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renovate

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AN (HBJ) PUBLICATION

JANUARY 1985

Volume 9, Number 1 \$2.00

LAWN CARE INDUSTRY

Serving lawn maintenance and chemical lawn care professionals

HAPPY NEW YEAR!

LCOs can hardly wait for '85

As the new year dawns, most lawn care operators and landscape maintenance contractors can't wait for the season to get into full swing. Based on 1984 business, everyone seems hopeful for a bigger and better 1985.

Like Paul Harder of Prescription Turf Services, Middleton, Mass.

"We more than doubled our business in 1984," says Harder. "We're going to try to double business one more time (1985), then

we'll get more reasonable in our expectations."

So, too, is Red Fawcett optimistic.

"We nearly doubled our business this year," claims Fawcett of The Green Machine, Cambridge, Mass. "Customer retention and doing a good job are the keys the industry's got to be concerned about as we look to the future, though."

Steve Evans of Turf Doctor, Framingham, Mass. concurs with

his close competitors, but sees an obstacle ahead.

"Over the next five years, I think we're going to have problems with government regulations," Evans says. "But 1984 was good, considering the unusual weather."

John Hassey and Phil Green of Stanley Steemer, Columbus, Ohio, are looking ahead with conviction.

"We feel good about our first

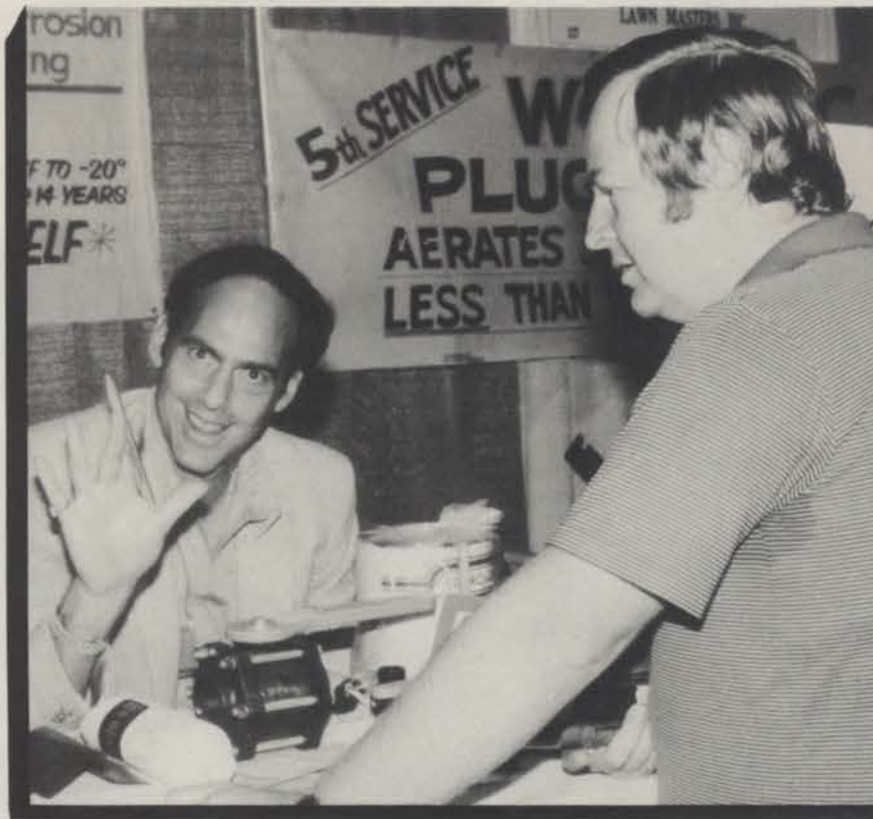
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Ruckelshaus out, Thomas in as EPA's administrator

Effective Jan. 5, William D. Ruckelshaus will no longer be administrator of the Environmental Protection Agency. Ruckelshaus submitted his resignation in late November, citing no particular reasons. It took just one day for President Reagan to name Lee M. Thomas to replace Ruckelshaus.

In a letter to the President, Ruckelshaus said, "The ship (E.P.A.) is righted, and now steering a steady course." Ruckelshaus was appointed in May, 1983, following the resignation of Anne Burford amid charges of mismanagement and wrongdoing

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Record-breaker

Howard Stephens (left) of Palm Industries mimics for the camera in his booth at the recent PLCAA conference. Looking on is Carl Hansen of Viking Engineering. More details on page 11.



Stauffer tackles publicity

A recent decision by the Stauffer Chemical Co. will help your lawn care business, even though you might not be involved directly.

Stauffer, in conjunction with the Professional Lawn Care Association of America, has begun a national publicity program designed to promote professional lawn care to homeowners. At the heart of the program are eight press releases.

"The program will utilize selected daily and weekly newspapers in targeted sections of the country where you do business," Greg Bushman told LCOs at the recent PLCAA convention in Tampa, Fla. "They (releases) will be timed to appear in print when homeowners begin to think about getting their lawns in shape...(and) will continue to appear throughout the summer and into fall to remind homeowners about your companies."

Titles of some of the articles are:

- "Steer Clear of Lawn Service Fly-by-Nighters"
- "Revitalize Your Lawn with Professional Help"
- "Short Cuts to Lawn Beauty"

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Next month:

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cool-season turf such as tall fescue, bluegrass and perennial ryegrass. It is a low-volatile ester formulation designed especially for professional applications. And it offers reduced potential for off-target injury because of low volatility and little movement in the soil.

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Circle No. 108 on Reader Inquiry Card

All marks shattered by NYSTA

The New York State Turfgrass Association's annual conference held recently in Syracuse, N.Y. drew an all-time record crowd, according to executive director Ann Reilly. Attendance was 1,157.

"I don't know anybody who wasn't pleased with the show," Reilly said. "We're moving upstairs in the War Memorial next year, and we'll be able to have 190 booths instead of 140."

The group held elections and presented awards during the conference. Sherwood Moore of Winged Foot Golf Club, Mamaronek, was winner of the "Citation of Merit." and J&L Adikes donated \$5,000 toward Dr. Richard Smiley's research at Cornell University.

Featured speakers were Smiley, James Watson of the Toro Co. and Gene Bowler of Green Gene's.

Officers elected are shown in the adjacent photo. Left to right, they are: Janet Dudones, president; Jack Sloane, vice-president; Bill Stark, secretary/treasurer; John Musto, past president; Steve Smith, director; Dan Antoncchia, director; Joe Laubenstein, director; Dick McGovern, director; Ted Horton, director; Norm Hummel, Cornell liaison; and Reilly.



Officers and directors of the NYSTA are shown here. Details in story at left.

Rumors could've hurt ChemLawn, Van Fossen says

No one really knows why ChemLawn's over-the-counter stock took a big dip late last year, but company president Jack Van Fossen has a partial answer.

"Some very false information contributed to the drop, and the context in which it was delivered," Van Fossen told a Cleveland, Ohio, reporter. "I'm very concerned if people keep perpetrating those types of falsehoods."

The rumors were apparently circulated in New York. They concerned the deaths of six animals due to ChemLawn treatments, but ChemLawn investigated and could find no evidence of the rumors being true.

"This is an emotional issue that's promoted by a small group of individuals opposed to all

pesticides," Van Fossen said in another interview on the subject.

Part of the reason, too, analysts speculate, is the trend toward stricter pesticide regulation on the local level. Such cases are continuing in places where ChemLawn treats lawns like Wauconda, Ill. and Lyndhurst, Ohio.

Field Days in March

Plans for the ninth annual ALCA Student Field Days call for a March 29-31 get-together. Mississippi State is the host university.

The field day is a three-day competitive event among students from horticulture programs from colleges and universities from across the country. Events

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POSTMASTER: Send address changes to LAWN CARE INDUSTRY, P.O. Box 6200, Duluth, Minnesota 55806-9900.

include landscape design, sales presentation and surveying. A social event is also held to allow students to meet with landscape contractors, who often find future employees.

For more information, write Bob Callaway, Mississippi State University, P.O. Drawer MQ, Mississippi State, MS, 39762.

MEMOS

RUBIGAN, a foliar fungicide produced by Elanco Products Co., received an Environmental Protection Agency label for turfgrass applications on Nov. 19, 1984. The product had spent the last few years with an Experimental Use Permit while its label was pending with the EPA. Above and beyond the actual action, this might mean that the EPA is ready to grant labels to other turfgrass chemicals which have been pending for years, among them Triumph and Banner.

DR. ART BING of Cornell University suffers a problem many homeowners face: bentgrass populations encroaching on his home lawn. What does Bing do to control the bentgrass? An application of Roundup followed by Vapam, he told LCOs at the New York State Turfgrass Convention. "Vapam is the ultimate weapon," Bing concluded.

PGR'S: plant growth regulators, according to many experts, will make an impact on the turf market in coming years. Currently, Monsanto, Ciba-Geigy and Union Carbide chemical companies are all working on turf PGRs, and all see a good market. The problem, most experts agree, is finding a growth regulator that performs consistently under any number of conditions: soil type, seed type and growing conditions.

SPEAKING OF PGR'S, Limit, Monsanto's entry, will be out

in 1985, according to Monsanto president **Dick Maloney**. This PGR doesn't suppress seed heads like others. First attack markets are rights-of-way, parks, cemeteries and professional applicators. Mahoney called Limit "not a home run like Roundup, but a triple to deep center."

