spray gun, hose or between the pump and hose reel. The four digit readout will calibrate to most chemicals including insecticides, herbicides, fungicides and fertilizers. Also used for transferring materials, filling spray tanks and measuring water flow.

ALA PEOPLE

Bluebird International, Englewood, CO, has announced the appointment of three new turf market distributors in the United States and two new distributors in Europe.

Brent Hight, vice president and general manager of Small Engines Unlimited, Boulder, CO, will serve the turf market in Colorado and Southern Wyoming; **Ron Pearl** of Brooks Gravelly Company, Rochester, NY, will cover Western New York state; **Harold Block**, sales manager of Storr Distributing, Somerville, NJ, will cover the state of New Jersey.

In Europe, **Lars Svensson** and **Thomas Horberg** of Gronytemaskiner AB,

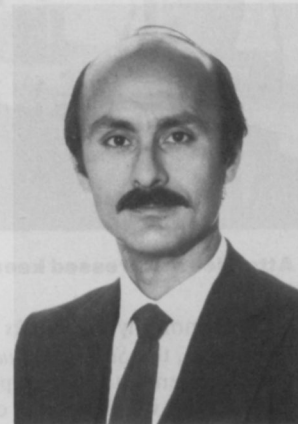
Vaxjo, Sweden, will cover Sweden; and **Sven Eker** of Garden Motor AS, Vejli, Denmark, will cover Denmark. Bluebird manufactures and markets a full line of power rakes throughout the world.

Thomas P. Stoesser, CPA, has been named financial manager of Jacklin Seed Company, Post Falls, ID. Stoesser is an alumnus of Gonzaga Prep and Gonzaga University, earning his bachelor of arts degree in 1977. He previously held positions with Sears, Roebuck and Company's auditing department, then spent a year with the Jesuit Volunteer Corps teaching high school accounting and math in St. Marys, Alaska. For the past four years he



Tracy Sheffield

was with the accounting firm of Christie Weyen and Company, Coeur d'Alene. He received his CPA in March, 1981. While in the process of establishing his own firm, he accepted the Jacklin position.



Mahmood Jafroodi

Jacobs Brothers, the distributor of supplies to the horticulture industry since 1924, has been acquired by American Horticultural Supply, Inc. The principals of the new company are

(continued on page 22)

New ^{LAWN AERATOR} TURF plugger

Hi-Performance !!!
Simply the Best.

model 400

24,000 sq. ft./hr.
Low maintenance

Vertical stainless tines limit soil compaction.



model 200

Fits in the truck of an automobile.

12,000 sq. ft./hr. Ideal for slopes and small lawns.



Call or Write us -

Classen Mfg. Co.
1403 Roach St.
Norfolk, NE 68701
[402] 371-2294



PACK THE SPRAYER THAT DOES IT ALL.

- Spray fast, easy. Cover more in less time.
- Spray a few pints or up to 5 gallons.
- Lightweight, durable construction.
- Polypropylene parts absolutely will not rust.
- Comfort contoured, fully adjustable.
- Adjusts for broad coverage or pinpoint accuracy.
- Lever action pump adjusts for right or left hand operators.
- Order direct and save. Not available in stores.
- Money back guarantee.



Order now. Only \$119.95. Fast shipment available. We'll even pay the freight. To order or for a free color brochure, call toll free 1-(800) 255-5256. In Kansas, call 913-649-5525.



4-2038



Kalo, Inc., 4550 West 109th Street, Overland Park, KS 66211

Mark your calendar! You won't want to miss the green industry event of the year: the 1984 PLCAA Annual Conference and Show, Tampa, Florida, Nov. 12-15

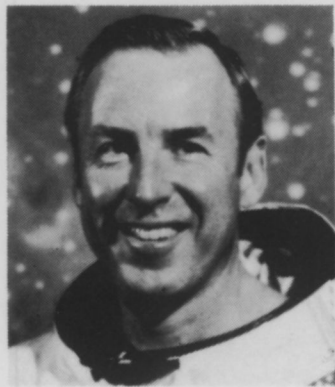


PLCAA '84 Tampa

NOVEMBER 12-15

NEW LOCATION • NEW PRODUCTS • NEW SEMINARS • NEW SPEAKERS

The 1984 Annual Conference and Show of the Professional Lawn Care Association of America moves South to the heart of sunny Florida—Tampa! PLCAA/Tampa '84 is devoted exclusively to making you a better lawn care businessman. PLCAA/Tampa '84 is where you'll find an exciting blend of new products, new technologies, and new opportunities. Join the hundreds of lawn care businessmen who will attend PLCAA/Tampa '84. Don't miss the outstanding lineup of workshops and seminars. Learn how to use the latest management and marketing techniques to make your business more productive and more profitable.



KEYNOTE ADDRESS

"SUCCESSFUL FAILURES"

JAMES A. LOVELL, Senior Vice President, Centel Corp.

Keynote speaker and former astronaut Capt. James A. Lovell will boost PLCAA/Tampa '84 into orbit on opening day (November 13, 1984). His topic is a provocative one: "Successful Failures". Don't miss this inspirational public speaker!

THE TRADE SHOW

Tampa's ultra-modern Curtis Hixon Convention Center plays host to the biggest gathering of lawn care suppliers, equipment makers, and manufacturers in the five-year history of the PLCAA Conference and Show. Exhibit viewing hours are

10:30 AM to 6:30 PM Tuesday and Wednesday. See the latest your industry has to offer!

EARLY BIRD REGISTRATION AND RECEPTION

Make plans to arrive Monday, November 12th, and take advantage of the Early Bird Registration and Reception Theme Party (6:30 PM to 8:30 PM). Pick up your badge and convention packet and be ready to go Tuesday morning when the Show opens.

NEW! EARLY BIRD WORKSHOPS

Yet another reason to come early this year—two "Early Bird" workshops are scheduled for Monday, November 12th:

HOW TO GROW YOUR BUSINESS

Panel: LAWRENCE D. KOKKELENBERG, Ph.D., President, Kokkelenberg Corp.; JAMES SKELTON, MBA, Principal, Ross-Payne & Assoc., Inc.; ED T. WÄNDTKE, CPA, Assoc. Advisor, Advisor Associates, Inc.; and RICHARD I. LEHR, PA, PLCAA Attorney.

PROMOTIONAL TECHNIQUES FOR THE LAWN CARE MARKET

Panel: KATHY COPLEY, Editor, Grounds Maintenance; and RAYMOND L. GIBSON, President, Ohio City Communications.

SEMINARS AND TECH SESSIONS

An outstanding group of speakers and topics have been assembled for this year's educational sessions:

OUR CHANGING INDUSTRY

ROBERT EARLEY, Group Publisher, Harcourt Brace Jovanovich, Inc.

REGULATORY ASSISTANCE THROUGH THE PESTICIDE PUBLIC POLICY FOUNDATION (3PF).

DAVID H. DIETZ, Principal, David H. Dietz & Associates

THE OFFICE—ASSET OR LIABILITY?

TOM HOFER, Vice President, Spring-Green Lawn Care Corp.

STRESS MANAGEMENT; HIS, HERS, OURS

TOM JADIN, Director, Winnebago Mental Health Institute

REDUCING CANCELLATIONS

LAWRENCE D. KOKKELENBERG, Ph.D. President, Kokkelenberg Corp.

PRINCIPLES OF TREE & SHRUB FERTILIZATION

Dr. ROGER C. FUNK, Vice President, Davey Landscape

FERTILIZATION OF SOUTHERN ORNAMENTALS

Dr. ROBERT BLACK, Urban Horticultural Specialist, Florida Cooperative Extension Service, University of Florida

SOUND BUSINESS CONSIDERATIONS FOR MOWING / MAINTENANCE COMPANIES

ROD BAILEY, President, Evergreen Services Corporation

TURFGRASS RESEARCH UPDATE: WATER

Dr. JAMES B. BEARD, Professor of Turfgrass Science, Texas A&M University

THATCH: GENERAL CONSIDERATIONS

Panel: Dr. KIRK A. HURTO, Ph.D., Research Specialist, Chemlawn Corp.; Dr. A.J. POWELL, Turf Extension Specialist, University of Kentucky; JOHN C. PRUSA, Vice President of Operations, Lawnmark, Inc.; Dr. CHARLES PEACOCK, Turf Extension Specialist, University of Florida

HOW TO AVOID AND RESPOND TO UNION ACTIVITY

Panel: RICHARD I. LEHR, PA, PLCAA Attorney; PAUL DAVEREDE, President, Ever-Green Lawn Corp.; JAMES R. SACKETT, President, Ever-Green Lawn Care, Inc.

EXPANDING INTO THE COMMERCIAL LAWN CARE MARKET

IRVIN DICKSON, Vice President, Native Tree, Inc.

PLUS MUCH MORE!

SPECIAL SPOUSE PROGRAM...DISNEY WORLD SIGHT-SEEING...POST CONFERENCE CRUISE

One of the best things about visiting Tampa is that it offers a wealth of places to visit and things to do. This year's PLCAA Conference and Show offers a chance to take advantage of some exciting fun options for you and your spouse, including a special one-day "Spouse Program" tour of the Sarasota area, a pre-conference tour of Disney World and Epcot Center—even a post-conference Caribbean cruise! Indicate your interest on the return coupon and you will be supplied with costs and details.

YES! I'm interested in attending PLCAA's 5th Annual Conference and Trade Show. Send me more information on:

- REGISTRATION EXHIBITING MEMBERSHIP
 POST CONFERENCE CRUISE SPOUSE PROGRAM
 PRE-CONFERENCE DISNEY TOUR

NAME _____

COMPANY _____

ADDRESS _____

CITY, STATE, ZIP _____

Mail to:

Professional Lawn Care Association of America
 1225 Johnson Ferry Road, NE • Suite B220 • Marietta, Georgia 30067

PEOPLE

(continued from page 20)

Tracy Sheffield, former sales manager of Jacobs and **Mahmood Jafroodi**, an owner of Milgro Nursery, Inc. and Greenland Tropicals, Inc., both are companies located in Oxnard, CA.

American Horticultural Supply, Inc. will continue to do business from the same location in Valencia where Jacobs Brothers relocated a year ago from Sepulveda, and also will continue to service the whole state of California. Sheffield will be responsible for sales and marketing while Jafroodi will concentrate on administration.

Rain Bird Sales, Inc. recently named five sales and product managers.

Mike Ukena has been appointed commercial product manager for the Turf Division of Rain Bird. Ukena is responsible for the

development of new products for the light commercial and industrial segments of the turf irrigation market.

Steve Christie has been appointed western regional sales manager for the Turf Division. He is responsible for Rain Bird's turf sales effort in the 13 states west of Kansas. Christie supervises a sales support team that includes a staff of district and specification managers who personally service those states.

Rick Davis has been appointed Southern California Specification Manager for the Turf Division. Davis' responsibilities include serving as liaison between Rain Bird management and landscape architects, irrigation consultants and city and county officials. Additionally, Davis conducts irrigation seminars for various groups, including universities. His territory comprises Inyo,



James L. Carnes (right), president of International Seeds, Inc. of Halsey, OR, receives a plaque in his honor from **Norman M. Rothwell**, president of Rothwell Seeds, Ltd. of Lindsay, Ontario and 1984-1985 president of The Lawn Institute.

Kern, Los Angeles, San Luis Obispo, Santa Barbara and Ventura counties.

Mike Schierer has been appointed Southern California district manager for the Turf Division. Schierer, whose district includes Inyo, Kern, Los Angeles, San Luis Obispo, Santa Barbara and Ventura counties, provides sales support to Rain Bird

distributors and contractors.

Mark Pedicone has also been named Southern California district manager for the Turf Division. Pedicone, whose district includes Imperial, Orange, Riverside, San Bernardino and San Diego counties, provides sales support to Rain Bird distributors and contractors.

NEED SPRAYING EQUIPMENT?

We are custom fabricators of lawn and tree sprayers featuring:



Components or complete units available
Parts and accessories shipped anywhere, UPS

**GEORGE OLSON & SON
POWER EQUIPMENT CO., INC.**
139 NEW YORK AVE, HUNTINGTON, NY 11743
1/800/645-2822 Outside New York
516/421-5020
Distributor and Dealer Inquiries Welcomed

The Original Imler Measuring Wheel

FOR ACCURACY AND
DURABILITY
FOOT AFTER FOOT ...
MILE AFTER MILE ...
YEAR AFTER YEAR!

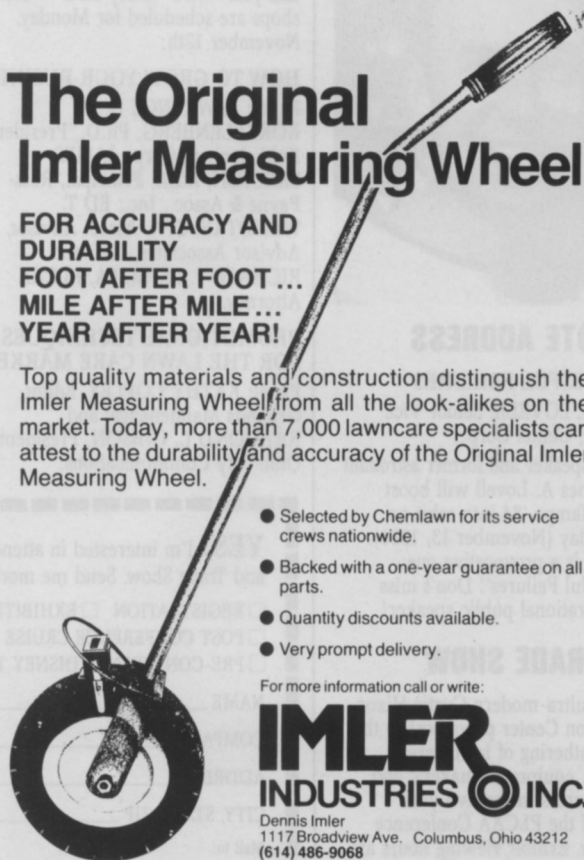
Top quality materials and construction distinguish the Imler Measuring Wheel from all the look-alikes on the market. Today, more than 7,000 lawncare specialists can attest to the durability and accuracy of the Original Imler Measuring Wheel.

- Selected by Chemlawn for its service crews nationwide.
- Backed with a one-year guarantee on all parts.
- Quantity discounts available.
- Very prompt delivery.

For more information call or write:

**IMLER
INDUSTRIES INC.**

Dennis Imler
1117 Broadway Ave. Columbus, Ohio 43212
(614) 486-9068



YOUR INVITATION TO JOIN US . . .

Dear Lawn Care Professionals:

Similarities between the pest control and lawn/tree care markets have opened tremendous new marketing opportunities for both interest groups.

These similarities are encouraging many PCOs to try their hands at getting a piece of the lucrative lawn care pie, and enticing many applicators to expand their business base into pest control.

To meet the needs of both the lawn/tree care and pest control markets, PCO EXPO '85 is proud to announce the addition of a special series of lawn care seminars to its seminar program.

This premiere series of lawn care seminars offers business-minded and technical sessions for the expert and novice alike. Topics will focus on how to increase your bottom line, how to safely manage chemicals, when and if you should expand your business, and much more.

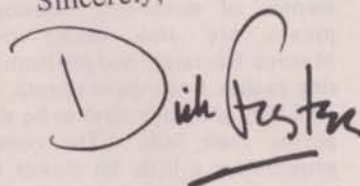
The pest control segment of the seminar program will target the most pressing issues faced by today's PCO. Whether you've already branched into this natural business extension, or if you just want to learn more, PCO EXPO '85 will provide you with the business and technical information you need to move into the pest control market with confidence.

The exhibition will feature leading manufacturers, suppliers and service providers from both the pest control and lawn care markets. Touring the exhibits gives you a time-saving opportunity to see and compare the latest in pest control and lawn care products, equipment and services. Hands-on demonstrations will show you the exhibitors' equipment in action throughout exhibit hall hours.

Please accept by invitation to join us at the second annual PCO EXPO. Send in the coupon below to be put on the priority mailing list to receive a free brochure detailing the seminar program and exhibition.

For more information, please call the show management, Conference Management Corporation, at (203) 852-0500.

Sincerely,



Dick Foster
Publisher, ALA
Publisher,
Pest Control Technology
PCO EXPO '85 sponsor



Exhibits: February 28-
March 1, 1985

Seminars: February 28-
March 2, 1985

Hyatt Regency Atlanta, Atlanta, Georgia

Yes, please send me a free program brochure!
I'm interested in attending.
I'm interested in exhibiting.

Name _____
Title _____
Company _____
Address _____
City _____ State _____ Zip _____
Phone _____

Return coupon to:

Conference Management Corporation
17 Washington Street,
Norwalk, CT 06854

SERVICING THE MULTI-UNIT HOUSING MARKET

BY TIM WEIDNER

Becoming established as a lawn care businessman is a difficult task which requires some tough decisions. You cannot simply buy a spray rig and trust the future of your business to fate. You have to make some conscious decisions about the way you want to run your business and the markets you intend to service.

Most budding lawn care operations concentrate on residential lawn care primarily because the average home lawn is small enough for the limited resources of a "one-truck" operator. Many established lawn care firms continue to service residential accounts exclusively, often because they are fearful of tying up too much revenue in large commercial accounts. Losing a residential account is one thing, but losing a quarter million dollar annual account with a shopping mall could spell bankruptcy.

Somewhere between home lawns and several hundred acre commercial accounts lies the logistical requirements of apartment and condominium lawns. Although lawn care businessmen who are currently servicing apartments and condos agree that the work requires no different tools or techniques than service on a large home lawn, this segment of the market does present some unique challenges. For one thing, lawn care businessmen have to keep in mind that while apartments and condos may have large property maintenance budgets, they may not be willing to allocate a large portion of the budget to landscape care. Residents may gripe about a brown lawn, but a faulty heating system will make them start thinking



Townhouses provide lawn care businessmen with prime outlets for their services.

about moving out.