MIDDLE MANAGEMENT at lawn care companies is undergoing a transformation, and the subject was kicked around at numerous cocktails during the recent PLCAA show in Tampa, Fla. It used to be that the operating staff below the head man Overmost companies had a technical background. But experts are seeing more business-types being hired to run day-to-day operations of lawn care companies as the industry "matures."

HE CAN HELP you do your mowing jobs easier. **William Linsingbigler** of Virginia Beach, Va. has recently applied for a patent on a telescoping fence post. The post, a press release notes, can be raised to facilitate the cutting of grass under the fence, then lowered for normal use. If the patent is issued, look for the device at your nearest hardware/outdoor supplier.

WHEN SPRING rolls around, look for Hawkeye Chemical Co. to announce a new product, Slo-Release 18-0-1. **Mike Scribner** of Hawkeye says the product is a flowable slurry to go along with Hawkeye's Formulene and Formusol.

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Liqui-Land owner passes away

Robert W. Freske, a well-known leader in the lawn and garden fertilizer industry, passed away on Oct. 9, 1984 in Niles, Mich.

Freske, who was co-owner with Sandy Nelson of Liqui-Land Corp. was 55. Cause of death was a heart attack.

Nelson, calling Freske "the big

Crystal ball foresees growth

Bob Earley, publisher of LAWN CARE INDUSTRY, gave PLCAA convention-goers a look at some of the changes the \$2.2 billion industry can expect in the coming years during a speech in Tampa, Fla.

Among the points Earley made were that:

- The industry should expect 15-20 percent annual growth until 1990, when growth should average about 5 percent annually.
- Because of possible thatch problems, aeration will play a more important role in effective lawn service.
- The use of dry chemicals appears to be gaining increased favor over liquid application, though liquids are still popular among larger companies.
- Despite the hesitancy on the part of some LCOs, telemarketing is gaining more effective and widespread use.
- The use of growth regulators and low-volume spraying could be the next major trends in the industry.
- The industry itself may not be charging customers enough for its services.

Company is fined \$25,000

New England Green of Rocky Hill, N.H. was fined \$25,000 for illegal pesticide spraying, including one instance in which a 2½-year-old boy was sprayed, according to the *Hartford Courant*.

Company president Michael McKee pleaded no contest in Manchester Superior Court to five violations of state law. One violation was for not complying with state certification regulations, the rest for applying pesticides without proper certification.

According to the New Hampshire Department of Environmental Protection, the fine was the largest ever levied against a lawn care company.

The youngster involved was Joseph Leonard of East Hartford, a neighbor of a customer. He was talking with the applicator when winds covered him "from head to toe with chemicals," according to his mother.

man with the big heart," says his presence will be missed, but that the business will continue on the same course Freske had helped to set.

"We've both worked so long and hard together, I'm not about to let things fall by the wayside," Nelson says. "I'm acquiring total ownership, as we had pre-arranged. And—to make up for his absence—we're planning on promoting from within."

Freske moved to Niles from the Chicago area, where he was born

and raised, in 1958. He was past president of the local Chamber of Commerce and organist at St. Paul's Lutheran Church for more than 25 years.

After 10 years with Mobil Chemical Corp., he resigned in 1974 to begin a fertilizer business. He most recently held three positions: president of Liqui-Land Corp. (formerly Great Plains Assoc. Ltd.), vice-president of Liqui-Lawn and president of NFD Transport, a fertilizer transportation company.



Robert W. Freske

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Lesco celebrates building opening

Lesco Inc., formerly Lakeshore Equipment and Supply, celebrated the opening of its new facility in Rocky River, Ohio, with a recent open house and cocktail party. The event was well-attended with many notables from the turf industry making their presence known.

Company president Jim FitzGibbon, seen in photo at left helping make one of the guests at

home, presided over the event.

Lesco moved from its original office in Elyria, Ohio last fall. The new corporate headquarters is a two-story red brick colonial-style building with white columns. Since the building's purchase, Lesco gutted the inside of the structure and remodelled to accommodate a staff of more than 70 persons.

The open house included tours, displays and presentations.

N.Y. conference expecting 2,000 next month

More than 2,000 turf professionals and 150 exhibitors are expected to attend the 17th Professional Turf and Plant Conference Feb. 25 at Colonie Hill in Hauppauge, N.Y.

Speakers include: Dave Dietz of the Pesticide Public Policy Foundation, speaking on "The Politics of Pesticides;" financial consultant James Skelton on "How to Lose a Million Dollars, and Other Valuable Advice;" Bob Earley of LAWN CARE INDUSTRY on "Hiring Landscape Crews: Not for Men Only;" and Bruce Shank of *Weeds, Trees & Turf* magazine on "The Customer: Expectations Versus Reality."

Pesticide license recertification credits will be given, and the state pesticide certification exam can be taken.

For further information, contact the Nassau-Suffolk Landscape Gardeners Association, 59 Orinoco Dr., Brightwaters, NY, 11719; (516) 665-2250.

Chevron rocked by explosion

An explosion at Chevron Chemical's Richmond, Cal. plant recently caused extensive damage and injured four workers.

The plant manufactures Difolatan fungicide, an agricultural chemical not used in either the lawn or pest control industries.

Chevron's adjacent Orthene plant, which uses the same power facility, went down until power was restored, but was not damaged itself.

"The explosion will not impact on the production of our lawn and garden chemicals," says Chevron spokesman Mike Marcy.

The local newspaper called the disaster a "thunderous explosion" that was heard miles away. Cause of the explosion was undetermined at presstime.

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Circle No. 105 on Reader Inquiry Card

UPFRONT



A convention notebook

There's no question that the Fifth Annual Professional Lawn Care Association of America convention and trade show was a huge success.

We're talking a larger crowd, more exhibition booths and informative educational sessions. And part of the reason for the success was the convention's site: Tampa, Fla.

As a matter of fact, the PLCAA

brain trust has shifted the site of the 1985 convention from Cincinnati, Ohio to Tampa.

Yet, had the PLCAA Board of Directors asked the opinion of at least one concerned onlooker, they would have received a vote to retain Cincinnati.

Why? Because the PLCAA needs to attract the little guy: the LCO who can afford neither the time nor the money to visit

Florida for a week or two in November, when some applicators are still worrying about a final service call.

Sure, the big guys—most of whom were in Tampa—set the course of the industry, and every so often their desires should be catered to. But the backbone of the industry—the LCOs who follow the lead of the major companies, the LCOs who account for a large portion of the chemical applications in this country, and the LCOs who are most in need of enlightening educational sessions—are situated, generally, in the Midwest. That is where lawn care was born, and that is where it proliferates in the greatest numbers.

But I'm not going to argue too vehemently. Tampa, though second in my book, is still an excellent choice.

* * * * *

The ebullient presence of immediate past president John Kenney was sorely missed at the PLCAA show. Kenney, one of the real go-getters on the PLCAA Board and a good-guy from the word go, elected not to make the trip from Boston to Tampa because of health problems.

His role as PLCAA president was assumed by president-elect Bill Fischer, and his role as chief operating officer of Turf Doctor was taken by brother Drew. Both did credible jobs.

As we write this column in early December, John is still under the weather. All of us at LCI have our fingers crossed that, by the time this appears in print, he's back on the job and eager to get to Tampa later this year.

* * * * *

If you missed the Tampa show, you missed a real treat. And it was made even nicer by the perfect weather. Temperatures hovered around 72 degrees, with nary a cloud the entire four days. If possible, don't miss it again.

* * * * *

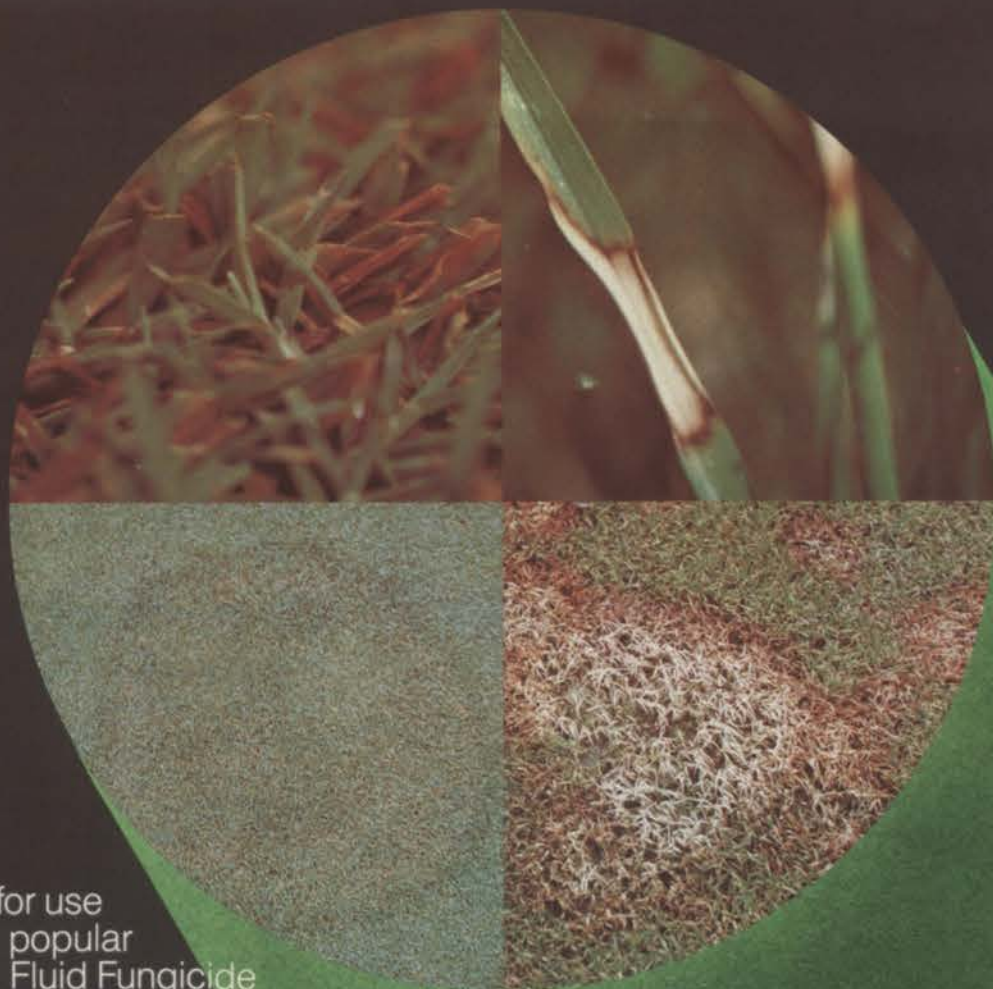
Quote of the PLCAA conference, from Lawrence Kokkelenberg: "If you think training is costly, think of the cost of ignorance." Amen.

Jerry Roche

Jerry Roche
Editor

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106	121	136	151	166	181	196	211	226	241	256	271	286	301	316	331	346
107	122	137	152	167	182	197	212	227	242	257	272	287	302	317	332	347
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112	127	142	157	172	187	202	217	232	247	262	277	292	307	322	337	352
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LAWN CARE INDUSTRY

JANUARY 1985

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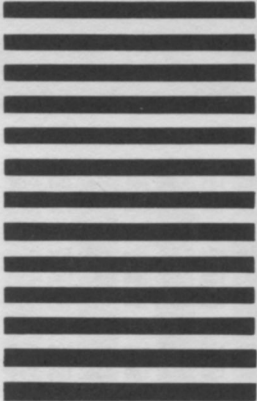
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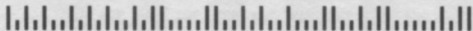
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The 'Big Gamble' pays off: PLCAA visits sunny Florida

The Big Gamble paid off—in spades.

Officials of the Professional Lawn Care Association of America were uncertain whether a move from the Midwest to Tampa, Fla. would help attendance at their gala convention and trade show. Since the great majority of lawn care operators are located in Pennsylvania, Ohio, Indiana, Illinois and Michigan, the Board hesitated at moving the convention 1100 miles away.

But 1,637 attended the 1984 convention at the Curtis Hixson Center in Tampa, compared to 1,297 who turned out for the 1983 show in Indianapolis, Ind. The 1984 convention netted the organization \$15,000 in working capital.

"It's been a good year—a tiring year, but a good year," executive director Jim Brooks said at the annual membership meeting. "But we don't want to rest on our laurels. We've got an even greater year coming.

"As a young organization that is really only in kindyarden (sic), we have a lot to accomplish and a lot out there that we can call opportunity. I'm convinced that this association will become THE preeminent association in the turfgrass industry."

The PLCAA, according to figures from committee chairman Des Rice, enlisted 249 new members in fiscal 1984 to bring its membership to 612. Rice, Brooks and President John Kenney had set a goal of 600 by the 1984



Members of the Professional Lawn Care Association of America's Board of Directors until this November are, left to right: Paul Davarede, Al Rumbo, Max Graham, vice-president Keith Weidler, Paul Moore, Jerry Garnett, Bob Earley, secretary-treasurer Jim Marria, president Bill Fischer, Dr. Bob Miller and Jim Sackett.



Keynote speaker Capt. James Lovell signs autographs after giving his presentation, which included a 15-minute film on the ill-fated Apollo 13 mission.

PLCAA convention.

Bill Fischer of Spring Green, Plainfield, Ill., who was elected new president, spoke in glowing terms of Kenney, who missed the

convention because of illness.

"He set a goal of 600 members, of a larger show, of publishing a safety manual, of publishing a monthly legal update for members, and of making our newsletter 'Turf Talks' bi-monthly.

"We reached all those goals, so John should certainly be quite proud of his administration," Fischer noted.

New officers are Fischer, president; Jim Marria of Perma Green, Boise, Ida., vice-president; and Keith Weidler of ShurLawn, Omaha, Neb., secretary-treasurer.

New members of the Board of Directors are Dr. Paul Schnare of Accu-Spray, Cape Girardeau, Mo.; Paul Moore, Lawn Green, Las Vegas, Nev.; and Jerry Garnett of Rhone-Poulenc, Monmouth Junction, N.J. (associate).

Outgoing board members Des Rice, Paul Bizon and Bob Scobee were presented plaques honoring

their contributions. Also receiving a plaque was Glenn Bostrom of Bostrom Management Associates, Chicago, Ill., the original executive director of the PLCAA.

"I should not be receiving this award," Bostrom told a crowd of more than 300 in the large convention hall. "It was the staff that did the work, and I'm getting the credit. But it's still a thrill to know that I got a start with all of you in the early years."

Highlighting the program was the keynote speech "Successful Failure" by Capt. James A. Lovell. The former Gemini and Apollo astronaut also narrated a film chronicling the difficulties of the ill-fated Apollo 13 flight, which he commanded.

Besides the usual educational sessions, members were also treated to a pair of Early Bird Workshops, the annual Early Bird Reception, the Chipco Bluegrass to page 14

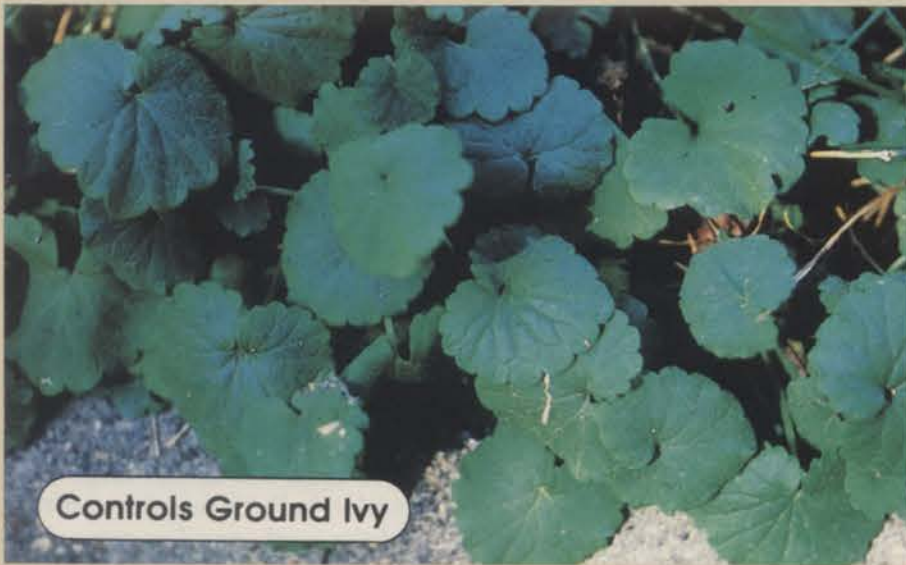


Don Burton and his wife Kathy (second from left and left) engage in a friendly chat with Jerry Faulring and his wife Paula (right and second from right) at a special dinner put on by Union Carbide during PLCAA Convention week.



Dr. Bob Miller of ChemLawn (center) talks with friends, including Bob Parmley of Tempo 21/Lawn Beautiful (back to camera, left) during the dinner sponsored by Union Carbide in Tampa, Fla.

Introducing the **SUPER**



Controls Ground Ivy



Controls Oxalis



Controls Spurge



- Controls Spurge, Oxalis, Ground Ivy and other hard-to-control weeds.
- Rapid visible effect in early-season or late-season cool weather.
- Minimum hazard to nearby flowers and ornamentals.

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PROFESSIONAL TURF PRODUCTS

SUPER TRIMEC[®] BROADLEAF HERBICIDE

KILLS: Dandelion, Chickweed, Knotweed, Plantains, Henbit, Spurge, Kudzu, and many other species of broadleaf weeds; some of which are listed on this label.

FOR SALE TO, USE AND STORAGE BY, PROFESSIONAL TURF MAINTENANCE PERSONNEL ONLY.