"Oftentimes with large projects, you have to tailor the program to their budget," says David Sek, sales manager of Monroe Tree and Landscape, Inc., Rochester, NY. Homeowners with quarter-acre lawns can be sold four application per year programs at \$30 an application, but management of apartments or condos built on several acres will most likely not be willing to pay the correspondingly higher cost of four application per year programs on their property. Apartment building owners and condo associations generally opt for a less effective, but more economical, two application per year program, according to Sek. "You get some that go four applications a year, but a lot of them are more interested in some basic weed control and getting the lawn green in summer."

Sek says Monroe Tree and Landscape has been in the tree care business in the Rochester area for about 45 years. Monroe's tree and landscaping business has gotten the company involved in lawn care and just recently, multi-unit housing landscape service. Sek has found that a good job on one account in this market can lead to many others. "We have some accounts in the

Rochester area where we pick up one or two and end up doing numerous projects for the same company which manages various locations."

Although the multi-unit housing market comprises only 4 to 5 percent of Monroe's total annual sales and the revenue per acre is lower than the residential market, Sek feels there is still significant profit potential in apartments and condos. One reason the profit is still there is the fact that travel time is reduced to an absolute minimum. The technician is servicing the same amount of lawn with one stop that he would normally service on three or four home lawns with a lot of travel time spent between each stop. Sek says on a condo account, "You might move a truck a quarter mile all day long."

Servicing fewer accounts per day is also beneficial for the technicians from a customer relations standpoint. "During the summer when the lawns are looking rough," Sek says, "it is better to deal with one person in a day than with 15 or 20."

When it comes to liability in repairing damaged or fertilizer-burned turf, Sek says his company has to deal with much fewer incidents on multi-unit housing lawns than on residential lawns. The liability factor can be more or less critical, depending on the type of application being made, like application of a weed herbicide. "If I knew I had a 15-acre project to spray and I had a 50 percent chance of rain, there is no way I would put the truck out on the big job because I'd end up re-spraying 15 acres, as opposed to re-spraying 20 home lawns," Sek says.

In addition to reduced liability, the owners of multi-unit housing complexes are also better creditors. Monroe has rarely had problems in getting money from these clients, but Sek says they generally tend to be slower at paying their bills. "The commercial projects are a little bit slower because when you are paying numerous bills for everything associated with maintaining a large project, if the bill is 30 days net, they don't pay it the week after they get the bill," Sek says. "If cash flow is slow, they will go 45 or 60 days."

Like Monroe Tree and Landscape, The Shur Lawn Company in Omaha, NE has found that one happy customer can spawn other happy customers in the multi-unit housing market. "We started out doing two or three apartments," says Keith Weidler, Shur Lawn president. "This year we are



Lawn care businessmen have to keep in mind that while apartments and condos may have large property maintenance budgets, they may not be willing to allocate a large portion of the budget to landscape care.

has to tailor his treatment program to their situation. He says he charges apartment management less per square foot and provides a reduced program in terms of fertilization. Many apartment managers do not water their lawns the way they should and Weidler allows for this in his fertilization program. The key to profitability in this market, notes Weidler, is the amount of time spent applying material during the entire work day. In the apartment lawn market, the much-reduced travel time means increased profit. Weidler estimates that his operators can make as much money on an apartment lawn in three to four hours as they could on home lawns in eight hours, largely because of travel time between home accounts.

Reduced travel time on apartment lawns also means applicators must work harder and longer without the "travel break," but Weidler claims his men really do not complain or try to avoid apartment duty. Weidler himself cannot complain about his apartment clients, especially in their role as creditors. "If I look at the overall picture over the past 10 years, I have never lost a dollar on an apartment complex."

He can, however, grumble a little over the policy of most apartment management companies to take bids for lawn care service. He recalls an experience with one of his "favorite projects." This particular account has cancelled his service twice and tried to do it themselves once in the 12 years his company has worked with them on and off. "The last time someone low balled us," Weidler says. "When we got it back, 20 percent of the turf was dead and had thistles the size of Buicks." The situation with this particular apartment complex has been rectified, but the experience has made

(continued on page 26)

doing about 25 different units for the same company." Weidler says his company has even been able to expand its treatment program from one to two annual applications of fertilizer and weed spray to a five application per year program.

Quality service will sell itself in any business, according to Weidler. "If you do a good job for a customer at a fair price, treat them fairly and respond to their needs, they will then reciprocate with more business as they have it available." There are few condos in Weidler's area, but there are numerous apartment complexes and they contribute about 12 percent of his annual lawn care sales. That figure of 12 percent is rather remarkable considering that Weidler currently works with only three real estate companies. "Once you get with a management company that is reputable and pays their bills, they can give you a lot of business."

Shur Lawn got its foot in the multi-

unit housing market by servicing the home lawns of personnel in the apartment management companies. Weidler's good service can sell itself, but recently he has been giving it a helping hand by actively soliciting apartment business. "More recently we have been soliciting that business by contacting the management companies and apartment managers themselves to find out who the owners are." Weidler intends to stay involved with apartment lawn care because he finds it a profitable business with few headaches.

He likes working with apartment management because he says they understand the dynamics of lawn care better than the average homeowner. "They realize what it is to grow grass in a large area, they are not going to call about one dandelion. If they have a problem, they want you to respond to it, but they don't bother you with little problems."

Like Sek, Weidler has found that he

MULTI-UNIT HOUSING

(continued from page 25)

Weidler aware of how dangerous it can be to have too much of his business tied up in apartment work.

"If you lose 10 home lawns, you've not lost much. If you lose 10 commercial properties at 300,000 to 400,000

square feet, then you have lost a considerable amount of work and thus profit. It takes a lot longer to replace one apartment lawn than it does to replace one home lawn."

William Murdock, owner of Greenscapes in Tallahassee, FL is not worried so much about losing multi-unit housing accounts as he is about acquiring

them. Greenscapes is strictly a lawn spray company in a condo and apartment market that demands complete lawn maintenance from their service companies. Consequently, most of his clients are home owners and the one condo complex he does currently service has in-house mowing and maintenance. He says the complex con-

Servicing Florida Condominium Projects

When construction work slowed down, Scott and Bruce Lampitt started doing grounds maintenance work for the condominium developer they were working for in southwest Florida. That was 10 years ago. Today, Grass-Hopper Landscaping Service, Inc., headed by Scott and Bruce Lampitt, cuts up to 125 acres a week during the growing season in the Fort Myers area.

Besides their grounds maintenance work, Grass-Hopper also does sodding and landscaping, and has its own tree nursery. The Lampitts also do fertilizing and spraying, but now subcontract most of that work.

Lampitt says, "With our experience, we're trying to diversify our services more. We're starting to do some renovation landscaping and some tree replacement work. And we do brush cutting for local contractors when they start clearing undeveloped areas for new construction."

Originally from the New York-New Jersey area, Scott and Bruce moved to Florida 15 years ago to work on condominium construction with a brother-in-law. When business was at a lull, they began doing grounds maintenance work on the side, and it increased until they were doing it full time. Grass-Hopper Landscaping Service was thus born and incorporated in 1974.

"We want to keep it a family business," Scott says, "but we intend to keep growing, too. In fact, our work has expanded every year."

According to Lampitt, 75 percent of Grass-Hopper's accounts are condominium projects. And although a lucrative market for the company, Lampitt says these jobs give him the most problems. It's not a difficult mowing job, he says, adding that the cutting work is easy because of the large open areas in condo complexes. It's the people that make it hard, he says. "You have 400 bosses in a condominium project. In a shopping mall, for example, you only have one."

Multiple bosses means multiple instructions, multiple special requests and multiple disturbances. "They (condominium residents) slow our



Blair Lampitt

men down sometimes," Lampitt says. "That's one of our biggest losses." The jobs would be easier if residents brought their suggestions and complaints directly to the office instead of bothering the men who actually mow the lawns, he explains.

A typical condominium job for Grass-Hopper is a 10-acre project with buildings and turf. The mowing, edging, weeding and removing of debris takes about three hours with five men. Pricing depends on the number of man-hours and the equipment used. "Through our experience we know how many hours it takes to do a job," Lampitt says. "We charge X amount of dollars an hour for labor and X amount of dollars for equipment used." And that X usually ranges anywhere from \$8 to \$20 at Grass-Hopper.

Innovation has played a key role in the company's growth. To cut down the cost and difficulties of picking up clippings, the Lampitts fabricated a pick-up hopper for their first Cushman Front Line® Mower. "We had to mount a motor on the side to blow the clippings up into the hopper, to eliminate going back and raking them later," Lampitt says.

Then Cushman came out with their new Grass Caddy® system and the brothers traded in their equipment for two new Front Line diesels with Grass Caddy hoppers attached. "The Front Line diesel we traded in had 1,300 hours on it," Lampitt says.

In addition to their Front Line Mowers, Grass-Hopper runs two John

Deere 850s in the summer season, each with a six-foot cutting width and 27-bushel hopper that the Lampitts designed to fit the 850s. For winter mowing they use a larger Howard Price front mower to open cut, then they follow up with the Front Lines to trim and pick up the clippings.

"We just had to find a better way to pick up the clippings here," says Lampitt. "In this part of Florida grass will grow a half-inch in 24 hours during the summer. When we cut once a week, we're cutting off three to four inches of growth. If we didn't pick up the clippings," he explains, "that would soon become a problem."

Clippings are usually dumped and spread for compost on nearby undeveloped land. However, the Lampitts are currently working on other methods of disposal. They're investigating the purchase of equipment from Sweden that will automate this process, allowing them to use the same men to mow and move clippings, while getting rid of clippings faster than ever before.

"We've often had to start out by fabricating or modifying equipment to fit our needs," Lampitt says. In fact, the company has just designed three, one-ton truck boxes that enable mower operators to back up to the trucks and dump their hoppers quickly.

"We also developed an 18-foot trailer that we can pull into an area and park, then dump into it as we work on the surrounding turf." The trailer comes in handy when cutting the 80-acre Myerlee condominium project, says Lampitt. "There are only certain areas where we can dump clippings. We can park the trailer and let it set without tying up a truck all day."

The Lampitts have also initiated involvement with lawn care industry organizations in the Fort Myers area. Three years ago they helped organize the Professional Grounds Maintenance Association of Lee County. Bruce Lampitt is currently serving as president.

"We're trying to promote the professionalism of our members," says Scott. "The association helps us keep up with new developments in the industry."

tacted several lawn care companies and took bids, but he believes he got the job because one of the condo's board members is a satisfied home lawn customer of his.

Murdock thinks it is difficult to sell lawn care to a market with a lower lawn care budget than the residential lawn market. "As a young business, I can build up my business much faster by selling residential lawns than putting all the effort into sales and talking to commercial people," Murdock says. "It just takes too much time to make a sale. I can make a residential sale a whole lot faster." At some future date, after his company has attained some stature, Murdock says he may go after the condo market.

L.D. Anderson, president of Fertilawn, Inc., Bloomington, MN is not currently selling to the multi-unit housing market and has no intentions of doing so in the future. Anderson does not turn away apartment or condo lawn accounts, but he does not actively solicit their business or handle them any differently than any other account. "We don't particularly want their business. We'll do it, but we are very firm with them about service," Anderson says.

His company services 40 large complexes, representing about 2 per-



cent of his total annual sales, but he says apartment and condo complexes take second place to his 6,000 residential customers. "We'll do our residential first and then do those complexes," Anderson says. "They are large dollars, but not much profit." He claims apartments and condos require large amounts of material and generally must be acquired through bidding.

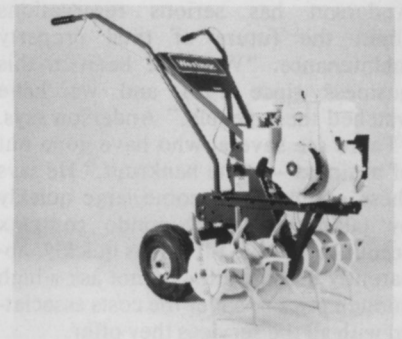
Anderson is also leery of condo work because of the liability involved. "We're pretty careful with the larger ones, simply because if you burn it you are in for a lot of trouble on a big area. We only put our three- to four-year men on those big places." Anderson has not run into any particular problem with collecting bills from condos, but he says the potential is there. "We

(continued on page 28)

The WESTMAC[®]

"Money-Making Machine"

pays for itself in 2 days. . .
then earns you \$44 per
manhour!



PLUG AERATOR
32 SPOONS
60 HOLES PER SQ. YD.
NEW 1984 MODEL
(World's Fastest)

AS A PLUG AERATOR . . .
the Westmac cores up to 4", depending upon soil conditions leaving 60 holes per sq. yd. so water, air and fertilizer can penetrate through thatch to reach the roots **immediately**, to help build and expand the root system.

Very maneuverable, easy to operate and equipped with large pneumatic tires, the Westmac has a 5 HP Briggs & Stratton engine, with a chain and bearing transmission. It can plug aerate a typical 5,000 sq. ft. lawn in just 15 minutes - or less (straight runs -750 sq. ft. per minute). Release the deadman's clutch, and the Westmac stops instantly, without coasting. **Extra weight can be added.**

AS A MONEY MAKER . . .
the Westmac allows you to make 4 visits, and get paid for 5 for a 25% increase in gross income!

Assuming two visits per manhour, it can pay back its low cost in only 2 days! After that, each Westmac you own can mean an **extra \$44 profit per manhour!** (Based on \$27 charge per visit and \$10/hour for labor and overhead).

And if you act fast, you can make this extra profit now and for years to come. Get all the details, without obligation. Use the Reader Reply Card, the coupon below, or phone Jim Gourley at (414) 552-8911 and ask how Lawn Masters, Inc. successfully worked plug aeration into 98% of customers services.



Of course, we'd like to earn an extra \$44 profit per manhour. So rush all the details on the Westmac Plug Aerator to us, without obligation. (No salesman will call.)

Please Print

NAME _____
FIRM _____
ADDRESS _____
CITY _____
STATE _____ ZIP _____
PHONE (____) _____
No. of Trucks _____

Lawn masters

6527 39th Ave. • P.O. Box 652
Kenosha, WI 53141

INJECTION GUN SYSTEM & LOW VOLUME SPRAYER



THE BETTER WAY TO SPRAY!

Lease Terms - Call Tom Jessen
Perma-Green Supreme
1-800-346-2001
219-663-8417

MULTI-UNIT HOUSING

(continued from page 27)

prefer the homeowner because we can tell him to go to hell for his \$30. But when someone owes you \$400 or \$500, you have got to be a little more careful."

Unlike Murdock, Anderson's spray application business orientation has not prevented any condo or apartment management from seeking his services. Anderson has serious reservations about the future of total property maintenance. "We have been in this business since 1961 and we have watched these people," Anderson says. "There are several who have gone out of business — gone bankrupt." He says these companies become large quickly by taking on many condo complex accounts, but die off just as quickly, apparently because they do not ask a high enough price to cover the costs associated with all the services they offer.

Steve Bizon, owner of Bizon Maintenance, Wilsonville, OR does not share Anderson's pessimism on the topic of total property maintenance. Most of Bizon's accounts are commercial in nature, such as industrial sites and office parks, but he has recently taken his total maintenance business to condominiums and he says he has no

regrets. He services the condos, which represent about 20 percent of his total annual sales, the same as his industrial accounts. They are signed on with two-year contracts and fertilized six times per year.

"Most contracts are dealt with through an association with a board which varies from four to 12 members," Bizon says. "They negotiate with us for all of it or none of it."

The key to profitability in this market, notes Weidler, is the amount of time spent applying material during the entire work day. In the apartment lawn market, the much-reduced travel time means increased profit.

They are looking for one service to do it all." Bizon's operation covers such services as lawn fertilizing, landscape maintenance, mowing, edging and parking lot maintenance. "Our program

covers everything from the outside of the building to the property line," Bizon says.

There is no question in Bizon's mind about the value of condo maintenance. "Anybody who doesn't do it is going to be left behind," Bizon says. "I have gotten my last three contracts by emphasizing that it is much easier to deal with one person than three or four. Plus, I can coordinate everyone so it is all done right, at the same time, and most importantly, it all looks the same."

Bizon wants to stay in the condo business, but he says it is not without its share of headaches. He says you had better do a good job because there are a lot of people at each account who would like to tell you how to do your job. "There are a lot of people there and they all have their opinions on how something ought to be done. That is where you have to educate them. Tell them what is going to be done month by month."

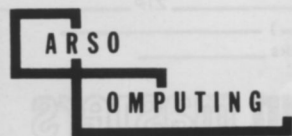
Because of the number of residents at condo complexes ready to voice their opinions, Bizon's men also share his feelings about condos and would rather be working on industrial sites. "At industrial sites we deal with one person for a \$100,000 per year contract, compared to dealing with 95 people for

LCO DATA SYSTEM

Our LCO data system is a comprehensive lawn care system, programmed to assist you with:

- Sales Leads
- Routing
- Inventory Control
- Invoicing
- Payroll
- Accounting
- Service Calls
- and much more

A computer lawn system developed by Lawn-Care Professionals for the LCO.



SALES-SOFTWARE DEVELOPMENT

P.O. Box 143, South Vine
Camargo, Illinois 61919
Call Collect (217) 832-2711

SUNBELT

The Turf Type Tall Fescue Specialists

Distributors of:

- CLEMFINE • REBEL
- REBEL/FALCON BLEND
- REBEL/FALCON/ADVENTURE BLEND
- FALCON • TURF TYPE TALL FESCUE AND BLUEGRASS MIXTURES
- OTHER QUALITY TURF GRASS SEEDS AND WILDFLOWER MIXTURES

Ask about our custom bagging



CALL JOE O'DONNELL AT
1-800-522-SEED
IN GEORGIA 404-448-9932

Sunbelt Seeds, Inc.

Atlanta, Georgia 30071

the same amount in a condominium. If that one person is satisfied, then everything runs smooth. But in a condominium you have to have at least 80 percent of them satisfied for the whole place to be satisfied."

At least Bizon has not experienced any special liability problems with condos. He says none of the condos he deals with require liability insurance, which points to a basic ignorance on the part of the condo associations in dealing with service operations since all of Bizon's industrial accounts do require such insurance. But liability should not be a major stumbling block for lawn care operators who are interested in the condo and apartment market. "As far as liability goes, I don't think a person needs a whole lot of insurance, our policy runs \$300,000."