ACTIVE INGREDIENTS	
***Isopropyl ester of 2,4-Dichlorophenoxyacetic acid	32.48%
**Butoxyethanol ester of 2-(2,4-Dichloro-phenoxy) propionic acid	30.66%
***Dicamba (3,6-dichloro-p-aminic acid)	5.86%
INERT INGREDIENTS	31.48%
TOTAL	100.00%

This product contains:
 **2.0 lbs. 2,4-Dichlorophenoxyacetic acid per gallon or 21.54%
 ***2.0 lbs. 2-(2,4-Dichlorophenoxy) propionic acid per gallon or 21.54%
 ****0.5 lb. 3,6-dichloro-p-aminic acid per gallon or 5.86%

TRIMEC[®] is a registered trademark of PBI/GORDON CORPORATION U.S. Patent No. 3,284,196

ONE GALLON
COVERS UP TO
4 ACRES

**KEEP OUT OF REACH OF CHILDREN
CAUTION**
See Side Panel for additional precautionary statements
and Statement of Practical Treatment

KEEP FROM
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Problem Solver —

TRIMEC®

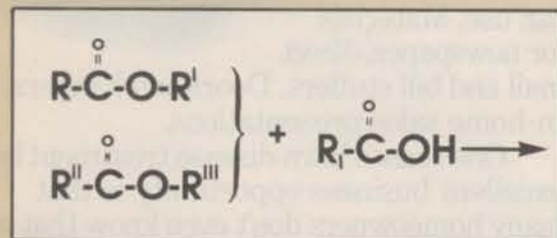
BROADLEAF HERBICIDE

You may have been responsible for the name Super Trimec. If so, your prize is in the mail. If not, you can still be a winner. Read on for a minute and find out how.

We are continually testing ways to improve Trimec. In the beginning was our U.S. patent number 3,284,186, which gave us the sole right to combine 2,4-D, MCPP and dicamba.

It was certainly a giant step forward in turf herbicide because it was synergistic, but there are often problems with just tank mixing chemicals . . . problems caused by inconsistencies from batch to batch. And thus it was that our first major progress came from our experiments that led to our ability to react the three acids, in a unique way, to form a new compound.

The next big improvement came in our discovery of the eutectic principle, which causes the unique complex to resist crystallization and penetrate into the circulatory system of a weed much more rapidly.



And then came the little jewel you see above. It is a unique means of combining different esters with dicamba to form a new and unusual Trimec Complex.

How we do this is, of course, a trade secret, but the activity of the complex

is nothing short of amazing! It controls tough weeds like Ground Ivy, Oxalis and Spurge as easily as shooting fish in a barrel . . . It delivers fast, visible response in early-season or late-season cool weather . . . and yet it poses a minimum hazard to flowers and ornamentals.

Turf Professionals Named it Super Trimec

We decided to call it Trimec Turf Ester, and in our advertising we offered a free sample. To our amazement and sheer delight, some 9,000 turf professionals took us up on the offer . . . and soon the bouquets started flooding in to our headquarters in Kansas City.

If there was one word that stood out in the comments from users, it was *Super* . . .

"The control of Spurge was super."

"The low volatility is really super."

"The quick response was really super."

"The efficiency was super."

Well, if our friends in the turf community insist that it is Super, who are we to argue? Super it is! So the name



Like all genuine Trimec Complexes, the Super Trimec label contains the famous Trimec seal — your guarantee of professional quality.

has been changed from Trimec Turf Ester to Super Trimec.

A \$5.00 Coupon is in the Mail

If you are one of those who received a sample last year, we want to thank you for being part of the group that gave us this Super name . . . and so we're sending you a \$5.00 coupon to redeem on a gallon of Super Trimec.

If you were not one of those who got a sample last year, you can still be a winner. Call us or write and we'll send you a sample of Super Trimec that will cover 11,000 square feet. We'll also send you a \$5.00 coupon you can redeem on a gallon of Super Trimec.

For your sample and coupon call us

Toll-free 1-800-821-7925

In Missouri 1-800-892-7281

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Al Cody of Clifford B. Hannay Reels (left) tries to make points with Mike Solapek of Swingle Tree Co., Denver, Col., on the PLCAA trade show floor.



Sue Ann Brown of Mallinckrodt Chemical Co. tells a prospective customer the advantages of her company's products during the PLCAA trade show.

from page 11

Festival, a new member reception and breakfast and the annual business meeting.

Winner of the \$1000 first prize in the LAWN CARE INDUSTRY Long Green Sweepstakes was Bob Kapp of Kapp's Green Lawn, Munster, Ind. He filled out his winning ticket at the Agris Corp. booth. Second place prize of \$500 went to Rick Harrington, who was drawn from Lebanon Chemical entries. Third prize of \$250 went to Kelly Kassander of Birchwood Lawns, Milwaukee, Wisc., who filled out her winner at the Cushman-Ryan booth.

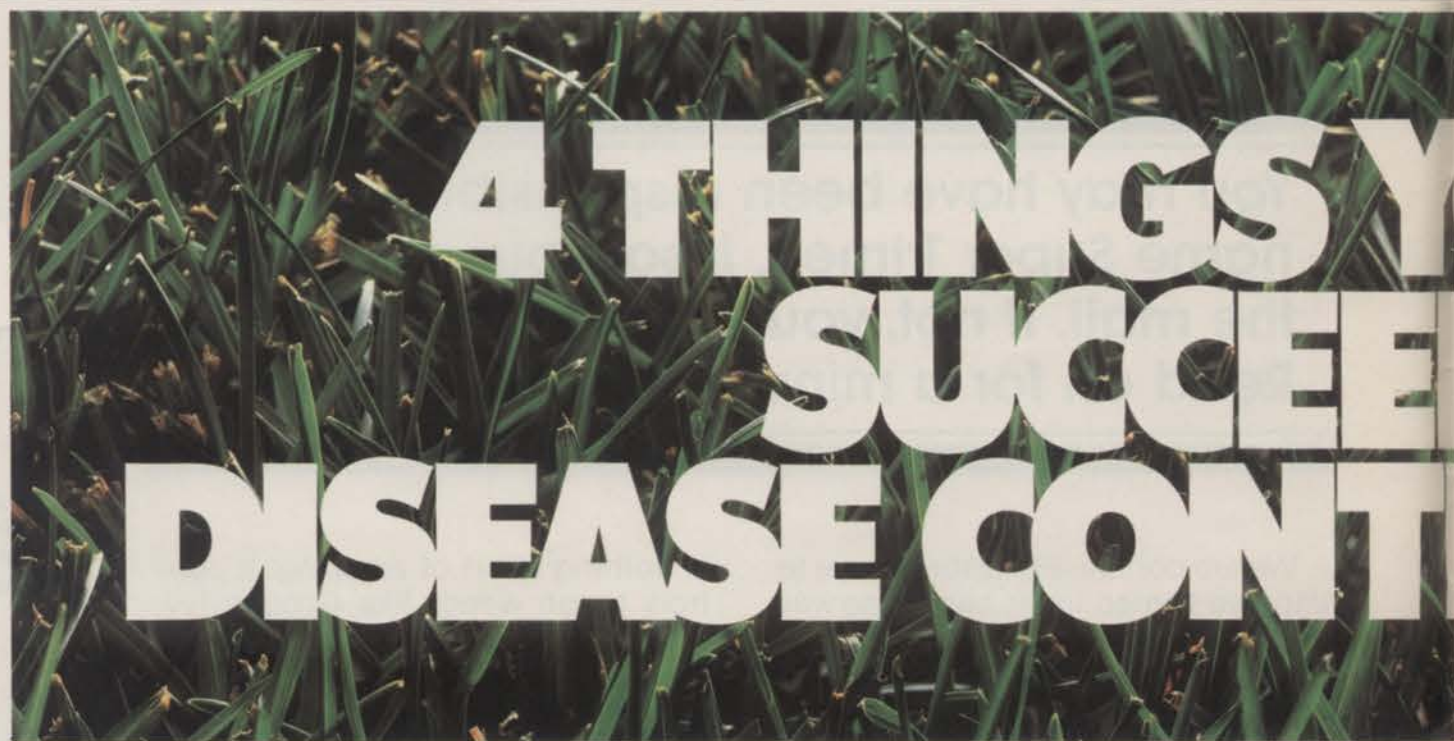
The trade show floor featured more than 230 booths, a 45 percent increase over the 1983 show, and attendees were given 16 full hours to visit the exhibits.

"I think we came into our own, we grew up as a national organization, in Tampa," said Brooks. "We now have companies talking about introducing new products at the lawn care show instead of the traditional golf show, and that's a good sign.

"A big gamble? Yes, but our neck's not sticking out there any more."



Paul Morgan (right) shows Kathy Hutt and Ross Harbaugh of Green Scape Boise, Ida., Lesco's new aerator during the first day of the PLCAA trade show.

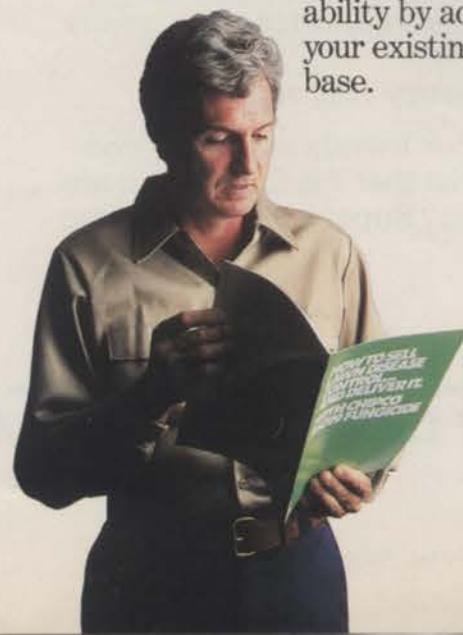


1 THE RIGHT STRATEGY.

Every year, more lawncare companies discover new profits in turf disease control. If yours isn't one of them, we'd like to show you the way by sending you our free CHIPCO® 26019 fungicide *Healthy Business Package*.

It includes lots of valuable information and materials to help you turn lawn diseases into profits...beginning with strategy.

We'll explain how effective disease control can give you a competitive edge. How it can build your reputation as a quality-oriented company. How it can protect the business you already have...and help bring in more customers. How it can be used to establish a long term customer relationship. In short, how it can improve your profitability by adding value to your existing customer base.



2 THE RIGHT TACTICS.

Coming up with an effective disease control sales strategy is one thing. Carrying it out is something else. Our *Healthy Business Package* shows you how.

It includes not only advice on how to communicate with customers and prospects, but materials you can use. Materials for newspaper, direct mail and bill stuffers. Doorknob hangers. In-home sales presentations.

One reason lawn disease treatment is an excellent business opportunity is that many homeowners don't even know that turf diseases exist. If you make them aware of the problem—and offer the solution—in your advertising, promotions and sales calls, you'll capture more than your share of this growing market. We can help.



FREE HEALTHY BUSINESS PACKAGE

Please send my free *Healthy Business Package*, full of valuable information and materials to help expand my business with CHIPCO® 26019 turf fungicide, to:

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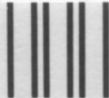
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January

North Carolina Turfgrass Conference and Exhibit, Jan. 2-4, Adam's Mark Hotel and Convention Center, Charlotte, NC. Contact: W.B. Gilbert, 1119 Williams Hall, Box 7620, North Carolina State University, Raleigh, NC, 27695. (919) 737-2657.

Georgia Turfgrass Conference, Jan. 6-8, University of Georgia, Athens, GA. Contact: Gil Landry, 2400 College Station Rd., Athens, GA, 30602. (404) 542-5350.

Maryland Turfgrass '85, Jan. 6-9, Baltimore (MD) Convention Center. Contact: Cheryl Gaultney, Maryland Turfgrass Council, Box 223, White Marsh, MD, 21162. (301) 335-3700.

Tennessee Turfgrass Association Conference, Jan. 8-9, Music City Rodeway Inn, Nashville, TN. Contact: Suzanne Lamb, Tennessee Turfgrass Association, P.O. Box 24352, Nashville, TN, 37202. (615) 256-2659.

Southeast Pennsylvania Turf School and Trade Show, Jan. 8-9, Westover Inn & Golf Club, Jeffersonville, PA. Contact: Keith Zanzinger, Chester County Extension Service, 235 W. Market St., West Chester, PA, 19380. (215) 696-3500.

Landscape Design Short Course, Jan. 9-11, OARDC, Wooster, OH. Contact: Fred K. Buscher, OARDC, Wooster, OH, 44691. (216) 263-3831.

Associated Landscape Contractors of America Convention and Trade Show, Jan. 20-24, Kona Surf Resort, Kailua-Kona, HI. Contact: ALCA, 405 N. Washington St., Falls Church, VA, 22046. (703) 241-4004.

Professional Turf and Landscape Conference, Jan. 23, Tappan-Zee Townhouse, Nyack, NY. Contact: Frank Claps, Committee Chairman, 136 Laurel Ave., Larchmont, NY, 10538. (914) 834-9393.

Virginia Turfgrass Conference and

Trade Show, Jan. 23-25, Virginia Beach (VA) Pavilion and Tower. Contact: J.R. Hall III, Agronomy Dept., Virginia Tech, Blacksburg, VA, 24061. (703) 961-5797.

University of Tennessee Turfgrass Management Winter Short Course, Jan. 28-30, University of Tennessee/Knoxville (TN). Contact: Dr. L.M. Callahan, Professor Turf Management, Box 1071, University of Tennessee, Knoxville, TN, 37901. (615) 974-7324.

Horticulture Industries Conference, Jan. 28-31, Earle Brown Center, University of Minnesota, St. Paul, MN. Contact: Shirley Munson or Office of Special Programs, 405 Coffey Hall, 1420 Eckles Ave., University of Minnesota, St. Paul, MN, 55108. (612) 373-1561.

American Sod Producers Association Midwinter Conference, Jan. 30-Feb. 1, Disney World Contemporary Hotel, Orlando, Fla. Contact: Douglas Fender, APSA, 4415 W.

Harrison, Hillside, IL, 60162. (312) 449-2890.

Spring Valley Turf Seminar, Jan. 30, Milwaukee (WI) Marriott Inn. Contact: Bill Vogel, 1891 Spring Valley Rd., Jackson, WI, 53037. (414) 677-2273.

February

Musser International Turfgrass Foundation Annual Board Meeting, Feb. 11, Washington, D.C. Contact: Dr. Fred Grau, The Musser Foundation, Box AA, College Park, MD, 20740.

Capital Region Turf and Ornamental School, Feb. 12-13, Holiday Inn, Grantville, PA. Contact: James Welshans, Dauphin County Extension Service, 75 S. Houck St., Suite 101, Harrisburg, PA, 17109. (717) 652-8460.

Recreational and Commercial Turfgrass Short Course, Feb. 13, Statesboro, GA. Contact: Gil Landry, 2400 College Station Rd., Athens, GA, 30602. (404) 542-5350.

Northeastern Pennsylvania Turfgrass and Grounds Maintenance School, Feb. 19-20, Luzerne County Community College, Nanticoke, PA. Contact: William Kleiner, Luzerne County Extension Service, 200 Adams Ave., Scranton, PA, 18503. (717) 825-1701.

Landscape Design Short Course, Feb. 20-22, OARDC, Wooster, OH. Contact: Fred K. Buscher, OARDC, Wooster, OH, 44691. (216) 263-3831.

Commercial Turfgrass Short Course, Feb. 21, Atlanta, GA. Contact: Dr. Gil Landry, 2400 College Station Rd., Athens, GA, (404) 542-5350.

Recreational Turfgrass Short Course, Feb. 22, Atlanta, GA. Contact: Dr. Gil Landry, 2400 College Station Rd., Athens, GA, (404) 542-5350.

Nassau-Suffolk Landscape Gardeners' Organization Professional Turf and Plant Conference, Feb. 25, Colonie Hill, Hauppauge, Long Island, NY. Contact: John Adel, NSLFA, 59 Orinoco Dr., Brightwaters, NY, 11718. (516) 665-2250.

Western Pennsylvania Turf and Grounds Maintenance School, Feb. 26-28, Monroeville (PA) Expo Mart/Marriott. Contact: Christine King, Pennsylvania Turfgrass Council, P.O. Box 417, Bellefonte, PA, 16823. (814) 355-8010. Or James Helbling, 965 Balmoral Dr., Pittsburgh, PA, 15237. (412) 366-9018.

March

Canadian Turfgrass Conference and Show, March 3-6, Winnipeg, Manitoba, Canada. Contact: Mary Gurney, Canadian Golf Course Superintendents' Association, 698 Weston Rd., Toronto, Ontario, Canada, M6N 3R3. (416) 767-2550.

Midwest Regional Turf Conference, March 4-6, Purdue University, West Lafayette, Ind. Contact: Dr. W.H. Daniel, Dept. of Agronomy, Purdue University, West Lafayette, IN, 47907. (317) 494-4785.

Massachusetts Turfgrass Conference and Industrial Show, March 5-7, Springfield, Mass. Contact: Dr. Joseph Troll, University of Massachusetts, Plant and Soil Science, Stockbridge Hall, Amherst, MA, 01003. (413) 545-2353.

Reinders Turf Conference, March 13-14, Waukesha (WI) Expo Center. Contact: Ed Devinger, Reinders Brothers Inc., 13400 Watertown Plank Rd., Elm Grove, WI, 53122. (414) 786-3301.

Maine Winter Turf Conference, March 20-21, South Portland, ME. Contact: Dr. Vaughn Holyoke, Deering Hall, University of Maine, Orono, ME, 04401. (207) 581-2922.