Like Anderson, Allen Duey, president of Jay-Lan, Inc. of Sioux City, IA is also skeptical of the total maintenance field. "What I have seen of the mowing and spraying business, it doesn't work together," Duey says. "From what I have observed here and in Omaha, most of the people who have gotten into the lawn care business get a taste of the better income from the spraying end of the business and want to get out of mowing."

Duey says condo and apartment



management do not necessarily expect their lawn service to provide a total maintenance package. "Usually, we find the condo management has its own mowing equipment and have people like us come in to spray."

Condo lawn service represents an insignificant percentage of total annual sales to Jay-Lan, but Duey is quite adamant about maintaining pricing and service guidelines to condos. He has con-

tracts with all his customers — even homeowners — to insure that both parties are certain of what one expects from the other. "A lot of people will give away the front door to them (condos), but we don't," Duey says. "We charge relatively the same price as if we were going into a homeowner situation."

Back in the total property maintenance camp, Carol Miller, co-owner of Acme Maintenance in Acme, MI, has found condo maintenance to be a "pleasure" in many ways. "Most people who move into something like that realize they aren't the only ones there," Miller says. When someone in the complex does complain about something, Miller or her husband, Robert, contacts the condo board and the board works out the problem with the agitated party.

Miller explains that it is important to understand the mechanics of condo ownership when dealing with condos. Once all the units in a complex are sold, the buyers own them. In complexes where some units are not sold, the lawn care businessman must answer to the existing owners who belong to an owner's association and the builder of the complex or whatever entity has original ownership of the

(continued on page 30)

We Made It Simple!

BIRCHMEIER has the Back Pack Sprayer for you —

AVAILABLE IN
5 GAL. (20 K)
3½ GAL. (15 K)
2½ GAL. (10 K)



- **QUALITY** — Built with Swiss clocklike precision.
- **LIGHTWEIGHT** — With the comfort of the user in mind.
- **ACCESSIBLE** — A durable self-lubricating and external pump assembly.
- **SIMPLICITY** — Insures cleanliness and longer wear. No tools necessary to disassemble and repair.
- **PRICING** — Here's one instance where you pay less for the best.

AT THE HEART—DURABILITY OF SERVICE

Technical data	FLOX 2½ gal.	IRIS 3½ gal.	SENIOR 5 gal.
Weight #	11	11.4	12.1
Tank Capacity	2.6 gals.	3.9 gals.	5.2 gals.
Max. Working Pressure	84 PSI	84 PSI	84 PSI

FOR MORE INFORMATION

TREBOR CORPORATION

4047-A JONESBORO ROAD • FOREST PARK, GA. 30050 • 404-366-0957

MULTI-UNIT HOUSING

(continued from page 29)

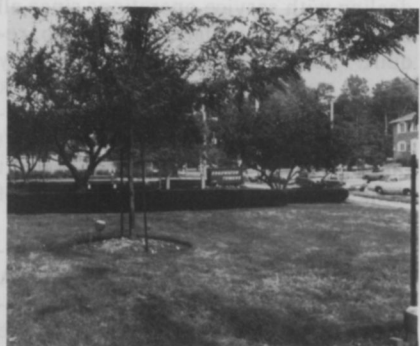
property. The condo association holds monthly meetings and designates money from the owner's maintenance fund to cover the cost of maintaining the property common to all condo units — driveways, sidewalks, lawns, etc.

To avoid the hassle of dealing with dozens of people on every visit to the condo, Miller says it is imperative to deal only with the personnel who have been designated as managers of each condo building. The presence of the manager can actually make customer relations simpler at condos than residences. "You can go to the manager and say, 'I'm having a lot of trouble with this one guy and you are going to have to help me out on this,'" Miller says. "If you have a good relationship and they like what you are doing, they won't want to lose you."

Condo owners can be "fussy" says Miller, especially when they think the common property in front of their unit is not receiving the same care as the property in front of someone else's unit, but overall, condos tend to be less trouble than home lawns. "In the long run we have had fewer problems with condos than with homeowners," Miller

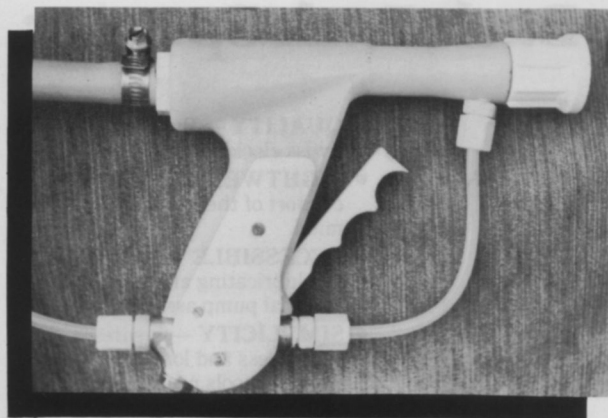
says.

"We try to keep it looking the best for the minimum amount of money," Miller says. "That is what they all want. As long as it looks good, they are happy." But it is important that they remain happy, so Miller has designated one crew member on each condo crew to handle customer relations. "We



have one fellow we try to get to the condos more than anyone else because he really knows how to handle people. Elderly ladies live in some of the condos and you have to know how to handle them as opposed to young married couples with kids."

INJECTION GUN SYSTEM



TARGET HERBICIDES WHILE
BLANKETING FERTILIZER

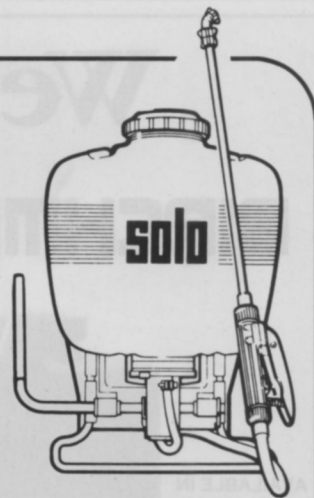
**YOU CAN'T AFFORD TO
SPRAY WITHOUT IT!**

CALL TOM JESSEN
AT PERMA-GREEN SUPREME
1-800-346-2001 OR 219-663-8417



SOLO JETPAK-425 Knapsack Sprayer

World's first manual sprayer designed without metal or rubber parts subject to contact with chemical formulas. Guaranteed against corrosion, swelling, shrinking or dissolving of pump components when used with accepted agri-chemicals dissolved in water or oil. The pump design allows application at any desired pressure from 0 to 85 psi.



Applications include plant protection and weed control in the horticultural, agricultural, woodland industries. Excellent for animal and stump spraying.

OUR MOST POPULAR MANUAL SPRAYER—AT A VERY SPECIAL PRICE!

Order No. 200200 \$119.95

SALE PRICED AT ONLY \$89.95
Add \$4.00 for Shipping and Handling
OFFER VALID WHILE QUANTITIES LAST

TO ORDER:

Send check or money order to the location nearest you



Equipment Supplier to Professionals Throughout the World

Ben Meadows Company

3589 Broad Street
Post Office Box 80549
Atlanta (Chamblee), Georgia 30366

2601-B West 5th Avenue
Post Office Box 2781
Eugene, Oregon 97402

Apartments Fuel Growth in Housing

Apartment construction is keeping life in the United State's housing recovery, according to a recent report in *USA Today*. Housing starts in June ran at a seasonally adjusted annual rate of 1.9 million units, up 5 percent from May's 1.81 million units and 9 percent from June 1983. June's starts rate for apartments (including condominiums and townhouses) was 710,000 units — up 32 percent from May, the biggest monthly rise since September 1973.

Experts say the apartment rate cannot continue because:

- Higher mortgage rates will cut apartment construction. Apartment financing involves long lead time, so "it takes longer for higher rates to hurt," says Mark Riedy of Mortgage Bankers Association of America.
- The market for condos and townhouses is soft. And condo builders are the most pessimistic about higher mortgage rates, says economist Gopal Ahluwalia of the National Association of Home Builders. It sounds as though lawn care professionals had better work fast to grab those condo accounts in a market that is growing, but will soon peak.

Losing the revenue from a large condo can be a frightening prospect, but knowing that condo contract has come in for the year can be equally reassuring. "A lot of times a homeowner will call and say, 'I don't want it cut this week.' That never happens with a condo. Since we do fall and winter work, it is a steady job. When the condo contracts come in, we know we are going to have work for so many crews."

Miller has found that keeping condo owners pleased with good service can also provide a promotional benefit for her company. "It's your showplace. A lot more people see that condo than see a homeowner's lawn. You would be surprised at the number of people who see you coming or going or will ask who is doing the work there."

Conclusions. There is some disagreement over the strengths and weaknesses of service to the multi-unit housing market, but the fact that none of the professionals we interviewed would walk away from these accounts says a lot. Admittedly, there are hassles associated with the market, especially in the case of condo owners grumbling over the quality of one another's flower boxes. But many business people have found this segment of the lawn care market quite profitable, like Robert and Carol Miller who have devoted nearly half of their business to condo service.

The biggest dispute seems to be over the extent of service that should be offered to the market. Operators in every segment of the lawn care market have been arguing and will continue to argue over the merits of offering customers total maintenance programs as opposed to only lawn spraying or only mowing. As in all other business disputes, the buyer will have the final say.

Quality Pays!



When you're removing thatch, a high quality power rake can cut your operating costs. Less maintenance, less downtime and easier operation all add up to lower costs for you. Here's why BlueBird is the highest quality power rake you can buy . . .

- **Broadest line:** gives you a rake for every type of need
- **Most durable:** longest life, least maintenance
- **Choice of horsepower:** satisfies every customer's needs
- **Rotor disengaging clutch:** easy to start, eliminates periodic belt adjustments
- **Unilever height adjustment:** allows repeatable blade depth setting, maximum rotor ground clearance
- **Flail rotor:** handles all raking needs
- **Patented knife blade reels:** for vertical mowing
- **Sealed ball bearings:** no maintenance needed
- **Largest selling rake made:** your guarantee of excellence

No other power rake can give you all the benefits and advantages that BlueBird can. To get all the details on why BlueBird is your **best buy**, call the BlueBird Action Center today. BlueBird International, 2778 South Tejon, Englewood, Colorado 80110. (303) 781-4458.



SELF-FUNDING INSURANCE: AN ALTERNATIVE TO STANDARD POLICIES

BY VIVIAN FOTOS

Insurance. An investment for the future. You know how important those premiums are, yet it still hurts the billfold when your insurance company sends you that annual rate increase for your employee health plan. It's enough to make you question the return on your investment—and *maybe* you should.

If your medical claims are continually less than your health insurance premiums, you might be a good candidate for an alternative coverage program—self-funding insurance (also called self insurance). According to Chris Hutchinson, president of Self Funding Administrators (SFA), Annapolis, MD, a lawn care professional can normally save about 20 percent to 25 percent of the premium he's currently paying during the first year he participates in a self insurance program.

"It's really a pretty simple concept," Hutchinson says. Instead of making payments to an insurance company, a lawn care business covers its own medical costs through a special, interest-bearing trust fund. "The employer takes the same amount of money that he would've paid his insurance company and puts it into a trust fund," he explains. "And from that trust fund, he contracts with a third party administrator to pay the medical bills just like his insurance company. Except," Hutchinson says, "at the end of the year, whatever is left over in the trust fund belongs to the employer instead of the insurance company."

But what happens if medical costs exceed the amount of money in the trust fund in a given year? Well, the results could be devastating for someone who's *fully* self insured. That's why most businesses participate in *partial* self-funding programs. As Hutchinson says, "Full self insurance means that you have to pay all of your own medical

claims regardless of how high they go. That gives you a great deal of responsibility and liability." Partial insurance allows the employer to self insure up to a specific limit, then purchase a stop/loss policy that assumes liability if that limit is reached.

Stop/loss policy. Stop/loss policies are very specialized, with only a few insurance companies offering them. Purchased through a self-funding administrator, the lawn care specialist has two different coverages to choose from—an individual stop/loss policy which stops each employee's claims at a certain point (usually around \$10,000, says Hutchinson) and an aggregate stop/loss policy which acts as an umbrella policy, covering all claims for

Instead of making payments to an insurance company, a lawn care business covers its own medical costs through a special, interest-bearing trust fund.

all employees.

"These two policies limit the employer's liability," Hutchinson explains. For example, he says, under an individual stop/loss policy with a \$10,000 limit, if an employee has a half million dollar claim on a premature baby, the employer is only responsible for the first \$10,000. After that, his stop/loss policy takes effect and an insurance company pays the other \$490,000.

With an aggregate stop/loss policy, if a company averages \$50,000 a year in medical claims, an insurance company will probably set the firm's limit at about \$60,000, Hutchinson says, to compensate for unusual claims. So if the business had a terrible year with maybe \$100,000 in claims, the employ-

er would only be liable for the first \$60,000.

"You can't have self-funded insurance without stop/loss insurance on top of it," says Jerry Faulring, president of HydroLawn, Gaithersburg, MD. "It would be such a terrible risk." Lawn care professionals need a stop/loss policy to cover catastrophic cases and get protection against exceptional losses, he explains.

Faulring contracted SFA to administer his company's partial self insurance plan over a year and a half ago, and he is "very pleased" with the program. "Our costs have been substantially lower," he says, emphasizing his interest in the program's cost reduction features and flexibility.

One of the major benefits of partial self-funding is that lawn care specialists can design their own benefit packages. "You can add benefits or delete benefits under this kind of a concept. You can't do that with Blue Cross, for example," Hutchinson says. "You can't walk into their office and say, 'I want to take out the surgical benefit of your plan and pay you less money.' They offer one or two or three plans and that's it." A lawn care professional can tailor his benefits around the needs of his employees. He can include or exclude anything he wants because he's paying for it.

Substantial savings. Working with a third party administrator on a partially self-funded insurance plan is cheaper than buying a standard health policy for a number of reasons, says Hutchinson. First of all, because of their low overhead, he says third party administrators can process accounts more economically than big insurance companies. "An insurance company might need anywhere from 15 percent to 25 percent of the premium to administer an account," he says. "We would need about 8 percent to 13 percent. And when you're talking about a health insurance premium of \$100,000 or \$200,000, every percentage point is

a lot of money.”

Insurance companies also require clients to establish a monetary reserve to cover future claim fluctuations or, in the event of policy termination, unpaid bills. According to Hutchinson, that reserve amount is often equivalent to about 25 percent or 30 percent of the company's annual claims in dollar value. “So if we take a client that has \$50,000 of claims every year,” he says, “it's possible that the insurance company could be holding about \$15,000 of the client's money.”

SFA counsels their clients to keep a reserve for years when claims are above average as well; however, the money is put directly into the client's trust fund which accrues interest. “The client's actually earning interest on the reserve,” Hutchinson explains. “And the reserve and the interest belong to the client, not the insurance company.”

Jerry Faulring of HydroLawn is also impressed with the cost containment features offered by SFA's partial self insurance plan. SFA encourages the use of such features to save its clients' money. According to Hutchinson, many SFA clients incorporate second surgical opinion requirements into their health plans. And, among the dozen different cost containment ideas they utilize, SFA conducts hospital audits to catch billing errors. “We audit every hospital bill over \$5,000 and we catch errors in favor of the policyholder in about 60 percent to 70 percent of those bills,” Hutchinson says.

All the necessary documentation which outlines the employee health plan is provided by the administrators of the program just like an insurance company. SFA issues insurance booklets, identification cards, claim forms and return envelopes, and they do so on a customized basis. “We feel strongly that the employer get recognition for the enormous expense of providing welfare plans to his employees,” Hutchinson emphasizes. “So our booklet has the employer's name and logo all over it, as with the identification card and everything else. We want the employee to appreciate what the employer is doing.”

SFA also maintains a toll-free telephone number for use anywhere in the United States by its clients. Anyone with a problem can contact SFA directly and get assistance, Hutchinson explains. In return for all their services—general administration of accounts, handling claims, providing documentation—SFA charges each client a per employee, per month fee. Depending on the number of employees, a lawn care company can expect that figure to be between \$3 and \$6.

To participate in a partial self insurance plan, a lawn service company usu-

ally sets up a special, tax-exempt IRS 501(C)9 trust fund at his local bank. Once monies are deposited into the trust, they can only be taken out to pay employee benefits. However, the principal of the fund is immediately tax deductible as a business expense and the collected interest is tax-exempt.

The internal structure of the trust fund consists of a savings account and a zero-balance checking account. The lawn care professional makes deposits into the savings account which is usually bearing at least 5-1/2 percent interest, and when claims come in, the third party administrator contacts his

client so that money can be transferred into the checking account and claims can be paid.

“We don't control any of the money; we just administer the fund,” Hutchinson says. “The claims come in to us, we check them to see if they're valid and our client authorizes us to issue the checks to the various doctors and hospitals. They (the client) get the bank statements at the end of the month with all the cancelled checks.”

Not for everyone. Partial self-funding insurance is not for everyone. “Being self insured is no across-

(continued on page 34)

PLCAA'S TAMPA CONVENTION WILL COST YOU THOUSANDS OF DOLLARS

If you're thinking of advertising to get your sales message to the hundreds of Lawn Care Operators in Tampa, and the thousands that will not be attending the PLCAA Convention — Put your message where it will produce the most return for every dollar invested. Only one Lawn Care market magazine offers maximum exposure at minimum expense.

ALA delivers the largest lawn care market coverage — 23 percent larger than Lawn Care Industry magazine — and the lowest cost per thousand circulation* — 48 percent less costly than Lawn Care Industry magazine.

ALA

We Cover The Lawn Care Market Like No Other Magazine!

*Based on one time 7 X 10 page four-color rates and Lawn Care market circulation: Lawn Care Industry, 12,683; ALA Magazine, 15,606.

SELF-FUNDING INSURANCE

(continued from page 33)

the-board panacea for unfortunate experience a company may be having with conventional insurance," explains a spokesman from the Self Insurance Institute of America. "Each company contemplating self insurance should have a thorough study made and might be advised to retain a consultant to analyze their own situation."

The number of people a company employs will also determine the viability of a partial self-funded program. Some third party administrators, such as SFA, only work with companies employing 50 or more people. Some won't work with firms of less than 100 people.