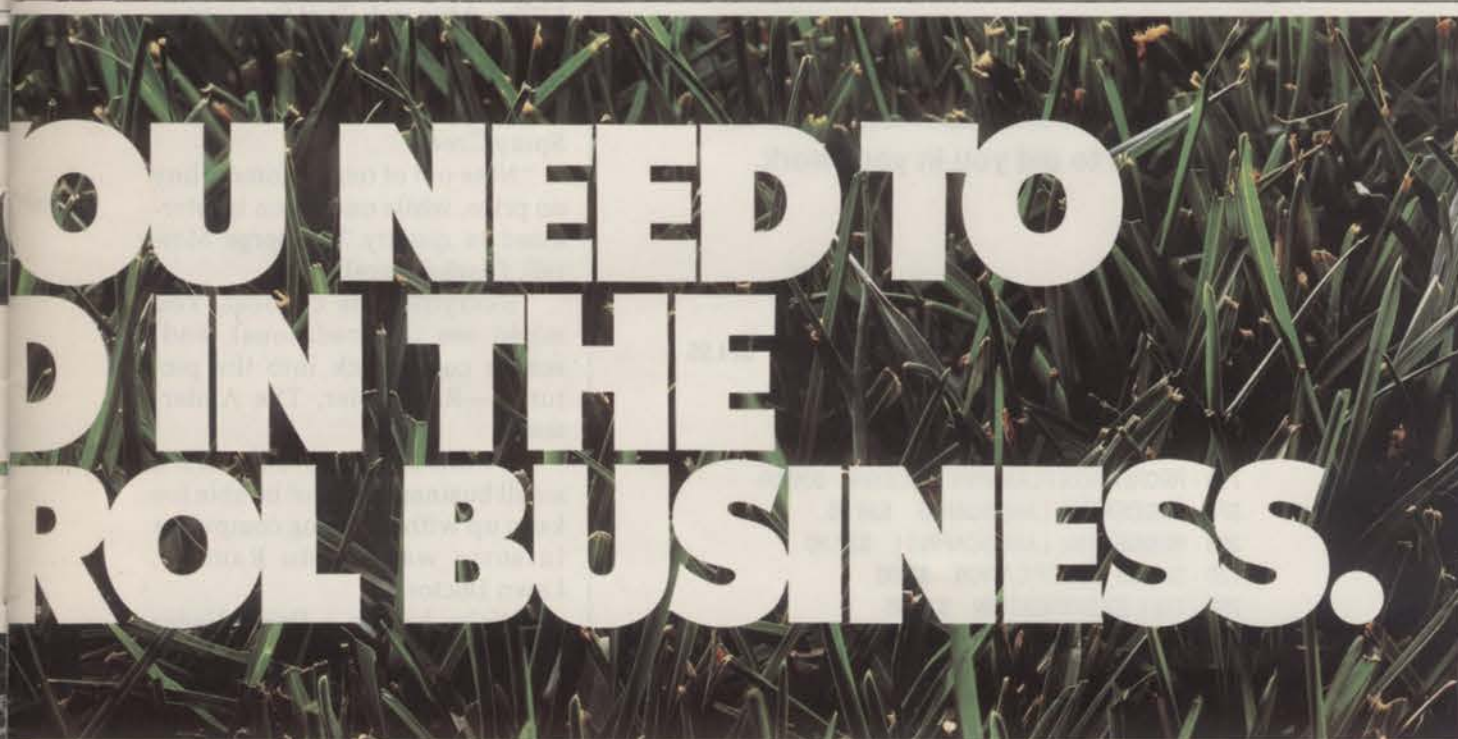
California Landscape Industry Show, March 27-29, Long Beach (CA) Convention Center. Contact: Bob Gouley, California Landscape Contractors Association, 2226 K St., Sacramento, CA, 95816. (916) 448-2522.

Later

Southeastern Turf Conference, April 15-16, Rural Development Center, Tifton, GA. Contact: Dr. Glenn Burton, Coastal Plains Experiment Station, University of Georgia, Tifton, GA, 31793. (912) 386-3353.

Fifth International Turfgrass Research Conference, June 30-July 5, Avignon, France. Contact: John F. Shoulders, Agronomy Department, VPI & SU, Blacksburg, VA, 24061. (703) 552-4518.

PLCAA Convention and Trade Show, Nov. 17-21, Curtis Hixson Convention Center, Tampa, FL. Contact: Jim Brooks, PLCAA, 1225 Johnson Ferry Rd., Suite B-220, Marietta, GA, 30067. (404) 977-5222.



3 THE RIGHT TRAINING.

Before you start offering disease control to your customers, you have to be sure your employees know how to handle the job.

We'll take care of that, too. In your *Healthy Business Package*, you'll find training aids you can use to teach your workers how to spot, identify and treat all the major turf diseases they're likely to encounter.

With the materials we provide, you can quickly and easily show your people how to apply a turf fungicide properly and keep your customers satisfied.

4 THE RIGHT FUNGICIDE.

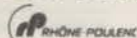
Of all the turf fungicides on the market today, CHIPCO 26019 fungicide is the best for building your business.

It controls the major turf diseases, including Leaf Spot, Red Thread Dollar Spot, Fusarium Blight and Brown Patch. So it's the only fungicide you need.

Its long-lasting residual action makes it cost-effective and lets you fit it into your existing treatment schedule... with virtually no call-backs.

It's easy to use. And toxicity is low, so you and your customers get added peace of mind.

Expand your business and improve your profitability. With the right strategy, tactics and training in our free *Healthy Business Package*. And with the right fungicide: CHIPCO 26019 turf fungicide. Rhône-Poulenc Inc., Agrochemical Division, Monmouth Junction, New Jersey 08852.



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You said it...

A diary of quotable quotes from 1984

"In the summer she wore a halter top to work, and she definitely had something to halt."—"Wayne," to "Scorch"

"Potential customers will chase you down the street waving money at you, saying, 'Spray me!'"—Mark Nuzum, Turf Wiz

"We see more and more lawn care companies going to A-B-C-D programs."—Fred Whitcomb, Rhone-Poulenc

"If I'm going to be paying dues to the PLCAA, I'm going to expect them to do something about policing the industry."—Charles Baird, Green Thumb Lawns

"We may be in trouble the day that the public finally opens their eyes and they weigh the plusses and minuses of the industry."—Rick Steinau, Greenlon Environmental Services

"Nine years ago, people didn't

even know how to mow a lawn properly."—Dana Smithlin, Foothill Grounds

"It seems the environmentalists have the time to look into every nook and cranny."—Mark Yahn, Ground Control Landscaping

"There are some people in this business who have no business being in business."—David Schubert, D&J Lawn

"One unscrupulous operator can damage the reputations dozens of honest lawn care businessmen have worked years to establish."—Bob Earley, HBJ Publications

"You literally have to reach out and take customers from other companies. That's flat out the bottom line."—Jim Shade, Perf-A-Lawn

"There's ChemLawn, and then there's everybody else."—Mike Miller, Monarch Turf Services

"I don't rest easy each night until all the trucks have come in like homing pigeons."—John Cross, Spray Green

"Nine out of ten customers buy on price, while one in ten is interested in quality."—George Morrell, Clark-Morrell

"Everything is cyclical. You might see the traditional landscaper come back into the picture."—Ron Meier, The Andersons

"Within five to seven years, a small business will not be able to keep up without using computers in some way."—Stu Ramsay, Lawn Doctor

"We're having a Darth Vader concept being painted of us."—Nate Robinson, Leisure Lawn

"You won't get professionals unless they're educated."—Jack Mattingly, Mattingly Associates

"The real key to successful lawn care is the seed."—Dr. Eliot Roberts, The Lawn Institute

"You can anticipate that—at some point—the homeowner will have an impulse to un-purchase you."—Paul Harder, Prescription Turf

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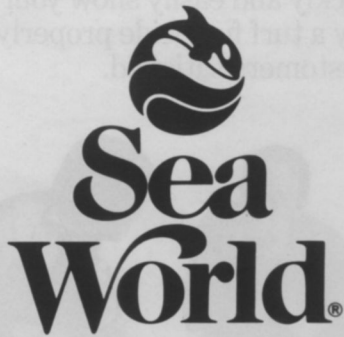
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More quotable quotes from 1984 on page 51.



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Great family fun at the most spectacular marine life parks in the world.

PSSST.



YOU'RE BEING WATCHED.

The next time you're at a trade show, seminar, convention, or wherever an important green industry story is breaking, look around. You'll see one or more of these men watching, listening and asking questions.

WHO ARE THEY?

They're the men who bring you the news, breakthroughs and market conditions of the lawn maintenance and chemical lawn industry. They're the editorial and sales management team of **LAWN CARE INDUSTRY**. Please meet (from left to right) Bob Mierow, Kevin Cooney, Ron Kempner, Bob Earley, Jerry Roche and Joe Kosempa.

Collectively, these men have over 85 years of marketing and green industry experience. Experience that gives them the necessary foresight to spot the trends, analyze market developments and write the information packed stories that have helped the industry grow to a healthy 1.8 billion dollar giant.

But then, you've come to expect that kind of vision from

these professionals. They saw the fledgling industry's need for a news and marketing forum back in 1977, and had the foresight to publish the first magazine targeted exclusively to the lawn maintenance and chemical lawn markets...

LAWN CARE INDUSTRY.

THEY KNOW THE GRASS REALLY CAN BE GREENER ON THE OTHER SIDE.

Breakthroughs happen frequently in the green industry. The company that first utilizes a new advancement to produce a greener lawn has an edge on the competition. When a new development comes on stream, you can count on the **LAWN CARE INDUSTRY** team to bring you the story fast and first with enough hands-on information for you to decide whether it will work for you. The end result? You improve your service. Your customers get a better lawn for their money, and the industry prospers.

So the next time you're at the lawn industry event, look around. Chances are we'll be looking back at you.

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Transit Hydroseeding: a survivor of the recent 'lean' 70s and 80s

Norm Gray Jr. is a survivor.

Gray, owner of Transit Hydroseeding, Mansfield, Mass., survived the lean years by totally restructuring the family business left in his hands by his father, a past president of the Associated Landscape Contractors of America. And today, Gray sees nothing but glittering success on the horizon.

Not only has the company pur-

chased a brand-new \$75,000 hydroseeder, but Norm Gray III seems to be enjoying his on-the-job training as a third-generation hydroseedsman. So things are finally falling into place for the Grays and their business.

Once upon a time, however, such was not the case.

The business was formed as a hydroseeding service in 1951. As the economy grew through the

next two decades, though, it added contract mowing/clip-ping/planting services.

Then, when the recession hit Massachusetts in the late-70s, Transit Hydroseeding came close to becoming an early casualty. Bidding on government contracts, the business had to hire employees at union wages, and that eventually resulted in deep financial troubles.

Gray, given full rein of the business's operation by a father who had become ill enough to retire, displayed acute business knowledge and foresight by cutting the full-service business back to its bread-and-butter. The money-losing ventures were unceremoniously dropped in 1982. That move resulted in a drastic turnaround, and as the 1985 season was opening, things were coming up roses.