But more importantly, the program is not advantageous for companies with cash management problems. According to Hutchinson, a lawn care businessman will run into trouble if he can't keep enough money in his trust fund to pay the normal amount of claims. "He should have the money—it's about the same amount that he was paying his old insurance company," he explains. "But if he doesn't have good cash management, if he doesn't put the money in the trust fund and claims come in, he could have a problem." The stop/loss policy premiums are billed to each client, Hutchinson says, but no one can force a company to feed its trust fund. "It's their money."

That's one reason why Daniel Kenney, associate director/company operations of the Health Insurance Association of America, is wary of self insurance plans. One of his concerns focuses on the lack of financial guarantees provided by self-funded plans. The insurance industry is heavily regulated by state insurance departments, he says. "They're watching what's going on with insurance companies. In essence, they can pull the license of an insurance company if something is going awry," Kenney explains. "With self-funded insurance, you don't have another authority that has a vested interest in seeing that premiums are collected."

Kenney also questions the expertise offered by some third party insurance administrators. "Many are very good and very efficient," he says, "but there are a whole lot of them that don't have a great deal of experience and do not have the number of resources to accomplish what needs to be done."

Understanding employers' concerns for rising medical care costs, Kenney believes there is a way for companies, especially smaller firms, to reduce their insurance costs through conventional group insurance programs. "One of the easiest cost containment features to reduce insurance premiums is to en-

courage people to have higher deductibles," he suggests. He says this will "dramatically" reduce the cost of the lawn care specialist's insurance program, and essentially accomplish what he's trying to do under self insurance without sacrificing full protection.

Of course, like choosing an insurance company or any other kind of firm to do business with, it's important to find a well-established and reliable organization. If a lawn care professional is looking for a third party administrator to handle his insurance, Kenney says he should look for someone who has a large volume of business and offers cost containment features. It's also important that the organization is willing to sit down and work with you.

SFA works with each potential client to ascertain whether or not partial self-funding insurance is a good idea for them. "When the client's claims are continually higher than his premiums and he's jumping from one insurance company to another to find a good deal, then the client does not belong in a self-funding program," Hutchinson advises.

"We want somebody that's stable and has a relatively younger work force, because younger people tend to get sick less than older people. Lawn care specialists are excellent candidates for partial self insurance," he says, "because they tend to hire younger, outdoorsy-type people—healthy people."

Jerry Faulring agrees that age is to the lawn care industry's advantage. "We don't have old age claims," he says. "When we go to somebody like Aetna, we're being factored in with the whole population. Their rates have to be higher, because essentially we're subsidizing the older folks and higher risk groups."

Faulring believes his employees have noticed a difference between working under a partial self insurance program as opposed to a standard health policy. "It seems like we have fewer hassles (with processing claims)." The company has a little

more leverage since the administrator is subcontracted by them, he says. "Whereas with Aetna, if they want to sit on a claim for six months, they're going to sit on it and you really don't have much influence over that. But if SFA is sitting on a claim," he adds, "we can call them up and tell them we're not real happy about that. Because they're working for us, they're more responsive."

Marty Erbaugh, president of Lawnmark Associates, Peninsula, OH, recently set up his own partial self-funding insurance program with SFA. He was referred to Hutchinson by Faulring. Although his program has only been in effect for a few months, he's certain that the future benefits of his plan will be quite rewarding. "Partial self insurance becomes a really good thing if your claims are less than your premiums," he says. Any excess money remains in the plan rather than being profit money for the insurance carrier, Erbaugh explains. "And over time, you can either improve your benefits at no cost because the plan already has the money to pay for the extra programs, or you can reduce the premiums."

An increasing number of companies are participating in self insurance plans. According to Hutchinson, approximately 30 percent of the American work force is under self-funded or partially funded plans. Certainly the ever-rising cost of health care makes the concept appealing. As a lawn care specialist, the idea of tailoring your own benefits package should be attractive, too. However, it's important that each prospective client investigate his individual situation to determine if a self-funding or partial self-funding insurance program is right for him.

For further information on partial self-funding insurance, lawn care professionals can contact Chris Hutchinson: Self Funding Administrators, Suite 102, 130 Holiday Court, Annapolis, MD 21401, (800) 424-8611, (In Maryland, call 1-266-6663).



Jerry Faulring



Marty Erbaugh



Chris Hutchinson

THE BRITISH TAKE AN INTEREST IN AMERICAN LAWN CARE

BY TIM WEIDNER

Earlier this year, the Hawley Leisure Group of London, England acquired Ever-Green Lawns Corporation of St. Charles, MO with a deal that may amount to \$15 million, according to a report in London's *Financial Times*. Ever-Green and its 75,000 accounts have been purchased from owners Paul Daverede and John Crammer. \$11 million is to be satisfied by a vendor placing of Hawley shares and the remaining \$4 million will be deferred dependent upon the company achieving profits before taxes of at least \$10.3 million over a three-year period until October 1986. The financial paper concluded its report by noting that in the year to October 1983, Ever-Green earned pre-tax profits of \$2.3 million.

Residential lawn service is big business in the United States and British businessmen have begun to take an interest in this market. The Hawley Leisure Group constitutes a group of service companies operating in the United Kingdom which has begun to expand into the United States in the last four years, according to David Hammond, Hawley's main board director. "We are in a whole range of service businesses, from central station security to janitorial, and more particularly here (England), home improvements," Hammond says. Ever-Green is Hawley's first venture into the lawn care industry.

Ever-Green was brought to the attention of the Hawley Group by a Merrill Lynch broker because the lawn care company met Hawley's four acquisition criteria. First, Hammond says Ever-Green is a service business; second, it is profitable; third, it is in a highly fragmented market (no dominant companies, including ChemLawn Corporation, in Ever-Green's market); and fourth, Ever-Green has good management personnel who are willing to stay on. Hawley intends to operate

Ever-Green with its existing personnel and merely provide "ownership representation," according to Hammond. "We are not interfering in operational management. We have our own main board director residence in New York who supervises all our American investments."

"We buy management as much as we buy anything else," Hammond says. "We do not put our own management into our acquisitions overseas. What we have brought to the transaction is an encouragement and financing source for Ever-Green to expand." Since the acquisition, Hammond says Ever-Green has already opened a branch in Philadelphia.

Hammond makes no bones about his company's hopes of becoming a lawn service power in this country. "We intend to encourage and stimulate the Ever-Green management to achieve that end." The Hawley Group intends to take the industry by storm, both by acquiring other companies and developing Ever-Green. "We are confident that they can grow quickly, but they can't grow 10 times over with the existing management," Hammond says. "Perhaps three or four times over with existing management." Hammond would not say if Hawley has its sights on any other U.S. lawn care companies, only that they "are studying the industry."

Though things are hopping for Hawley in America, the company has not had the same kind of success with lawn care in Great Britain. It is not Hawley's fault, but rather the nature of British society. "It is not a business that is generally recognized by the public here," Hammond says. "We are somewhat more highly taxed and have less discretionary (income) to spend I suppose." He says the British also tend to take great pride in personally caring for their gardens, landscape and lawns.

One British firm in the south of England intends to change the country's attitude toward residential lawn servicing. Miller Jones Associates of Worthing in Sussex County is the first company to successfully market lawn



Canterbury Cathedral

care in England. Business partners Matthew Miller and Clinton Jones formed their company in 1982 with a single pick-up truck and a spray rig. Their first direct mail campaign produced a 3.5 percent response and got their business rolling. As co-owner of England's first lawn care operation, Matthew Miller is determined to be at the forefront of a phenomenon he is sure will sweep the country.

"We are looking at getting a nationwide franchise operation going before somebody else jumps on the bandwagon," Miller says. "Competition isn't a bad thing, but we would like to be leading it." Miller says his company has recently sold two franchises in southern England, but he is up against an inherent reluctance to accept foreign concepts. "Up until now it has all been do-it-yourself," Miller says. "We have garden centers and lawn shops where you can buy mainly granular (formulations)."

Still, Miller claims he and his partner are making great strides and "are already talking to large companies about joint expansion ventures." Miller is quite interested in the dynamics of American chemical lawn care and would like to enter into some type of joint business venture. If any of you "Yanks" would like to know more about the Miller Jones organization, write: Miller Jones Associates, 37 Littlehampton Road, Worthing, Sussex, England BN 131 QJ; or call 011-44-0903-64129.

RESPONSE OF WEEDS IN BERMUDAGRASS TURF TO TANK-MIXED HERBICIDES

BY B.J. JOHNSON

Summer and winter weeds grow abundantly in bermudagrass turf throughout the Southeast. Therefore, it is usually necessary to include herbicides for weed control in the overall management program in order to maintain a quality turf. Most summer and winter weeds are controlled with either preemergence or postemergence herbicide treatments. Generally, the preemergence treatments are used for controlling winter weeds.

Large crabgrass is effectively controlled in bermudagrass turf with preemergence bensulide treatment (2,3,7). However, preemergence control with DCPA varied from inconsistent results in the Southeast (7) to effective control in the Northeast (3). Postemergence applications of glyphosate and paraquat will control many winter annuals, but the bermudagrass must be completely dormant when treatments are applied in order to prevent injury (5, 12). Combinations of 2,4-D plus mecoprop plus dicamba controlled

henbit (*Lamium amplexicaule* L. ff LAMAM), common chickweed (*Stellaria media* L. Cyrillo ff STEME) and spur weed (4,5,6) effectively, but the control of corn speedwell (*Veronica arvensis* L. ff YERAR) (6) and parsley-piert (4, 5) was inconsistent.

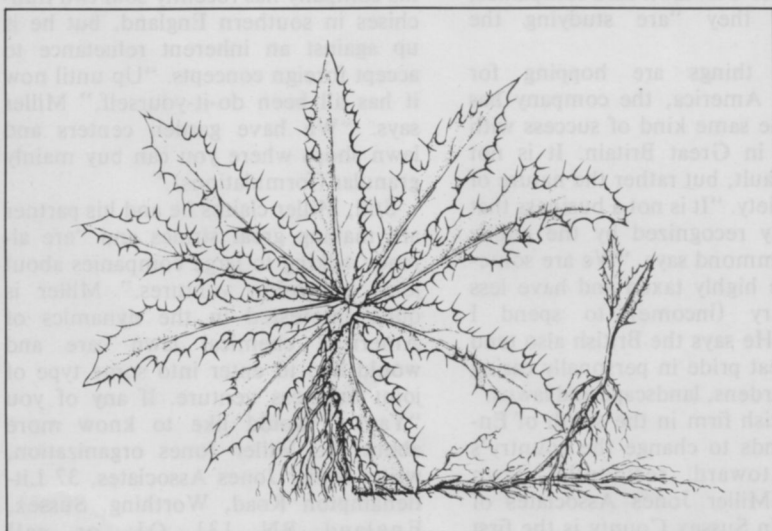
A single postemergence simazine treatment controlled corn speedwell (13, 9), parsley-piert (9) and hop clover (*Trifolium agrarium* L. ff TRIAG) (9), but not spur weed (9). The control of spur weed was improved from either a repeat treatment at 1.1 kg/ha⁴ or by increasing the single rate up to 2.2 kg/ha (9).

Tank mixing two or more herbicides is desirable because of the reduced operating expense. However, tank-mixed herbicides are not always compatible and may not perform as well as separate treatments. In an earlier study, the activity of glyphosate (0.3 kg/ha) was less on corn speedwell when tank mixed with bensulide (8). Similar results occurred with parsley-piert control from tank mixes of 2,4-D plus mecoprop plus dicamba and DCPA when compared with 2,4-D plus mecoprop plus dicamba (8).

Other workers have also reported less activity on selected grasses from tank mixing glyphosate with other herbicides. Quackgrass (*Agropyron repens* L. Beauv. ff AGRRE) control was reduced more by tank mixing glyphosate with either the wettable powder formulations of simazine (1) or atrazine (11) than with glyphosate alone. Glyphosate also controlled Canada thistle (*Cirsium arvense* L. Scop. ff CIRAR) better when applied alone than when tank-mixed with picloram (4-amino-3,5,6-trichloropicolinic acid) (10).

Because tank mixing herbicides will influence their activity on selected weeds in bermudagrass turf, experiments were conducted to determine the limitations of various tank-mixed herbicides on the control of winter and summer weed species. In addition, rates of tank-mixed herbicides that may be required to obtain maximum activity on the weeds in bermudagrass turf were evaluated.

Materials and methods. Four preemergence plus postemergence herbicide experiments were conducted on common bermudagrass fairways at the Griffin-Spalding County Golf Course



Canada thistle

Treatment ^a		Weed cover ^b			Bermudagrass cover ^c , 2-yr mean		
		Parsley-piert	Large crabgrass		May	August	
DCPA	Glyphosate (kg/ha)	1982	1981	1982			
0	0.00	28	75	75	22	30	
	0.28	42	80	84	48	18	
	0.56	20	80	94	54	22	
8	0.00	26	14	3	28	63	
	0.28	38	59	2	36	56	
	0.56	11	35	15	60	61	
11	0.00	43	1	2	32	76	
	0.28	4	41	8	62	64	
	0.56	4	57	1	61	53	
		DCPA treatments					
	LSD 0.05	6	14	7	3	18	
		Glyphosate treatments					
	LSD 0.05	6	14	NS	18	22	
		Glyphosate treatments within DCPA treatment					
	LSD 0.05	8	15	8	4	NS	
		DCPA treatments within glyphosate treatment					
	LSD 0.05	11	19	10	4	NS	

^aHerbicides were applied as single applications February 27, 1981 and February 22, 1982.

^bParsley-piert ratings were made April 1, 1982 and large crabgrass ratings were made August 18, 1981 and August 23, 1982 and based on 0 = no cover and 100 = no control or complete ground cover.

^cBermudagrass ratings are averages from 2 yr and were made May 14 ± 4 days and August 20 ± 3 days and based on 0 = no turf and 100 = complete, uniform ground cover.

Table 1. Influence of DCPA and glyphosate treatments on cover of parsley-piert, large crabgrass, and bermudagrass.

during 1981 and 1982. Applications of preemergence treatments were for preemergence crabgrass control while postemergence treatments were for control of emerged winter annual weeds. Herbicides were applied in water and sprayed broadcast at 376 L/ha in each experiment on February 26 +/- four days. Treatments were applied in a randomized factorial design to

Postemergence applications of glyphosate and paraquat will control many winter annuals, but the bermudagrass must be completely dormant when treatments are applied in order to prevent injury.

plots which were 1.5 by three meters with four replications.

The plots were fertilized with 500 kg/ha of 10:4:8 (NPK) in April and 50 kg/ha N in June. Supplementary irrigation was not used. The grass was mowed once or twice per week during the spring, summer and early fall at a height of 2.5 cm. Mowing was discontinued in the fall after bermudagrass growth ceased and remained unmowed until new growth occurred in the spring.

The herbicides in each experiment were applied alone and/or as tank mixtures in all possible combinations. A surfactant (alkylarylpoloxyethylene glycols free fatty acids isopropanol) was added to paraquat and 2,4-D plus mecoprop plus dicamba at 0.5 percent (v/v).

Weed control and turfgrass ratings were estimated visually. Weed ratings were based on percent ground cover where 0 = no cover and 100 = no control or complete cover. Ratings for winter weeds were made April 5 +/- five days while summer weed ratings were made August 20 +/- five days. Turf ground cover ratings were made May 15 +/- six days and August 20 +/- three days and based on 0 = no turf cover and 100 = complete, uniform ground cover. All data were analyzed statistically using LSDs (lethal single dosages) and reported for individual years and/or combination of years.

Preemergence DCPA rates were 0, 3, 6, 8 and 11 kg/ha and postemergence glyphosate rates were 0.00, 0.07, 0.14, 0.28 and 0.56 kg/ha. The herbicides were applied to the same plots each of two years and to separate plots in one year. The soil was Cecil (Typic Hapludult) loam with eight percent clay, 40 percent silt, 52 percent sand and 3.4 percent organic matter content. Weeds in the test area included annual bluegrass, spur weed, parsley-piert, corn speedwell, hop clover and large crabgrass.

- DCPA and simazine experiment. Preemergence DCPA rates were 0, 3, 6, 8 and 11 kg/ha and postemergence simazine rates were 0.0, 0.3, 0.6, 0.8 and 1.1 kg/ha and were applied to the same plots each of two years. The soil was Cecil sandy clay loam with 23 percent clay, 18 percent silt, 59 percent sand and 3.6 percent organic matter content. Weeds in the test area included annual bluegrass, spur weed and large crabgrass.

- Bensulide and 2,4-D plus mecoprop plus dicamba experiment. Preemergence bensulide rates were 0, 3, 6, 8 and 11 kg/ha and postemergence 2,4-D plus mecoprop plus dicamba rates

(continued on page 38)

RESPONSE OF WEEDS

(continued from page 37)

were 0.00, 0.28 + 0.14 + 0.03, 0.56 + 0.28 + 0.06, 0.84 + 0.43 + 0.08 and 1.12 + 0.56 + 0.11 kg/ha, respectively. The herbicides were applied to the same plots over two years and to separate plots in one year. The soil type and weed population were as described for the DCPA and glyphosate experiment.

- Bensulide and paraquat experiment. Preem-

ergence bensulide rates were 0, 3, 6, 8 and 11 kg/ha and postemergence paraquat rates at 0.00, 0.07, 0.14, 0.28 and 0.56 kg/ha and were applied to the same plots each of two years. The soil type and weed population were as described for the DCPA and simazine experiment.

Results and discussion. The data from the two lowest rates of preemergence and postemergence herbicide treatments are omitted from the tables for each of the four experiments. Although all data were utilized in the statistical analysis, data not statistically different were deleted from the presentation in order to simplify the interpretation.

When applied with 11 kg/ha of DCPA, glyphosate at 0.28 kg/ha controlled a higher percentage of parsley-piert in 1982 than when applied alone or with DCPA at a lower rate (Table 1). When the glyphosate rate was increased to 0.56 kg/ha and applied with DCPA, the control of parsley-piert was more effective than when glyphosate was applied alone. The activity of glyphosate at 0.28 kg/ha on parsley-piert was similar whether the chemical was applied alone or with DCPA at eight kg/ha. However, weed control was higher when the 0.28 kg/ha rate was applied with DCPA at the 11 kg/ha rate than with the eight kg/ha rate. Tank mixing glyphosate with DCPA did not affect the control of annual bluegrass, spur weed or hop clover. Therefore, DCPA did not reduce the activity of glyphosate on the control of any winter weeds included in the experiment.

When averaged over DCPA rates, the opti-

Glyphosate rate ^a	Weed cover ^b				
	Annual bluegrass		Spur weed		Hop clover
	1981	1982	1981	1982	1982
(kg/ha)	(%)				
0.00	31	54	50	30	10
0.07	38	62	14	13	9
0.14	25	47	5	1	12
0.28	19	11	3	1	2
0.56	5	1	2	0	1
LSD 0.05	6	6	4	4	6

^aHerbicide treatments were applied February 27, 1981 and February 22, 1982.

^bWeed cover ratings were made April 10, 1981 and April 1, 1982 and based on 0 = no cover and 100 = no control or complete ground cover.

Table 2. Influence of glyphosate treatments on cover of annual bluegrass, spur weed, and hop clover when averaged over DCPA rates.

**Custom-made
tank trucks built
to your
specifications.**



**Graham Lawn Care
Equipment, Inc.**

8878 Bright Star Road
Douglasville, GA 30135
(404) 942-1617

**Like horror stories?
Here's a scary one.
You're the victim.**

Once upon a time, a powerful, well-financed coalition of special interest groups set out to severely limit the manufacture and use of pesticides. They used every means at their disposal, including fear and misinformation. They were wrong, and there was opposition, but the opposition was weak and disorganized and easily overcome. The result was an unmitigated disaster for our nation's health and economy. And if pesticides or herbicides were a part of your business, you were out of business.

True story? Only the first part. The ending has yet to be written. That's where you come in. WE NEED YOUR HELP. We are the Pesticide Public Policy Foundation (3PF).

We are asking you to stand up for your rights! The only way we are going to defend them is through cooperation and involvement. Send in the coupon below or call us toll-free at 1-800-438-7773, and we'll send you more information.

Please send me more information on 3PF



Name _____

Company _____

Address _____

City _____ State _____ Zip _____

Mail to: Pesticide Public Policy Foundation
1511 K Street N.W., Suite 823 • Washington, D.C. 20005

mum control of winter weeds with glyphosate occurred with 0.56 kg/ha for annual bluegrass, 0.28 kg/ha for hop clover and 0.14 kg/ha for spur weed (Table 2). This shows the importance of glyphosate rates on postemergence control of various weed species.

In 1981, the control of large crabgrass was better when DCPA was applied alone at eight or 11 kg/ha than when applied as a tank mixture with glyphosate (Table 1). It is not known why this phenomenon occurred. It may have been a physiological effect as suggested by Selleck and Baird (11) since glyphosate was tank-mixed with a herbicide that has residual activity on germinating weeds.

Large crabgrass control was not drastically reduced in 1982 from combinations of DCPA and glyphosate when compared with DCPA alone (Table 1). The activity of DCPA at eight kg/ha on large crabgrass was not as good when applied with glyphosate at 0.56 kg/ha as with glyphosate at lower rates. Even though antagonism did not occur as severely in 1982 as during the previous year, glyphosate should not be tank mixed with DCPA when applied for large crabgrass control. DCPA controlled large crabgrass effectively throughout the two-year period only when it was applied alone.

Common bermudagrass cover was usually the highest in May where the greatest percentage of winter weeds was previously controlled with glyphosate (Table 1). Maximum turf growth occurred because weed competition was eliminated. In the Piedmont region of Georgia, bermudagrass growth reaches its peak after mid-May. This may explain why turf cover was below maximum in all plots.

In August, there was no difference in bermu-

dagrass cover from DCPA and glyphosate combination treatments when compared with DCPA alone (Table 1). However, turf cover was higher in plots treated with DCPA than in untreated plots. Since common bermudagrass generally produces a loose sward turf, the cover in the 11 kg/ha DCPA-treated plot (rated at 76 percent) was considered to be a normal common bermudagrass sward in the experiment. When bermudagrass cover was less than 76 percent, it was a result of competition from uncontrolled large crabgrass.

• DCPA and simazine treatments. Simazine applied alone at 0.8, 1.1 kg/ha, or tank-mixed with DCPA generally controlled annual bluegrass effectively (Table 3). However, spur weed control was drastically reduced when simazine was applied with DCPA when compared with simazine alone. These results indicate that DCPA greatly influenced the activity of simazine on spur weed, while affecting the annual bluegrass activity very little.

Large crabgrass was effectively controlled with DCPA throughout the two-year period regardless of whether applied alone or with simazine. Therefore, simazine applied with DCPA as a single tank-mixed spray did not affect the performance of DCPA on large crabgrass (Table 1), as reported for glyphosate and DCPA treatments in the above experiment.

Bermudagrass cover in May was generally the highest in plots where weed competition was reduced from postemergence simazine treatments (Table 3). Turf cover was the highest in August when large crabgrass was controlled with DCPA and partially controlled with 1.1 kg/ha of simazine. In August, there was no difference in

(continued on page 40)

Treatment ^a		Weed cover ^b			Bermudagrass cover ^c , 2-yr. mean	
		Annual bluegrass 2-yr. mean	Spur weed 2-yr. mean	Large crabgrass 1982	May	August
DCPA	Simazine					
	(kg/ha)		(%)			
0	0.0	36	53	59	34	50
	0.8	1	16	52	67	47
	1.1	1	8	30	69	64
8	0.0	28	59	2	42	67
	0.8	3	37	1	56	68
	1.1	4	35	8	61	64
11	0.0	43	42	5	32	67
	0.8	12	31	1	53	71
	1.1	3	20	0	67	71
	LSD 0.05	5	9	6	6	5
	LSD 0.05	4	9	6	6	5
	LSD 0.05	6	7	8	5	NS
	LSD 0.05	6	6	12	5	NS

^aHerbicides were applied as single applications March 2, 1981 and February 23, 1982.

^bAnnual bluegrass and spur weed ratings were made April 5 ± 5 days and are averages from 2 yr. Large crabgrass ratings were made August 23, 1982. All ratings were based on 0 = no cover and 100 = no control or complete ground cover.

^cBermudagrass ratings are averages from 2 yr and were made May 14 ± 4 days and August 20 ± 3 days and based on 0 = no turf and 100 = complete, uniform ground cover.

Table 3. Influence of DCPA and simazine treatments on cover of annual bluegrass, spur weed, large crabgrass, and bermudagrass.

RESPONSE OF WEEDS

(continued from page 39)

grass cover whether DCPA was applied alone or with simazine.

• Bensulide and 2,4-D plus mecoprop plus dicamba treatments. There was no difference in control of spur weed, hop clover, corn speedwell or parsley-piert due to bensulide and 2,4-D plus mecoprop plus dicamba combination treatments (data not shown). However, bensulide at 11 kg/ha controlled a higher percentage of large crabgrass when applied alone than with 2,4-D plus mecoprop plus dicamba. Bensulide applied at rates less than 11 kg/ha did not effectively control large crabgrass regardless of whether the herbicide was applied once or in combination with 2,4-D plus mecoprop plus dicamba.

Bermudagrass cover in May was low in all plots. The poor turf growth was related to competition from annual bluegrass and other winter weeds not controlled with postemergence treatments. Turf cover in August was the highest in plots treated with 11 kg/ha of bensulide alone when compared with all other treated plots. Because bensulide applied at 11 kg/ha with 2,4-D plus mecoprop plus dicamba did not effectively control large crabgrass, the lower cover of turf in these plots was related to competition from weeds not controlled.

• Bensulide and paraquat treatments. Paraquat applied at 0.56 kg/ha in 1981 controlled a higher percentage of spur weed than when applied at 0.28 kg/ha. However, there was no difference in control when paraquat was applied at either rate with bensulide. The control of annual bluegrass, corn speedwell and hop clover was not affected by tank-mixed bensulide and paraquat treatments.

Annual bluegrass was controlled completely throughout the two-year period with paraquat, even when applied at 0.07 kg/ha. In earlier studies, it was reported that paraquat controlled annual bluegrass, but with 0.6 kg/ha (5). Bensulide (11 kg/ha) tank-mixed with paraquat (0.56 kg/ha) controlled large crabgrass less than when bensulide was applied alone or with paraquat at the 0.28 kg/ha rate. An 11 kg/ha rate of bensulide controlled a higher percentage of large crabgrass than the eight kg/ha rate alone, or a combination with paraquat.

Bermudagrass cover in May was not affected by combinations of bensulide and paraquat treatments. However, turf cover was higher in plots treated with paraquat than in untreated paraquat plots. Bermudagrass cover in August

was in most instances related to large crabgrass control.

Conclusions. In summary, the postemergence control of winter weeds was not influenced from combinations of DCPA and glyphosate, bensulide and 2,4-D plus mecoprop plus dicamba, or bensulide and paraquat treatments. However, the combinations of DCPA and simazine controlled less spur weed than simazine applied alone. Large crabgrass control was not affected by DCPA and simazine treatments when compared with DCPA alone. However, large crabgrass control was lower in plots treated with DCPA at 11 kg/ha plus glyphosate than from

In August, there was no difference in bermudagrass cover from DCPA and glyphosate combination treatments when compared with DCPA alone. However, turf cover was higher in plots treated with DCPA than in untreated plots.

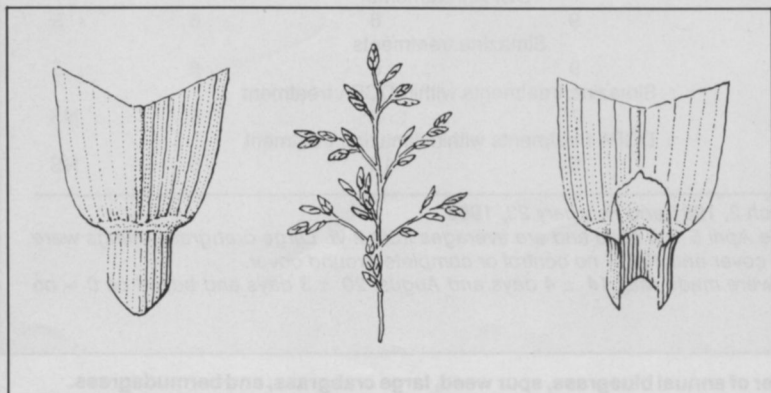
DCPA alone. The control of large crabgrass was also lower in plots treated with bensulide at 11 kg/ha plus paraquat at 0.56 kg/ha, or 2,4-D plus mecoprop plus dicamba than when treated with bensulide alone.

The author thanks the management of the Griffin-Spalding County Golf Course, Griffin, and G.O. Ware, Station Statistician, Agriculture Experiment Station, Athens, GA for their cooperation in these studies.

B.J. Johnson is a professor of agronomy at the University of Georgia, Experiment, GA. This article was reprinted with the author's permission from Weed Science, 1983, Volume 31: 883-888.

REFERENCES

1. Appleby, A.P. and M. Somabhi. 1978. Antagonistic effect of atrazine and simazine on glyphosate activity. *Weed Sci.* 26:135-139.
2. Coville, C.M. and J.A. Jagschitz. 1976. Herbicides for preemergence crabgrass and goosegrass control in turfgrass — 1975. *Proc. Northeast. Weed Sci. Soc.* 30:367-371.
3. Hesseltine, B.B. and J.A. Jagschitz. 1978. Control of crabgrass with pre- and postemergence herbicides in turfgrass. *Proc. Northeast. Weed Sci. Soc.* 32:308-314.
4. Johnson, B.J. 1975. Broadleaf weed control in bermudagrass turf. *Agron. J.* 67:689-692.
5. Johnson, B.J. 1976. Glyphosate for weed control in dormant bermudagrass. *Weed Sci.* 24:140-143.
6. Johnson, B.J. 1977. Winter annual weed control in dormant bermudagrass turf. *Weed Sci.* 25:145-150.
7. Johnson, B.J. 1982. Frequency of herbicide treatments for summer and winter weed control in turfgrasses. *Weed Sci.* 30:116-124.
8. Johnson, B.J. 1982. Combination of herbicides for winter and summer weed control in turf. *Agron. J.* 74:37-40.
9. Johnson, B.J. 1982. Simazine formulation treatments on control of winter weeds in bermudagrass turf. *Agron. J.* 74:881-886.
10. O'Sullivan, P.A. and V.C. Kossatz. 1982. Influence of picloram on *Cirsium arvense* (L.) Scop. control with glyphosate. *Weed Res.* 22:251-256.
11. Selleck, G.W. and D.D. Baird. 1981. Antagonism with glyphosate and residual herbicide combinations. *Weed Sci.* 29:185-190.
12. Troutman, B., R.E. Frans, and J.W. King. 1974. Control of winter weeds in dormant bermudagrass turf. *Arkansas Farm Res.* 23(3):3.
13. Johnson, B.J. 1979. Annual bluegrass and broadleaf weed control in bermudagrass turf. *Georgia Agric. Res. Rep.* 307:14.



THE COURSE OF LAWN TURF RESEARCH

BY RICHARD J. HULL

The professional lawn manager owes much to research. The chemicals used, both fertilizers and pesticides, are the products of research efforts which reach more than a century into the history of botanical and agricultural science. The equipment used and even the lawn grasses are the results of research conducted in laboratories and at field stations of universities and commercial centers around the world.

Important as research is to the present and future prosperity of the lawn care industry, the investigative process remains to many a mysterious activity. How do research projects originate and who decides which problems should be the subject of research? How do research efforts progress so as to generate information or a product of practical value to the lawn care profession?

Formula research. Before these questions can be answered, it is important to distinguish between the two basic types of research. For lack of better terms, I will refer to them as formula research and expository research. Formula research normally follows an established experimental procedure. The design of the experiments requires little creativity or imagination, in fact, such characteristics may be a detriment to good formula research.

Typical formula research projects include the evaluation of turfgrass varieties, field trials of herbicides, or performance tests of fertilizer formulations. In this research, new materials or grass varieties are compared with those already in use. The emphasis here is comparison. The new items must be compared with older items in such a way that the comparisons are valid and meaningful. Thus, the strength of formula research rests not with its originality but with how well it reflects real world conditions and how well the results can be compared with similar research conducted elsewhere or at another time.

The investigator directing a formula research project must thoroughly understand the practices and conditions under which a new material will be used in the field. Without this knowledge, the experiment may not reflect accurately the conditions of actual use and the new items will not be evaluated fairly. Formula research conducted under the specialized conditions of environmental control chambers or greenhouses is usually of less direct practical value than that conducted on field plots. However, there are few absolute rules in this business, and artificial environments

are very useful for preliminary screening experiments or for establishing general operating conditions for a new product. Controlled environment research also allows the investigator to continue working throughout the year without the constraint of weather conditions.

While formula research is important, and even essential for the development of new products, it is not designed to provide really new information or to expand our basic understanding of how lawn grasses grow or how best to manage them. This information is the intended product of expository research. Because this type of research can be somewhat abstract, I will devote more discussion to it.

Expository research. An expository research project normally has its origins in the identification of a specific problem. This can be a major or minor problem, but it should be a problem for which there is no apparent solution. Once the problem has been identified, the second step is to formulate an hypothesis which will explain or resolve the problem. The development of such an hypothesis is the truly creative part of expository research. Any hypothesis will not do. The hypothesis must be so constructed that it can be tested through experimentation.

When the specific research topic is mandated as a condition for financial support or is dictated by an administrator in response to urgings by institutional benefactors, what results is often premature formula research or expository research based upon inadequate information which attempts to test a flawed hypothesis.

The most ingenious hypothesis in the world is useless to help resolve a problem unless that hypothesis can be subjected to rigorous experimental challenges and emerge as a consistent explanation of field observations.

A classic example of a useless hypothesis is the explanation for the origin of life on earth which states that all life evolved from spores carried to earth in intergalactic meteorites about two and a half billion years ago. Such an idea may be intellectually intriguing, but it is scientifically useless because no experiment can be designed to test it. Unless an hypothesis can be experimentally tested, there is no way of critically evaluating it relative to other hypotheses which may be advanced to resolve the same problem. An hypothesis which explains all the known facts

(continued on page 42)

COURSE OF RESEARCH

(continued from page 41)

about a problem and which can be experimentally challenged, will, if it withstands the challenges, contribute to our basic information about the subject of the problem and is the hallmark of true expository research.

Putting this in the context of a lawn management problem might make the process of expository research a bit clearer. A common problem in turfgrass management, especially in the northern half of the country, is the decline in grass growth and vigor during the hot dry weather of mid-summer. This decreased summer growth

lawn grass during cool and hot conditions. If such a budget showed that heat-stimulated photorespiration wasted a large portion of available photosynthetic energy, leaving little to support necessary plant functions, including growth, the hypothesis could not be rejected. Even such an experiment would not prove the hypothesis correct because there is always room for alternative interpretations of the results. However, this experiment would provide the theory with a strong challenge and if the hypothesis was not rejected, it would acquire strong experimental support.

This type of expository research helps us to understand better how the lawn grass plant works and how it responds to unfavorable conditions. While such knowledge by itself will not solve the problem of summer lawn decline, it may suggest some answers. One answer may be to select grass varieties which have low photorespiratory rates and to determine if they experience a mid-summer growth suppression. This approach to solving the problem now becomes a secondary hypothesis which can be tested by appropriate experiments.

Thus, one set of experiments designed to test an initial hypothesis, leads to the formulation of secondary hypotheses which prompt further experiments and so on and so on. In this process, the basic problem becomes better understood as more and more information is collected. Eventually, if the proper questions are asked, a practical solution to the problem will emerge.

Combined research. This is the process of research. The individual experiments directed toward the resolution of central problem may be conducted by many investigators in several places. Taken collectively, they contribute to hypothesis building and testing and gradually they expand the information base upon which formula research can be designed. Good problem-solving research involves a combination of expository and formula investigations. Without carefully conducted formula research, most well-tested theories would never be translated into a practical recommendation useful to lawn care professionals. On the other hand, without carefully conceived expository research into basic lawn care problems, the information needed for good formula research will not be available and no real progress in improving turfgrass management practices will be likely. Thus, arguments over which type of research is more important are silly because both are essential for a productive research effort.