"We streamlined the operation by casting off our labor-intensive work and eliminating an all-union work force," says Gray Jr. "It was an unfortunate set of circumstances, but Dad taking ill effectively allowed the change to take place. The business has stabilized, and I've enjoyed steady growth in our specialty, hydroseeding, since then."

Transit Hydroseeding handles jobs in the commercial, industrial and residential sectors, including

'I imagine some other people around the country might wonder how someone can make a living doing just this.'

—Norm Gray, Jr.



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landfill revegetation, erosion control, pit restoration and groundcover and wildflower seeding. The company traditionally uses fescue mixes that contain 40 to 60 percent fescue seed, the balance depending on the job.

"It's without question a unique specialty," notes Gray the owner. "I imagine some other people around the country might wonder how someone can make a living doing just this. But having had either the courage or lack of brains—I don't know which—to make the change, I look back with no regret whatsoever.

"It's a funny thing, but in the spring I look forward to things popping. Then by the fall, I can't say I'm exactly broken-hearted when the ground finally freezes. I'm very comfortable living with an occupation where Mother Nature tells me when to work and when to stop."

Because of the very nature of the seeding business, the Grays are busiest during two stretches: "April Fool's Day to the Fourth of July, and Labor Day to Thanksgiving."

Just a few months ago, the company purchased a Bowie Imperial 2500 Hydroseeder, mounted on a new tandem-axle GMC truck



Norm III and Norm Jr. with the new hydroseeder.

frame. It's only the fifth such unit in the company's 34-year history, and the Grays are proud of it.

Gray Jr., who operates his business out of an office over his wife's extremely successful children's clothing store, is an ALCA regional co-director. He says that Norm III is becoming active in both the professional organization and the business.

"Norm's been in charge of the outside operations for a year-and-a-half now, and I'm taking him to all the local ALCA functions I can. When they have a national meeting east of the Mississippi, we'll talk about him attending."

Last year was a watermark in more than one respect.

First, Gray—an avid sports fan who likes to attend as many New England Patriots games as possible—helped carry the Olympic torch on its way from Greece to Los Angeles, site of the '84 Summer Olympics.

Then, as the business year ended, Gray found that Transit Hydroseeding seeded more than 100 acres throughout New England for the first time in recent history. Most of the jobs come from former clients. "My customer file is my best sales tool," Gray says.

With the rough years behind him, Gray has a right to be optimistic now that things are going smoothly. Not surprisingly, then, he sees a very bright future for Transit.

"Based upon what I experienced over the last 15 months—I've seen a 30 percent increase in volume—it appears to me that there's going to be more work out there," says Transit's owner. "I see a lot of growth potential in revegetation of landfills and at Super Fund clean-up sites. We're assuming that a healthy economy will also bring growth.

"I'm looking forward to a steady future in this business, and I have no interest whatsoever in returning to any of the other landscape forms."

—Jerry Roche

News

Lyndhurst City Council tables lawn care issue

At presstime, the Lyndhurst (Ohio) City Council had tabled a proposed pesticide regulatory law for more study by a legislative committee.

The potential ordinance would require: chemical lawn care companies to pay a \$10 fee to register with the city; each company to acquire a list of residents who want to be notified of neighboring pesticide applications; and such

notification.

The motion to table was made by councilperson Joan Klein, who believes the ordinance as written is not strong enough. Some others voted to table so that the law director could "make sure Council is on firm legal ground."

No deadline has been set for the ordinance to return to the council floor, but one councilman promised not to let it die in committee.



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Dad, Mom and the kids

Running a family-owned business

Family-owned businesses have a separate set of problems from their non-family-owned counterparts. And some of those problems may lurk in the background without recognition, sometimes ultimately causing serious consequences.

These difficulties may be glossed over or lie unrecognized for many years—usually because they don't fully materialize for a long period of time, and don't create an apparent effect on the business until they reach catastrophic proportions.

Basically, a family-owned business is subject to all of the problems that beset small businesses—plus those that can, and often do, arise when relatives try to work together.

Many of these problems can be resolved by making better use of non-family employees, outside consultants, and key personnel. Another major issue which family businesses have to deal with is plans for succession.

Non-family talents

The president of a family business is not necessarily the person in charge. In many family-owned businesses, the elder statesman of the family becomes president or chairman of the board of directors. But the day-to-day management is left in the hands of other members of the family.

If members of the family have to be in charge of operations, they should be capable of using efficient management practices,

Operating a growing family business is not and should not be a one-person show.

capable of learning and using new management techniques, thick-skinned enough to live with family bickering, and tough enough to make business decisions stick.

One way to obtain objective control in a family-owned business is to hire outsiders to manage the day-to-day operations, when possible.

"We have 8 to 10 divisional managers, and all are non-family," says Tom Lied of Lied's Nursery, Sussex, Wisc., a second-generation company. "If you want your business to grow, it is absolutely essential to develop non-family middle management.

"Promoting only family members may be disastrous. You have to choose by ability—not relations. If a non-family member is more capable of performing a certain job, then that person should get the job over a family member."

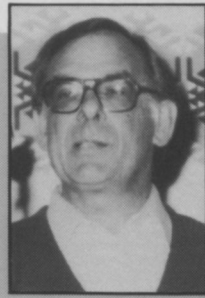
Hiring non-family managers allows the family members to spend more time in setting policies and planning for growth.

Outside consultants

Good management principles dictate that family business owners, at periodic intervals, evaluate their businesses on an objective basis.

Generally, operating a growing family business is not and should

Tom Lied



not be a one-person show. The owner must be a planner as well as a doer, must be able to anticipate problems, and must have the wisdom and the competence to select and build a management team to supplement his or her own skills.

Not many modestly-sized family businesses can afford to employ full-time competent people in each functional area of the

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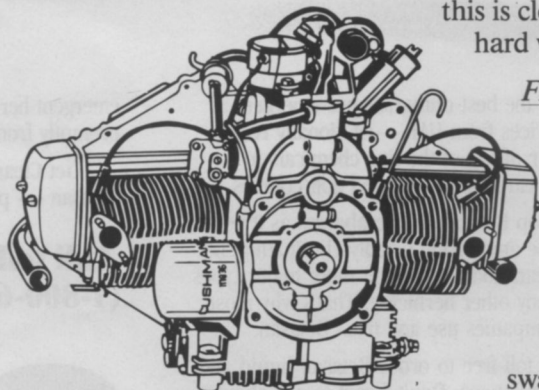
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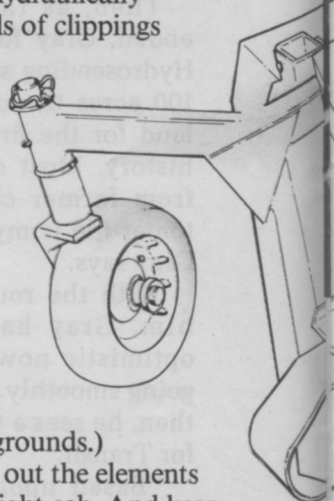
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business. But the owner might consider utilizing competent business consultants or financial management consultants.

"We call in an outside consultant about once a year," says Wally SaBell, of SaBell's Inc. (Lakewood, Colo.), a father-and-son business. "I've used consultants on a fairly regular basis for the past 20 years.

"By calling in an outside consultant you get a new outlook. This person may be able to show you where you're spending too much time or too much money and not getting a good enough return to justify the expenditure."

Wally SaBell



Key personnel

You may have very good ideas; you may obtain financial resources, plan an operation, build physical facilities, and perform many other functions; but a team of competent people is required for a business to achieve success. These people are the key

personnel in the family business.

Key personnel are those individuals needed to supervise and manage more than one task at a time—and to visualize an entire phase or even all phases of the company's operations.

"When choosing key personnel, the people involved—family or not—should be judged on merit," says SaBell. "For important positions in your business you shouldn't limit your choices to relatives. You should look for people who are capable of filling the position."

Normally, a key person is an all-around competent employee who holds a position of responsibility with the company. They are

Norm Gray, Jr.



needed to:

- Fill in gaps in the owner's knowledge or ability.
- Assure continuity in the event of the owner's disability or death.
- Provide competent management generally required by prospective purchasers of the business.
- Give advice and assistance to the owner by accepting responsibility for some phases of the business operation or by helping with policy decisions.

Plans for succession

"In the event of my untimely death, I want my company to survive," says SaBell. "This is best done with the proper insurance, an estate planning program, perhaps a buy-sell agreement, and plans for succession.

"In a father-and-son business, such as ours, an agreement has to be reached. The son must have the desire and the ability to take over.

Family business owners may have many reasons for wanting to divest themselves of company ownership.

"After all, succession has to happen. If not by my death, then by retirement."

Family business owners may have many reasons for wanting to divest themselves of company ownership, including these considerations:

- Equitable distribution of all assets to family members. The distribution—whether effected during the owner's lifetime or afterwards—can include the transfer of personal assets outside the business, as well as stock or assets within the business.
- The present and prospective competence of family members active or interested in the business. Are there family members who will manage the business in such a manner that the business will be perpetuated and the family itself benefit appropriately?
- Review of management competence within the company. The possibility might exist of reshuffling duties among management personnel to develop management potential, thus molding a cooperative, competent management team.