A final question, which should be considered in this discussion, is who decides which problems should be the subject of research. In an ideal situation, those decisions would rest with the individual researcher. After evaluating the various problems facing the lawn manager and understanding the depth of technical information available concerning these problems, the researcher can best formulate that critical initial hypothesis which starts the research process rolling. When the specific research topic is mandated as a condition for financial support or is dictated by an administrator in response to urgings by institutional benefactors, what results is often premature formula research or expository research based upon inadequate information which attempts to test a flawed hypothesis.

(continued on page 56)

A relationship of trust and support between the profession and institutional researchers must be established if useful products from research are to be expected.

makes lawns less able to recover from wear-induced injury or to resist invasion by warm season weeds. If the reason for this growth suppression was understood, management practices might be adjusted so as to minimize the impact on lawn quality.

Expository research to explain this phenomenon has been underway for many years but real progress appears to be coming from studies investigating the relationship between photorespiration and summer growth in cool season plants. Photorespiration is a high temperature-stimulated shunting of photosynthetic products into a wasteful production of carbon dioxide. An hypothesis has been formulated which states: during hot weather, cool season lawn grasses experience increased rates of photorespiration which can waste over 50 percent of their photosynthetic output.

This lost photosynthetic energy makes the grass less able to grow and repair injury caused by use, insects or disease. This hypothesis linking summer turf decline with photorespiration is scientifically valid because experiments can be designed to test it. For example, photorespiratory rates can be measured on lawn grasses in mid-summer and compared with rates during spring or fall. While such experiments will not prove hypothesis, a failure to measure greater photorespiration during hot summer conditions would prompt its rejection.

Comparing the photorespiratory rate of cool season lawn grasses with that of warm season grasses, e.g. crabgrass, goosegrass or bermudagrass, would also test this hypothesis. Again, if no differences in photorespiration were observed, the hypothesis would not be supported. Several experiments of this type have been performed and while no single test can prove conclusively that the photorespiratory hypothesis is valid, each experiment that fails to discredit the theory indirectly provides evidence to support it.

The most definitive experiment to test the photorespiratory hypothesis would involve the construction of a complete energy budget for the

COOPERATIVE EXTENSION "SERVICES" LAWN CARE NEEDS

BY STEVE CARR

They are among the most informative sources available to lawn care professionals, and certainly one of the most neglected. They're agents manning the nation's 3,100 county offices of the Cooperative Extension Service. That is the opinion of Don Juchartz, who is in charge of the agricultural extension office in Wayne County, Michigan, which includes Detroit.

He admits his facility, which covers 26 acres and has an annual budget of about \$1.5 million, is more advanced than most other extension offices when it comes to providing residential lawn and garden information or "urban services," as he puts it. "Still," he declares, "there's no reason similar services can't be made available through any county extension office, if people in the area care enough to demand and help obtain such services."

And lawn care professionals, above all, should be making such requests, Juchartz says. "Many don't, though, because they've never been told they can." Juchartz, who has been with the Wayne County Office of Michigan State University for the past 28 years, explains that while often the main purpose of the extension service is to serve the farming sector, its charter is much broader. "We exist," he continues, "to disseminate as broadly as practical the greatest possible amount of information available, including that on the care and feeding of desirable plants, and the control of undesirable ones."

In the urban environment, much of the special caring and controlling, he says, "can best be done by professionals, and that's what we frequently tell homeowners who come to us." And they do come. Last year, more than 100,000 people visited his facilities, and many times that number phoned in with plant and other lawn-related problems. Many of these calls, he says, were sparked by his daily radio appearances as "the Garden Doctor." Those three-minute spots, he says, often draw more than 100 calls in a single morning, "which is the only time we have staff available to answer calls."

The rest of the time, his three urban horticultural workers (out of a total staff of 70) are busy tending test plots, conducting field tours, working in the lab or with professional or commercial businesses. They also have numerous meetings to attend and classes to teach, Juchartz adds. "We try to talk to any group that invites us, and help or instruct anyone who visits," he says, noting that many visitors are, in fact, lawn care professionals.

"We actively encourage these professionals to visit," he adds, "because once we've taught them, they can teach others." An area that attracts a great amount of interest and inquiries among both professionals and customers, Juchartz says, is lawn renovation. "This is especially true when it concerns lawns that have been neglected over a period of years."

"In many such cases, we suggest three possible options. The old lawn can be mechanically removed, and replaced with seed or sod. That's labor-intensive, time-consuming and costly, though," he notes. Secondly, to eliminate some problems, the grass can be cut very short, with the seed then sown directly into the stubble mulch. "This, however," he says, "doesn't eliminate unwanted vegetation."

The third option, which generally overcomes most lawn problems, involves eliminating old turf with a herbicide application. Following close mowing to ensure good seed-to-soil contact, the desired grass species is seeded. "We demonstrate this option with sequential sample plots," explains Juchartz, who notes that four of five plots in each series are treated with Roundup® herbicide from Monsanto Chemical Company.

"We leave one plot non-treated," Juchartz continues, "to show the condition before the renovation was started. The other four plots are treated with Roundup at weekly intervals, with each plot reseeded seven days after the chemical is applied. A month after the first plot is treated, visitors can observe all stages, seeing that the 'brownout' caused by chemical application is really shorter-lived than some would have expected. New growth, too, is unaffected by the herbicide and already plentiful, even in that short period of time."

This demonstration, he says, has been a help both to homeowners and to lawn professionals unfamiliar with the chemical renovation process. "It's also helped lawn care professionals realize that there's much more we can do to help them."

Lawn care professionals in other parts of the country who would like similar help from the Extension Service should first contact their county agent to determine how they can get such an urban services program started, Juchartz suggests. "The pros may have to provide some funding and assistance to get it off the ground, but the residuals could prove well worth it," he says.

"If the agent is presented with an idea that will help him get more information to more people, he's likely to go for it. That is, after all, what he's there for," Juchartz concludes.

Steve Carr is an account executive with Dorf Public Relations, a promotions firm representing Monsanto Chemical Company.

THE PREVENTATIVE MAINTENANCE CHALLENGE

BY STEVE CARR



BY WAYNE SCHEPPELE

Preventative maintenance (PM) is not the challenge of the '80s. Lawn care professionals are already sold on PM. When asked, "Why PM?," most operators can name six advantages very easily. You should be able to list such advantages as: PM extends equipment life, it prevents costly breakdowns and provides maximum on-job time. PM provides valuable records to show potential buyers of used equipment. It also keeps machines in top condition to do a better job and gives operators safer machines to run.

We in the Service Department at John Deere's Horicon Works plant in Horicon, WI know you pros believe in PM. And you practice it, to varying degrees. When we sum up professional attitudes about PM, two conclusions stand out: The greater the effort put into PM, the greater the benefits. Striving for excellence in PM is tough but rewarding. That's the challenge.

And if we accept this as a challenge, how do we motivate more or all professionals to commit themselves to excellence? A look at PM from different viewpoints may help.

The perspectives. • *The priority.* As a professional manager of man and machines, one of your most vital concerns is the total cost of your operation. The first step toward lowering total cost is this: *Do not* cut the maintenance budget, but learn to take better care of equipment. Of course, that means you'll need to develop a strong PM program. In this way, you can utilize people and machines for greater efficiency and productivity.

• *Special words.* Have you read any lawn care equipment promotional material lately? Perhaps you've quit reading those sales pitches because, you say, they all sound alike. You're right, they do. Lawn care equipment companies all use the same list of "Special Value Words" to make their equipment seem great. So when you read a stream of value words in one brochure, you'll very likely find a similar stream in others.

However, you would do well to note these words because they have a strong relationship with PM. Here are the most popular: durability, economy, efficiency, flexibility, maneuverability, versatility, smoothness, reliability and capacity. These are words manufacturers apply to new machines. And if you consider these words carefully, you might conclude that

Your attention toward PM, your attention to details, your diligence and perseverance in all areas of PM form a powerful example that other personnel cannot ignore.

you want a machine that is efficient, maneuverable, smooth, etc. You would like to run a new or like-new machine all the time, wouldn't you? And how do you keep a machine running like new? Excellent PM practice is the answer.

• *Many parts.* Consider that one of the new, popular traction units with a front-mounted mower costs \$10,000 and has 2,000 parts. Every one of these parts is vital to the operation of the

machine. When only one nut and lock washer fall off the machine in the field, your operation can be crippled if the operator must limp the machine back to base for repairs.

You simply cannot afford this loss of man hours and machine hours. A situation like this should persuade any lawn care professional to pursue excellence in PM. You won't maintain your customer's lawns unless you first maintain your equipment.

The program. • *Your example.* Your attention toward PM, your attention to details, your diligence and perseverance in all areas of PM form a powerful example that other personnel cannot ignore. Your dynamic, professional leadership is

When asked, "Why PM?," most operators can name six advantages very easily. You should be able to list such advantages as: PM extends equipment life, it prevents costly breakdowns and provides maximum on-job time.

the most powerful force in developing excellence in PM. Excellence begins with you — your attitudes, your actions.

"Inform" is the key word to a strong PM program. Inform yourself. Inform others. Read professional articles on PM in trade journals. Make copies of these to pass out to your staff. Read operator's manuals that come with your machines. *Read.*

• *PM meetings.* Regular maintenance meetings are an essential part of excellent PM. Your staff will stagnate in daily routines unless they are challenged by progressive ideas and informative material. If you are strongly motivated and well-prepared, your meetings can provide this challenge.

These meetings also offer an opportunity for an exchange of information. You inform your staff. And you listen to them. Do they need tools, better ventilation or heating, a change in shop layout? Some of the best ideas for PM may come from your staff. A mutual sharing of information will also foster the teamwork so vital to support PM.

• *Manufacturers' meetings.* Manufacturers of lawn care equipment periodically sponsor free or inexpensive clinics, workshops or service schools. Because most of these are worthwhile, you will want to send a service technician. This technician can then pass on significant information to the staff after he has attended the clinic.

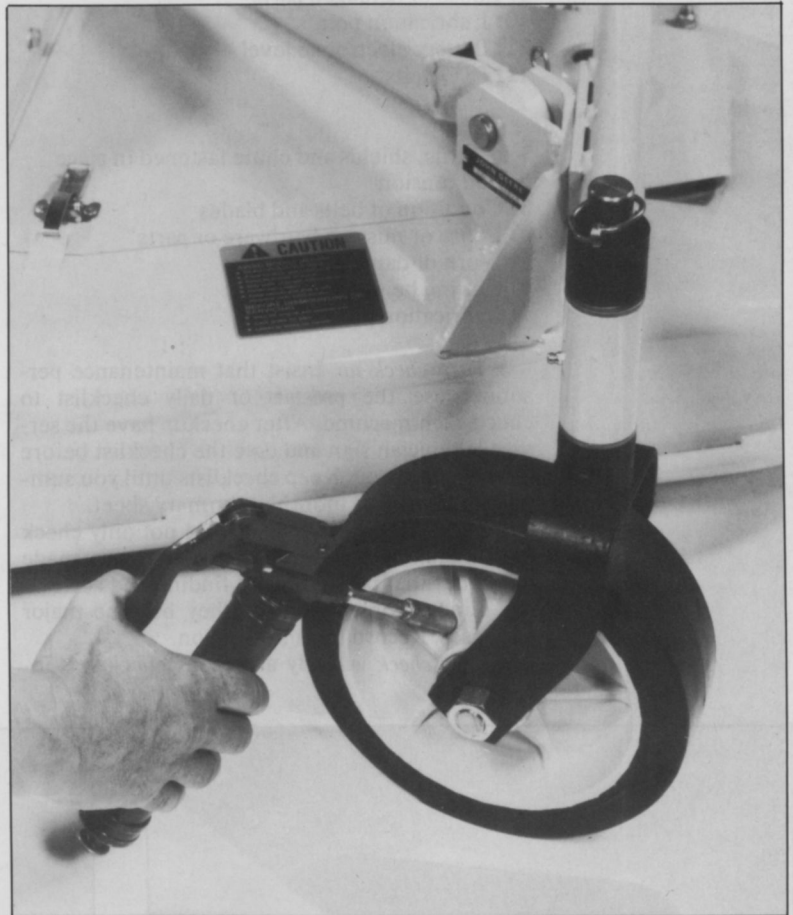
• *The OM.* A well-written operator's manual (OM) is one of the most valuable tools in your PM program for at least five reasons. One, the OM has been carefully researched and written by a trained technical writer. Two, it has been approved by the engineering department, service personnel, as well as a safety staff and a legal staff. Three, illustrations are provided by an expert photographer or skilled artist. Four, technical editors evaluate the quality of the manual and make final changes before the manual is published. Five, the OM gives you

safe and efficient ways to operate and service your machine. The hour you spend reading an OM will greatly enhance your understanding of PM for a certain machine.

Reportedly, only one of five machine owners read the OM after buying a new machine. Those who neglect this valuable tool are more likely to develop poor maintenance practices, resulting in a very costly operation. A good OM is well-organized and easy to study. But don't merely hand an OM to your service people. Show your staff, during regular maintenance meetings, how to read and use the OM.

Use the OM to explain warranty, safety, controls, operation, fuels and lubricants, daily inspections, periodic service, installation and removal. Show them OM contents and how to locate information they need. Finally, specify a certain place to keep the OM so it's there when someone needs it.

Use the OM as a guide for developing your



PM program — but only as a guide. If you aspire to excellence in PM, you will want to do more than the OM tells you. For example, the OM says, "Lubricate mower spindles every 25 hours." You may want your service technicians or operators to lubricate spindles daily. The OM may tell you to check transmission oil weekly or every 50 hours. Again, you will probably add this service to your prestart checklist.

• *Checklist.* A "Daily Inspection Check List" or "Prestart Checklist" is a must. A good OM will have such a list in a prominent place. Use

(continued on page 46)

MAINTENANCE CHALLENGE

(continued from page 45)

the OM list as a guide to develop your own checklist. A three-column checklist works well, with columns for items, boxes to check and comments. List items on the checklist in the order a service technician can work around the machine most efficiently.

Sample Prestart Checklist Items

Traction Unit

- 1) Transmission oil level
- 2) Engine oil level
- 3) Air intake screen and air cleaner
- 4) Engine shroud, radiator, cooler
- 5) Fuel level
- 6) Engine compartment for debris
- 7) Tire pressure
- 8) Oil or fuel leaks
- 9) Loose or damaged parts
- 10) Lubrication points
- 11) Battery electrolyte level
- 12) PTO belts

Mower

- 1) Guards, shields and chute fastened in place
- 2) Belt tension
- 3) Condition of belts and blades
- 4) Loose or missing hardware or parts
- 5) Worn or damaged parts
- 6) Cutting height and level
- 7) Lubrication points

• *Then check up.* Insist that maintenance personnel use the prestart or daily checklist to check each machine. After checkup have the service technician sign and date the checklist before bringing it to you. Keep checklists until you summarize them on a monthly summary sheet.

• *Then check back.* You should not only check back regularly to see that checkups are made daily, but that personnel are finding and correcting minor problems before they become major expenses. Record this information.

• *Then check with.* By all means check this in-

formation with your staff at maintenance meetings. Determine, with them, why they did not find and correct certain problems. Commend them for what they did find and correct.

If your dedication is the heart of developing excellence in PM, then regular periodic service is the soul. As you plan periodic service, use the OM for a guide, adding details and items to suit your operation. List these items at various intervals and make checklists. Here are samples:

Daily Service (Beyond prestart inspection already listed)

- 1) Neutral start system test
- 2) PTO safety stop tests (there may be several ways to test)
- 3) Seat adjustment
- 4) Operation of controls

End-of-Day Service

- 1) Blow down (with compressed air)
- 2) Hose down (with water pressure)
- 3) Wipe down
- 4) Lubricate grease points
- 5) Cool down
- 6) Refuel
- 7) Park

50-Hours Service

- 1) Change engine oil
- 2) Check mower gearbox oil level

100-Hours Service

- 1) Change engine oil filter
- 2) Check spark plug
- 3) Check toe-in
- 4) Check engine speeds

200-Hours Service

- 1) Change transmission oil filter
- 2) Check ignition points
- 3) Lubricate wheel hubs

500-Hours Service

- 1) Change transmission oil
- 2) Change mower gearbox oil

(continued on page 56)



For Greener Turfgrass...

Give it a Shot*
of 4X

Stimulates greener color without
excessive use of nitrogen!

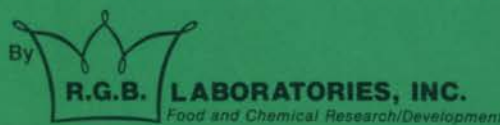


*** Agri-Plex® 4X**

	Corrective	Maintenance	Water	Coverage
Golf Courses	1 1/2 oz.	3/4 oz.	1-2 gal.	1,000 sq. ft.
Lawns	—	1 oz.	1-2 gal.	1,000 sq. ft.

Agri-Plex® 4X, the most complete and highly concentrated chelated plant nutrient available in liquid form, is a result of a technological breakthrough based upon a patented phosphate-citrate complex. Formulated to supplement a sound fertilizer program, application of 4X is highly recommended in combination spray treatments with pesticides when turfgrass is under stress. 4X serves as a preventative of alkaline degradation of pesticides in the spray tank mix. The product exhibits non-phytotoxicity and can be applied safely during the hot summer months. As a liquid spray, 4X is non-staining and can be rinsed off fabrics and cement walkways.

U.S. Patent Nos: 4,214,996 & 4,351,735



Kansas City, MO 64108-1580 • (816) 474-3342

DISTRIBUTED BY:

- ARIZONA, Phoenix**
Capitol Nursery Supply (602) 272-5508
- ARKANSAS, Searcy**
AGRA Turf (501) 268-7036
- CALIFORNIA, Fremont**
El Camino Crop Supply Co. (415) 792-4031
- San Diego**
Butler's Mill, Inc. (619) 263-6181
- COLORADO, Federal Heights**
S A J Turf Products (303) 430-1343
- CONNECTICUT, Wethersfield**
Charles C. Hart Seed Co. (203) 529-2537
- FLORIDA, Jacksonville**
Southeastern Turfgrass Supply, Inc. (904) 731-8565
- ILLINOIS, West Chicago**
Turf Products, Ltd. (312) 668-5537
- INDIANA, Nappanee**
Desco Chemical, Inc. (800) 321-9385
- IOWA, Des Moines**
Grass Roots Turf Equip. & Supply (515) 285-7620
- W. Burlington**
Brayton Chemical, Inc. (319) 752-6324

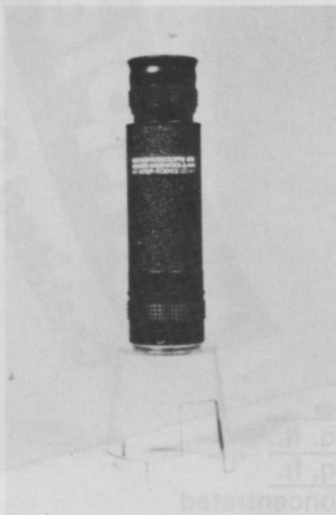
- KANSAS, Kansas City**
Rhodes Chemical Company (913) 432-2424
- Wichita**
Robison's Lawn & Golf (316) 942-2224
- KENTUCKY, Louisville**
Ky-Inna Turf Supply (502) 491-8400
- LOUISIANA, Metairie**
Associated Businesses Services, Inc. (504) 888-5036
- MARYLAND, Washington, D.C.**
Lea's Green Meadows (202) 488-1818
- MASSACHUSETTS, W. Newton**
The Clapper Co. (617) 244-7900
- MICHIGAN, Hartford**
Desco Chemical, Inc. (616) 621-3346
- S. Lyon**
Turfgrass (313) 437-1427
- MINNESOTA, St. Paul**
Turf Supply Co. (612) 454-3106
- MISSISSIPPI, Jackson**
South Central Turf Equip. & Supply (601) 922-7437
- MISSOURI, Chesterfield**
Beckmann Turf & Irrigation Supply (314) 532-3649
- Grandview**
Robison's Lawn & Golf (816) 765-3333
- Kansas City**
Patterson Green Up Co. (816) 842-8211
- NEBRASKA, Omaha**
Eagle Green Corporation (402) 334-9019
- Greenkeeper Co., Inc.** (402) 592-4800
- NEVADA, N. Las Vegas**
Las Vegas Fertilizer (702) 649-1551

- NEW JERSEY, Clifton**
The Terra Company (201) 473-3393
- NORTH DAKOTA, Fargo**
Tessman Chemical Northwest (701) 232-7238
- OHIO, Findlay**
Desco Chemical Inc. (419) 424-0151
- OKLAHOMA, Oklahoma City**
Chemical & Turf Specialty Co. (800) 527-1284
- PENNSYLVANIA, Lebanon**
Lebanon Chemical Corp. (717) 273-1687
- Malvern**
Fisher & Son Co., Inc. (215) 644-3300
- Pittsburgh**
E.H. Griffith, Inc. (412) 271-3365
- SOUTH CAROLINA, Bluffton**
Grower's Lawn & Garden (813) 757-3900
- TEXAS, Garland**
Chemical & Turf Specialty Co. (800) 442-4015
- UTAH, W. Jordan**
Farm & Turf Supply, Inc. (801) 255-3939
- VIRGINIA, Chesapeake**
Turf & Garden Div. (804) 543-2071
- Richmond**
Wilson Feed & Seed Company (804) 232-6791
- Roanoke**
Agri Turf Products Co., Inc. (703) 982-1239
- WISCONSIN, Milwaukee**
Happy Lawn Products (414) 444-6600
- WASHINGTON, Kirkland**
Turfgo Northwest (206) 827-6686
- WASHINGTON, D.C.**
Lea's Green Meadows (202) 488-1818

Write 25 on reader service card

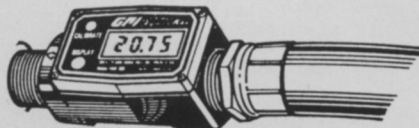
ALA PRODUCTS

A new portable field identification microscope and an electronic digital meter are available through **Green Pro Cooperative Services**. The microscope is a handy unit for making precise on-sight field diagnoses. It helps determine what kind of fungus diseases are attacking turf areas and plants, and allows the operator to make simple and positive identification of insect pests and diseases on all lawns,



trees and shrubs. Only six inches long, the compact microscope can also be used for estimating distances and tree heights. Options include a portable light stand and camera adaptor.

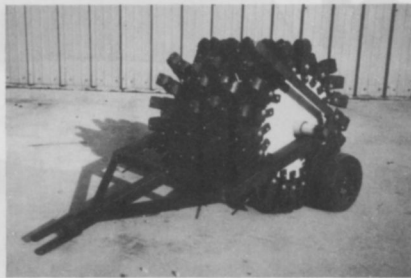
The electronic digital meter monitors all liquid applications, allowing the applicator to know exactly how much volume he sprayed on each service call. It installs on a spray gun or between the pump and hose reel and



gives an accurate four-digit reading of gallons used. It's compatible with most liquids and chemicals, including fertilizers, herbicides and fungicides, and easy to calibrate for measuring any volume unit. The flow range is 3 - 30 gpm with a maximum pressure of up to 300 psi.

Write 113 on reader card

Terracare Products announces the new Tiny Terra 140 aerifier designed for small areas. It has an overall width



of 34 inches with an aerating width of 22 inches. The Tiny Terra can be easily pulled by an 11-horse tractor, aerifying 40,000 square feet per hour. It features 140 "open" or "closed" tines, available in either 1/2-inch or 5/8-inch sizes with a spacing of 3 1/2 inches to 4 inches.

Write 114 on reader card

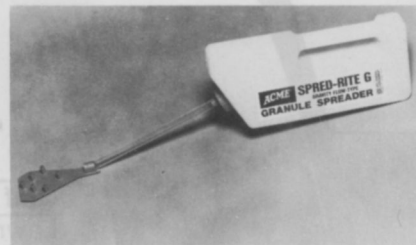
According to **OMC Lincoln**, the Ryan Ren-O-Thin® is an ideal tool for lawn renovation because the choice of blade types and blade spacing allows it to be used for thinning, dethatching and vertical cutting. The Ren-O-Thin cuts out excess stems, rhizomes and runners, along with other debris that builds up excess thatch in turf. It features a spring-loaded clutch control on the handle that lets the operator engage and disengage the reel quickly and easily, and a special front axle that follows surface contours to maintain uniform dethatching depth. A micro-screw adjustment permits precise setting for depth control.

The Ren-O-Thin has four interchangeable reels that offer the

user a choice of blade spacing, down to 3/4-inch on larger models, plus the option of fixed high carbon steel blades for clean cutting on fine turf areas, or flail-type blades for most dethatching needs. It is available with 5 hp or 7 hp engines, with 18-inch swath. A 10 hp self-propelled model, the Mataway®, is also available for large turf areas.

Write 115 on reader card

The Acme Spred-Rite C granule spreader, introduced by **PBI/Gordon Corp.**, is a hand-held unit designed for quick, easy and precise application of herbicides, insecticides or other granular products. Included is a set of two discs with different-sized orifices which enable the user to vary the rate of application. Designed to achieve a



swath width of up to 24 inches, the distribution pattern can be narrowed down to a band of just a few inches by holding the unit so it discharges closer to the ground or by adjusting the discharge deflector.

The long-necked design of the

(continued on page 52)



Parker's full line keeps the grounds up and the costs down.

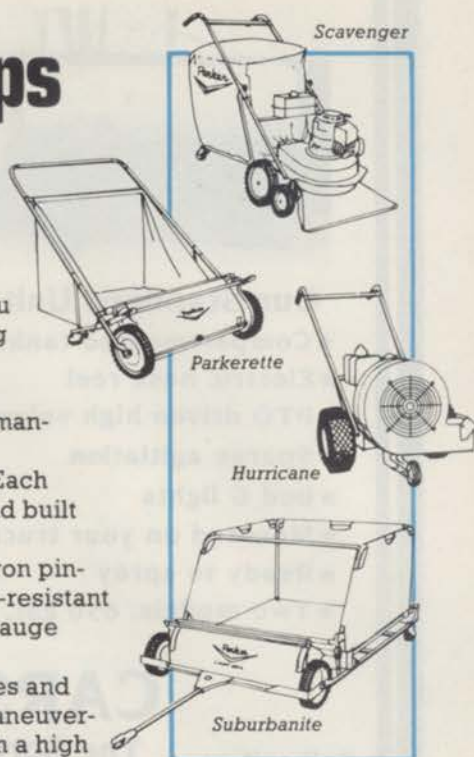
To get ahead in the grounds maintenance business, you need equipment that can perform well under punishing conditions . . . and survive. In other words, you need Parker quality.

Parker's full line of grounds care products includes manually operated, trailing and powered lawn sweepers, thatchers, leaf blowers, and indoor/outdoor vacuums. Each one is a superior performer, designed for efficiency and built tough to keep repair costs down.

Parker sweepers feature cast iron wheels, sintered iron pinions, long-life polypropylene brushes, tear and mildew-resistant baskets, rust-resistant plated steel tubing, and heavy gauge steel hoods with baked-on enamel finish.

The heavy-duty VAC-35 features large pneumatic tires and plated, plow-type handles for ease of operation and maneuverability. The rugged HURRICANE Blower generates both a high velocity and large volume air blast. The versatile Scavenger vacuum quickly converts to a powerful blower for windrowing leaves and other debris.

Keep the grounds up and the costs down, even after years of use. Demand Parker quality. And start getting a return on your equipment investment. For more information on Parker's full line contact your Parker dealer today.



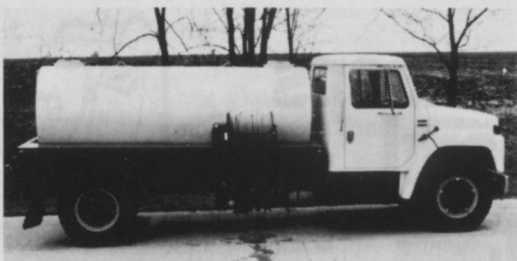
Estate Master

Parker®

PARKER SWEEPER COMPANY
Box 1728 • Springfield, Ohio 45501

Write 40 on reader service card

LAWN SPRAY UNITS



Our Standard Unit Includes:

- ★ Compartmented tanks
- ★ Electric hose reel
- ★ PTO driven high volume pump
- ★ Sparge agitation
- ★ Bed & lights
- ★ Mounted on your truck
- ★ Ready to spray
- ★ Two models, 650 gal. & 1,250 gal.

CARSO Inc. ★

The Spray People

Call collect
217-832-9031

Camargo, Ill. 61919

Write 7 on reader service card

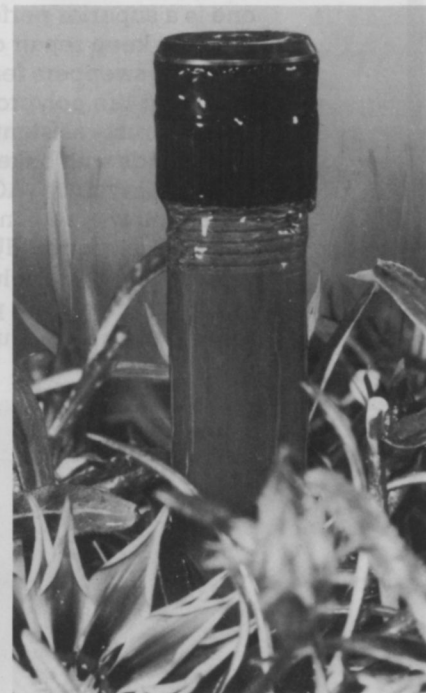
PRODUCTS

(continued from page 50)

Spred-Rite C makes it ideal for precision edging, says the company. It may be used over beds, walkways and gardens, but it's especially good for close work around buildings, grave markers, walls, fences, curbs and sidewalks. It also reaches under or around things, such as trees, shrubs, poles, park benches, railings and bleachers.

Write 116 on reader card

The 1400 Series Pressure Compensating Bubblers, featuring constant flow rates with pressure ranging from 30 psi to 90 psi, have been introduced by **Rain Bird**.



According to the company, exceptionally low flow rates of .25 gpm (Model 1401), .50 gpm (Model 1402) and 1.00 gpm (Model 1404) can be maintained despite changes in water pressure caused by rolling terrain, friction loss or mainline pressure fluctuations. The 1400 Series Bubblers are designed for localized irrigation of trees, shrubs and other small areas where precise watering is necessary. The company says the low flow rates and conventional installation procedures allow the bubblers to be used conveniently in many areas where previously only drip emitters could operate.

Models 1401, 1402 and 1404 are pre-set and require absolutely no adjusting. According to the company, the low gallonage flow rates of the Series allow installation of up to four times as many bubblers on line than is

(continued on page 54)

A Creative Method To A Beautiful Lawn **Feldmann POWER LAWN AERATOR**

Quickly aerate your lawn with the lightweight, portable, easy to use walk behind aerator/slicer. Available in 15½" and 25" swaths.

Maneuverable for hard to reach places, around contour beds and close to buildings and walkways. For professional results use the aerator lawn-care specialists use. Your lawn will be the envy of the neighborhood.

OPTIONAL:

Tiller tine kit for 15½" aerator model.



Model
1700

Call or write for details:

Please send more information on the POWER LAWN AERATOR.

Name _____

Address _____

City _____ State _____ Zip _____

Feldmann

Engineering & Manufacturing Co., Inc.
P.O. Box 153, Sheboygan Falls, WI 53085
Telephone 414/467-6167

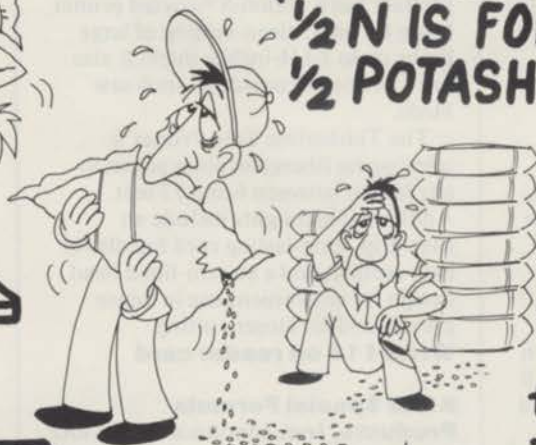
GREAT PLAINS ASSOC., LTD is NOW "LIQUI-LAND CORPORATION"

SUPPLIER OF
LIQUID FERTILIZERS TO THE LAWN CARE INDUSTRY



LIQUI  LAWN
FOOD

LIQUI-LAWN FOOD 14-2-7-2-S-04F_E
1/2 N IS FORMOLENE
1/2 POTASH SALT FREE



Next time you
feel like handling
bagged fertilizer,
lie down till the
feeling passes...
..Then call us!

STOP BREAKING BAGS
AND YOUR BACK.
START SPRAYING
WITH LIQUI-LAND.



FORMOLENE



CALL (616) 684-8400
123 MARMONT ST.
P.O. BOX 547, NILES, MI.
49120

Complete clear liquid formulations to your specifications.

"We Service The Independent Lawn Care Industry."

Write 44 on reader service card

PRODUCTS

(continued from page 52)

possible with today's conventional high gallonage units. They come with a filter screen that fits in the top of a 1/2-inch riser, and eliminates the need for additional filtration systems, including y-strainers or in-line filters.

Write 117 on reader card

As part of an on-going development of products for the sub-compact and light truck industry, **Sno-Way International, Inc.** introduces the Energy Saving, 3-in-1, Tilt-Way dump body for the 1984 Nissan Dual Wheel cab and chassis and pick-up truck. All Tilt-Way dump bodies incorporate into their design the convertability to either dump box, stake side or flat bed. All have fold down sides for easy side-loading when used as a dump body. According to the company, they're ideal for use by landscapers, wood haulers, nurseries, roofers, contractors and home improvement contractors.

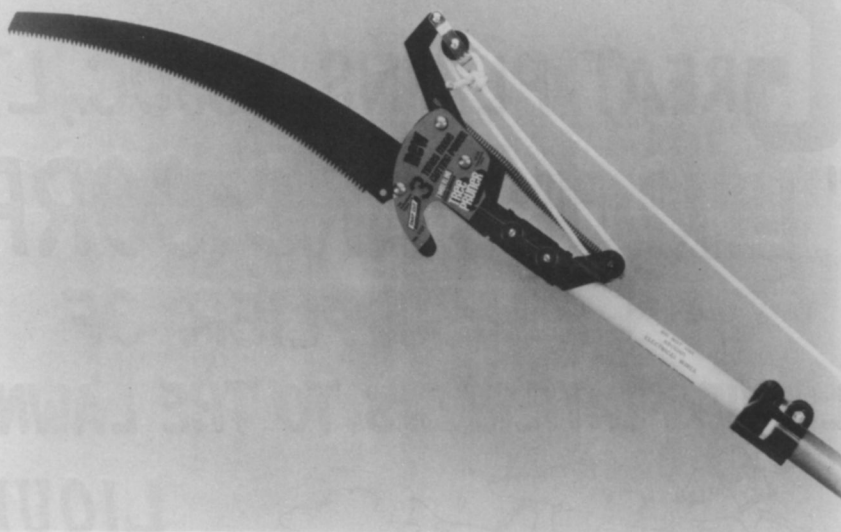
Tilt-Way units are constructed of super strong mild and high carbon steel. While this material reduces weight, it still retains strength and conformity and adds to the load-carrying capacity of the smaller trucks, according to the company. The units are powered by an Electro Hydraulic pump assembly which is finger-tip controlled, directing the hydraulic fluid to a four-stage, single-acting ram which is mounted on the sub-frame of the Tilt-Way unit. All units are 90 percent pre-assembled and



tested at the factory. Installation of the unit is quick and complete since no drilling, welding or fabrication is necessary. The user just has to bolt the sub-frame and box to existing mounting points, hook up the electrical cables and start operating.

Write 118 on reader card

Seymour Smith & Son, Inc. introduces the No. 312T Timberline® Tree Pruner, the first gear-driven tree pruner for home and professional use, according to the company. Patterned after Seymour Smith's first gear-driven lopping shears, the new 312T, which



has been added to the Snap-Cut® line, features a gear-driven blade and a multi-power pulley system. The new product has a Teflon-S®-coated pruner blade for easy, clean-cutting of large limbs up to 1 1/4-inches thick. It also has a Teflon-S-coated, 16-inch saw blade.

The Timberline Tree Pruner's telescoping fiberglass poles adjust to any length between 6 and 12 feet. Additional highlights include an easy-grip, long-lasting cord handle for easy cutting, and a stream-lined head design for convenient use in dense growth and for closer cutting.

Write 119 on reader card

Klotz Special Formula Products, Inc. announces that Klotz 50:1 BIA 2-cycle Synthetic Lubricant now comes in a new packaging label. This lubricant can be used in pre-mix or oil injection 2-cycle engines, and will

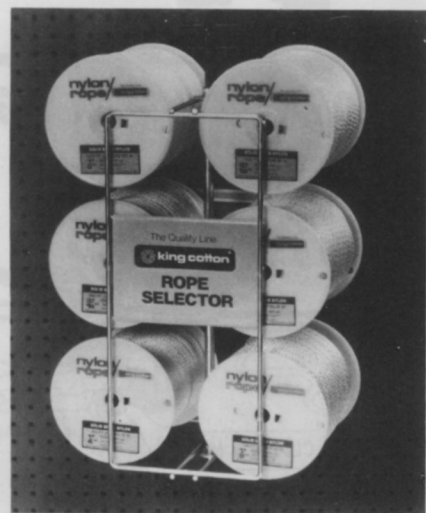


provide improved power and throttle response in high performance precision engines.

According to the company, dyno and field tests indicate that exclusive use of Klotz 50:1 BIA will help stop plug fouling, allow faster starts, help stop carbon build-up and inhibit rust and corrosion. It's available in 12-ounce poly bottles, 10 per case, or 30 and 55-gallon bulk drums.

Write 120 on reader card

King Cotton has introduced a new higher-capacity merchandiser for its solid braided, 100 percent nylon rope line. The display rack is available on a



no-charge basis to dealers ordering a King Cotton pre-pack of eight spools. It features a durable, attractive plated main frame and high-density plastic spools, instead of the previously provided cardboard spools. The plastic spools offer extra stability but also hold more rope in several sizes.

With the new rack, King Cotton is now including two adapters so that it can be used for either perfboard or

counter display of six spools. The solid braided, 100 percent nylon rope line is available in seven sizes, from 1/8 inch in diameter through 1/2 inch. Each spool is prominently marked with size, total length and recommended working load.

Write 121 on reader card

Hunter Agri-Sales, Inc. introduces spray truck washout systems for fertilizer dealers, manufacturers and large volume applicators. The 40-foot by 40-foot washout unit eliminates chemical contamination and reduces run-off liability. Sizes are available for 30,000 gallons and up. These units feature 12 by 20 reinforced concrete wash ramps; a 30 mil, one-piece liner which will resist UV rays and does not require an earthen cover; meets zero



seepage requirements; and can be installed in one week.

Write 128 on reader card.

The Pro Series commercial/professional special purpose mowers by **Gravely International** have an addition to their line-up—the Pro-60. The Pro Series is a system of power units,



out-front mowers and optional attachments that feature maximum maneuverability, easy operation, low maintenance and longevity. The Pro is available with a 40-inch, 50-inch or new 60-inch mower. Engine selections include an 8 hp Ruggerini diesel, plus a range of four-cycles—an 11 hp Honda or 11, 16 and 18 hp industrial/commercial series Briggs and Stratton.

The Pro-60 has five forward speeds with single-lever, on-the-go shifting and instant reverse, providing a ground speed for every operating condition. Its height makes it simple to mow under guardrails, shrubs and fences, and its unique double-idler wheel drive

prevents downhill free-wheeling. Each drive wheel is controlled by a clutch and brake which provides effortless steering and effective sidehill control, says the company.

Write 122 on reader card

Designed to tackle long grass up to 10 inches high, **Ransomes' Hydraulic 5/7** is equipped with the big diameter Magna 4 knife fixed-cutting unit. The Hydraulic 5/7 Magna is tractor-mounted and features all hydraulic operation. Each cutting unit has individual hydraulic lift, which allows for varying cutting widths and



over-the-road transport between locations. Five or seven heads can be used. The height of cut ranges from a 1/2 inch to 3 5/16 inches, with fixed head cutting units.

Write 123 on reader card

FALL

is the best time of all...

to renew tired lawns and prepare them for Spring growth.

Milorganize now!



Write 45 on reader service card



Ryegrass

The Closest Thing to An Instant Lawn You'll Ever Find

In addition to numerous other advantages ryegrass is the one you can count on to germinate in a matter of 7-10 days.

No other grass germinates faster or so quickly develops a strong, deep root system.

Those are two qualities which make it the ideal choice for the winterseeding of dormant turf in the Southern U.S.

But that's not all. Ryegrass is available in either the so-called "workhorse" varieties such as common Oregon annual and Gulf annual or the newer premium quality fine-bladed turf-type "proprietary" varieties.

It is recommended that annual ryegrass be sown at a rate of 10-20 lbs. per 1,000 sq. ft. of turf desired, while the fine-bladed turf-type ryegrasses are normally sown at the rate of 5-10 lbs. per 1,000 sq. ft. Seeding rates will vary, depending upon the desired density of the stand.

Because ryegrass is a cool-season grass it will not survive Southern summers and so can be counted upon to fade in the spring when the native grasses come on. Ryegrass is, however, used for permanent turf in the Northern U.S.

*Ask your dealer for brochures
about ryegrass or write to*

Oregon Ryegrass Commission

P.O. Box 3366
Salem, Oregon 97302

COURSE OF RESEARCH

(continued from page 42)

Research so mandated is often unproductive and contributes little to the progress of turfgrass science or management. Unfortunately, at a time when public support for turfgrass research is decreasing, many investigators are forced to undertake research projects, not because they offer great promise for advancing turfgrass science, but because a funding source which will support that research has been identified. Even the competitive grants method of supporting research suffers from the establishment of subject matter categories or other conditions which confine the investigator's creativity and thereby limits the productivity of the research.

In conclusion, there is no substitute for research conducted by uninhibited investigators who are in touch with the problems facing the profession. At the same time, these investigators must understand the state of the science upon which research directed toward solving these problems must be based. A relationship of trust and support between the profession and institutional researchers must be established if useful products from research are to be expected. History is replete with examples of research directly benefiting professional practice, but at a time of shrinking public support for research, this relationship is threatened. Hopefully, professional organizations and commercial interests understand the research process well enough to provide that needed support while permitting freedom for the investigator.

Dr. Richard Hull is professor of Plant Science, in the Department of Plant Science, at the University of Rhode Island, Kingston, RI.

MAINTENANCE CHALLENGE

(continued from page 46)

Seasonal or As-Necessary Service

- 1) Change fuel filter
- 2) Change air cleaner element
- 3) Check carburetor adjustment
- 4) Check brake adjustment
- 5) Other adjustments

Machine operators need training in PM too. They should attend maintenance meetings. Operators can make your PM program more effective by providing information about the machines they run. Train operators to be alert to changes in machine operation they can hear, see or feel.

Examples of changes they can see:

- Black exhaust smoke
- Leaking oil or fuel
- Bent or worn parts

Examples of changes they can feel:

- Engine responds slowly to throttle
- Excessive play in steering wheel
- Park brake will not hold machine

Examples of changes they can hear:

- Rattles, squeaks or knocks
- Transmission whine
- Engine missing or surging

Note and report these changes to service personnel. Train operators also to warm up machines before putting them under load or using full throttle.

Finally, the commitment. The challenge for excellence in PM demands that you commit yourself to all facets of PM. Remember, striving for excellence is tough, but rewarding. Commitment means not what you are, but what you are willing to become. Your challenge is this: Are you willing to become a professional in preventative maintenance?

Wayne Scheppele is a member of the Service Department at John Deere Horicon Works, Horicon, WI.

GET A GOOD THING FLOWING CLEAN CROP DACTHAL WDG

This new, exclusive Clean Crop® Dacthal formula has many advantages over liquid and wettable powder. The 75% water dispersible granules flow easily and completely from the container with no pre-mixing, no dusty measuring or container disposal problems. It's freeze-proof and stores stable for years. And unlike the others, it comes in handy 25-pound bags. Get Clean Crop Confidence with new Dacthal WDG, an exciting, new formulation of an old standby pre-emergent herbicide. For more helpful information call 1-800-228-0096, or 1-800-642-TURF in Nebraska.

UAP®

Special Products
P.O. Box 37800
Omaha, NE 68137



a ConAgra company

Write 46 on reader service card

Dacthal is a registered trademark of SDS Biotech Corporation.

ADVERTISING

Door Hangers—

Low cost "DOOR HANGERS" are an **EFFECTIVE ADVERTISING MEDIUM** — Promotes New Business — Effectively Allows Pinpointing Marketing Areas. As low as \$20.00 per 1,000 (even for smaller test orders). Send for complete details and **FREE KIT Today!!** Door Hangers, Box 1504-EJ, Placentia, CA 92670.

COMPUTER SERVICES

Computer Systems—

Complete systems with software for lawn care operators. Affordable prices. Pest Control Data Systems, 3535 Keith, Cleveland, TN 37311; 615/479-9711.

EQUIPMENT FOR SALE

Digital Flow Meter—

Monitor your liquid applications, tank fillings and water flow. Accurate and compatible with most chemicals, fertilizers and herbicides. Only four inches long, installs easily on hose or sprayer. Pressure — 300 psi/gpm. \$175.00 (includes postage). Green Pro Cooperative Services, 380 S. Franklin St., Hempstead, NY 11550. (800) 645-6464. In NY (516) 538-6444. Visa/Mastercard.

Fall Spray Equipment—

Economical Pickup/Van Sprayers — Available in 150, 200, 300 and 400 gallon sizes. Complete units include 300' hose, reel and accessories. *Portable Back Pack Sprayer* — Use for turf, tree and shrub spraying 300 psi/ five gallon capacity adjusts from fine mist to 25 ft. high stream. *Injection Deep Root Feeder* — Durable galvanized construction. Finger tip control valve for efficient flow control. Hardened steel chisel point for hard or rocky ground. \$129.95 Visa/Mastercard. Green Pro Cooperative Services (800) 645-6464. In NY (516) 538-6444.

Field Macroscope—

Make precise "on sight" diagnoses of

fungus, insects and diseases. Compact unit only six inches long converts to scope for estimating distances and tree heights. Options include light stand and camera adaptor. \$99.00 (includes postage). Green Pro Cooperative Services, 380 S. Franklin St., Hempstead, NY 11550. (800) 645-6464. In NY (516) 538-6444. 10 Day Money Back Guarantee. Visa/Mastercard.

Soil Testing Lab—

Why Aren't YOU Soil Testing? This complete service provides you with a thorough 14 point Professional Lab Analysis with recommendations. The professional approach that justifies the sale of all recommended services. Your **SPRING BOARD** to **PROFITS** for increased **YEAR ROUND** cash flow. (800) 645-6464. In NY (516) 538-6444.

Spray Truck—

HEAVY DUTY 1500 Gallon 3 Compartment Spray Truck, PTO driven 100 Gallon/Minute Myers pump, twin electric Hannay hose reels with 300 feet of hose each. Mounted on 1973 International 1810 truck has new tires, new engine and freshly rebuilt transmission. This cab over is nimble enough for residential, plus a real work horse for larger commercial property. Ready to spray, it is working every day right now. Call 813-957-0798.

Spray Truck—

Spray Trucks and Tanks. Evenings only. 6-9 p.m. 201/337-3057.

Tree and Shrub Products—

15-8-5 Tree/Shrub Root Food — Superior blend that is highly organic, humate based, low in chlorides. For injection or surface applications. Will not clog spray lines. Promotional 4-color flyers available. Full instruction for mixing, selling and pricing. 5 gal. pail \$25.60.

Winter Overcoat — Anti desiccant material for winter protection of trees and shrubs. Protect your customers' evergreens while extending your season with high profits.

Gives 6 month protection. Promotional 4-color flyers available. Full instruction for selling/pricing to make \$60 — \$100 per hour. Five gallons \$125.00. Green Pro Cooperative Services (800) 645-6464. In NY (516) 538-6444.

Motors and Pumps—

SALE—SALE—SALE—Hannay 12 volt base-mount reel motors, \$100.00 (new). Regular \$160.00. FMC (John Bean) parts and pumps at discounted prices. Hypro pumps parts and accessories at 25 percent discount. Call: Strong Ent., Inc., Collect: 305/264-5525.

Wholesale parts—

WHOLESALE PARTS for lawn equipment, minibikes, karts, chainsaws, small engines. Quality products. Send \$3.00 for full line catalog. G.R.P. Parts, P.O. Box 45245, Dept. P, Somerville, MA 02145.

HELP WANTED

Career Opportunity—

ChemLawn is now accepting applications for the position of lawn specialist in our expanded Florida market. Join the Nation's Leader in Lawn Care. Send resume to: ALA, Box 314, 4012 Bridge Avenue, Cleveland, OH 44113.

Service Manager—

SERVICE MANAGER needed for mid-sized company in Michigan. The right individual will have demonstrated diagnostic abilities on bluegrass lawns and be able to make appropriate recommendations for cultural and chemical controls. Some experience with tree and shrub care is helpful but not required. This is a management track position for someone with good organizational and communication skills who wants to be a part of an aggressive team in a competitive market. Send resume with salary history. All replies will be kept confidential. ALA, Box 300, 4012 Bridge Avenue, Cleveland, OH 44113.

PROVEN MONEY MAKER

Olathe
AERO-SEEDER

Self
Propelled
Slit Seeder
Thatches
and Seeds —

Results up to
80% Germination!

RENOVATES LAWNS

OLATHE MANUFACTURING, INC. 800-255-6438
100 INDUSTRIAL PARKWAY, INDUSTRIAL AIRPORT, KS 66031 913-782-4396

ADVERTISER'S INDEX

Ben Meadows	28	Milwaukee Sewerage	55
Blue Bird International	31	Monsanto Chemical Corp.	2,3
Carso Computer	30	Nor-Am Chemical Co.	11
Carso, Inc.	52	Olathe Manufacturing	58
Classen Manufacturing	20	Oregon Ryegrass	56
Feldmann Engineering	52	Parker Sweeper	51
Fisher and Son	33	Perma-Green Supreme	27,30
George Olson	22	PLCAA	21
Graham Lawn Care	38	Practical Solutions, Inc.	15
Great Plains Association	53	RGB Labs	49
Green Pro Co-op Services	19	Rhone Poulenc	4
Imler Industries, Inc.	22	Salsco, Inc.	12
Jacklin Seed, Inc.	59	Snapper Products	7
Kalo Ag Chemicals	20	Sunbelt Seed Company	28
Kelso Manufacturing	38	Trebor Corp.	29
Lawn Masters, Inc.	27	Tuflex Manufacturing	8
LESCO	60	UAP	17,57
Mallinckrodt, Inc.	9		

SPLIT PERSONALITY.

Another fine,
quality-con-
trolled product
of Jacklin Seed
Company.

Glade Glade

KENTUCKY BLUEGRASS U.S. Plant Patent 3151

Bright sunshine or moderate shade makes little difference to Glade Kentucky bluegrass. With its split personality, Glade grows well under both conditions.

A Rutgers University selection, low-growing, deep green Glade has improved resistance to most races of leaf rust, stripe smut and to powdery mildew in up to 60% shade. Because of its better than average resistance to most races of Fusarium blight, Glade Kentucky bluegrass is being used as a fortifying ingredient in many professional turfgrass mixes. It blends beautifully with the new, fine-leaved ryegrasses, fescues and other elite bluegrasses.

Specify Glade for your next turfgrass mix. You'll appreciate the split personality that thrives in both sun and shade.



Write 50 on reader service card

CUSTOMER SATISFACTION

Your customers are counting on you. Don't disappoint them. Use LESCO Sulfur-Coated Fertilizers and give your customers the beautiful lawn they demand.

Slow-release sulfur-coated fertilizers from LESCO provide sustained, even feeding from one application to the next. The gradual release of LESCO Sulfur-Coated Fertilizers promotes efficient nutrient availability and steady greening – drastically reducing the potential for burn and nutrient loss due to leaching.

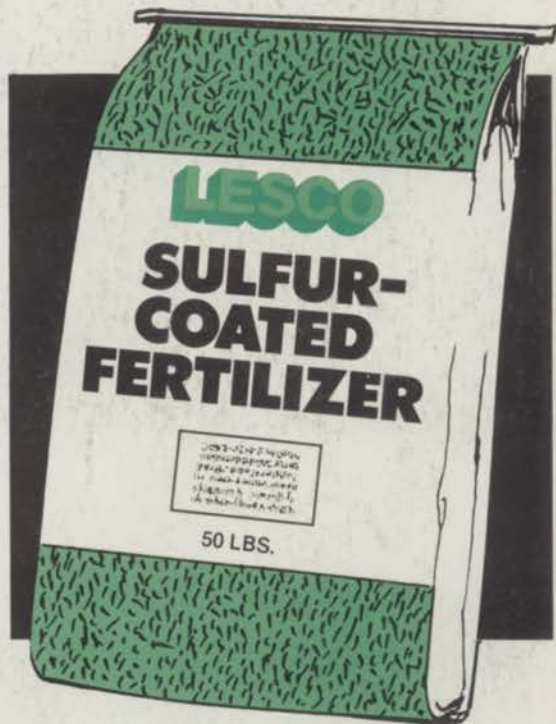
Manufactured in a wide range of analyses, you can choose products with a small or high percentage of sulfur-coated urea nitrogen – for the length of response you desire. Fertilizers with sulfur-coated phosphorus and potassium are also available, as well as a variety of fertilizer/control products.

Before you buy anything else, investigate the benefits of LESCO Sulfur-Coated Fertilizers. Ask, too, about our capacity for custom formulating to your specifications.

Customer satisfaction. It keeps you in business.

Call Barb today to order
LESCO Sulfur-Coated Fertilizers.

(800) 321-5325 (800) 362-7413
NATIONWIDE IN OHIO



LESCO

Write 61 on reader service card

LESCO, Inc., 20005 Lake Road, Rocky River, Ohio 44116 • (216) 333-9250