According to Norman Gray Jr., of Transit Seeding (Mansfield, Mass.), a second-generation com-

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Bill Thornton, Jr.

our family business to the fact that we have separate responsibilities," explains Bill Thornton Jr., of Thornton Landscape (Maineville, Ohio). "Our father runs the garden store and the hardgoods, my brother Gary handles the landscape part of the business, and I take care of the nursery wholesale division.

"We trust each other's judgment. For major decisions, we call a meeting. We also value the input and suggestions of our non-family managers.

"As far as the management of our own business, we haven't encountered any problems.

"It may not work for everyone, but it works for us." □

pany, "It's never too early to start planning for succession.

You should be thinking about an orderly line of transition and procedures for developing continuity."

Final thoughts

"I would attribute the success of

LETTERS

To the editor:

The "boo" of the year goes to Jerry Roche, editor LCI (LCI November letters, p. 54) for not printing my entire letter (short and concise as it was).

With the rebutes and comments I've been receiving, I can only attribute it to the original letter not being printed in its entirety.

We all prostitute ourselves one time and another, and I can understand why my reference to one of your advertisers wasn't used in

the context of my letter.

Tom Bontempo
L&M Lawncare
Pittsburgh, Pa.

Sorry for just excerpting the original letter. If you'll allow us to "prostitute" ourselves once more, here is the complete original, without reference to any particular company:

"Dear Mr. President: I just can not understand your marketing theory of pushing your product onto my customers, and opening their eyes to its availability! I now understand that you plan to sell it to the general public, and I refuse to be your media of education John Q Public for you as well as handing the customers over to you after they see what a good job we did as far as grub control is concerned. Why should they use a lawncare company when they can buy the same product themselves? Please remember your key market area—the professional lawn care companies."

I hope that somewhat clears things up.—JR

To the editor:

I recently received our first issue of LCI and am very pleased. Well put together, it is both stimulating and informative. Your reader inquiry card is especially appreciated.

I am just starting my company and was wondering if you could possibly direct me to some sources concerning the following subjects: liquid vs. dry, pressures and volumes, suppliers, research, and beginning bookkeeping system.

I only wish that I had received a copy of your magazine before I had purchased my equipment. Anyway, I am very pleased to subscribe now, and would recommend it to anyone who wants to build both a professional and profitable business.

David Smith
Metro Gardens
Beaverton, Ore.

We often run stories addressing the above areas of concern, including—most recently—suppliers, liquid vs. dry and research. Keep reading for information on the rest.—JR

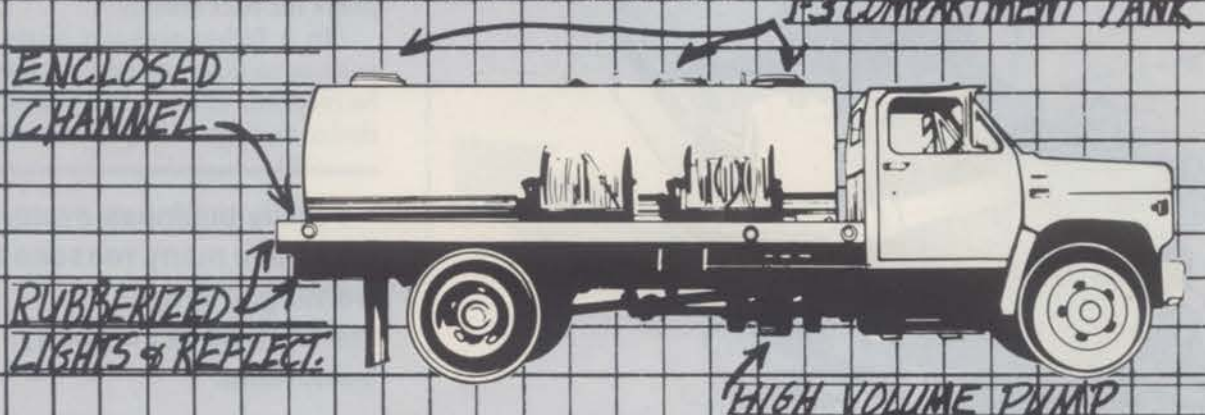
LAWN FUNNIES



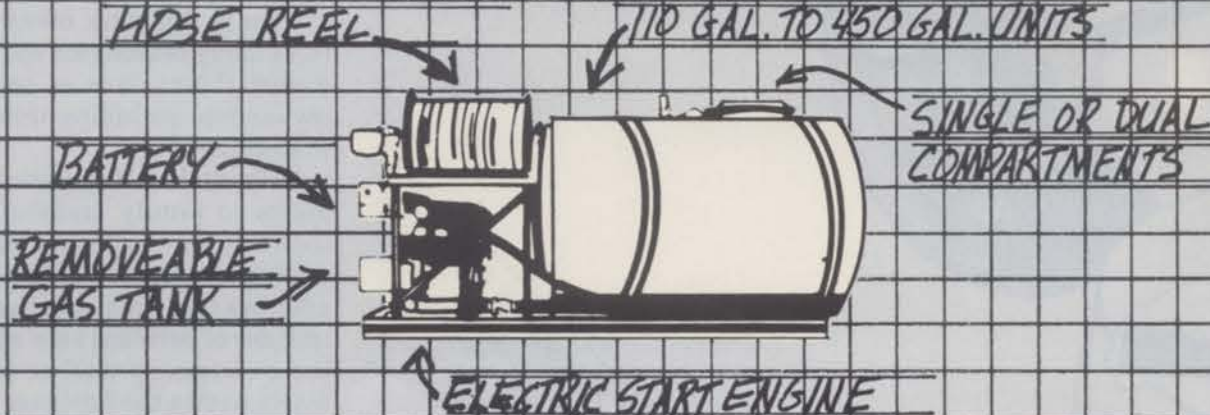
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Granular ureas found generally more volatile by OSU scientists

A study recently completed by researchers at Ohio State University revealed that, in some cases, ammonia volatilization losses for granular urea were higher than for liquid urea.

Losses ranged from 1.3 to 55 percent for granular, and from 1.5 to 26 percent for liquid in the tests.

The project was undertaken this past summer by graduate student Steve Titko and agronomists John Street and T.J. Logan, who summarized their findings at the 1984 annual meeting of the American Society of Agronomy in Las Vegas, Nev. recently.

Temperature, relative humidity, wetting and drying cycles and irrigation were evaluated for their effects on ammonia volatilization. Here are some of the conclusions:

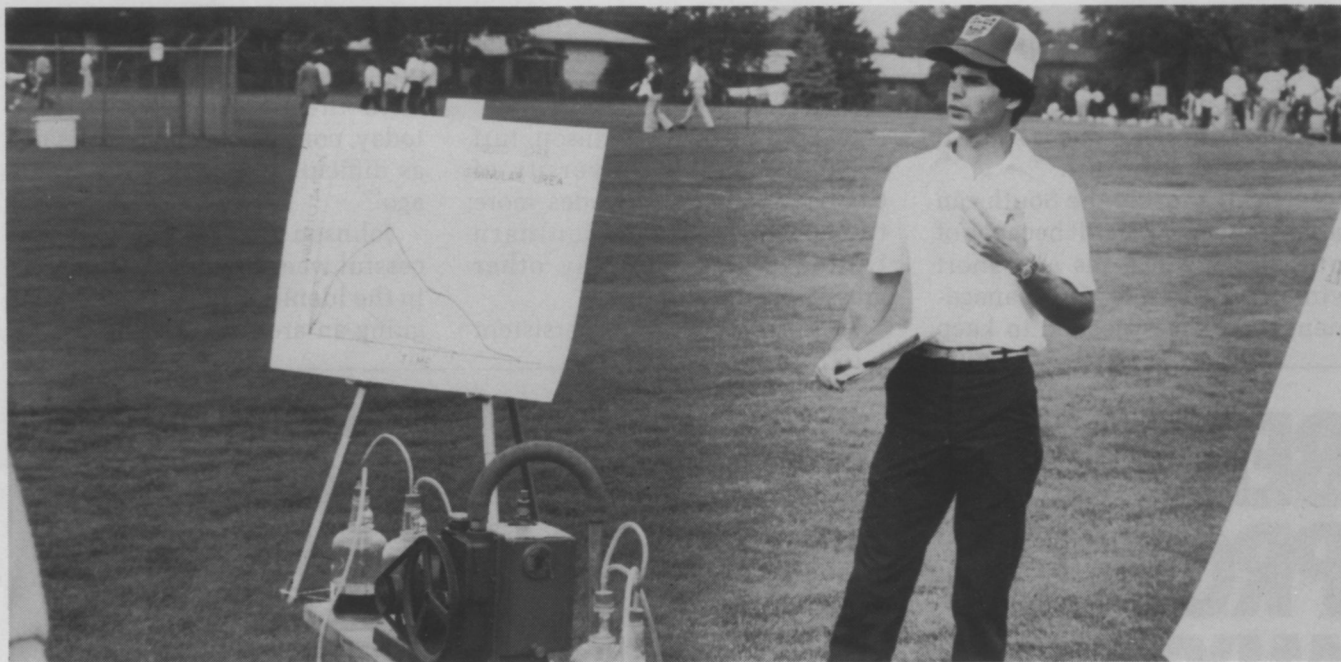
- High temperatures (32° C.) resulted in maximum volatilization losses (51 percent) for granular urea, while liquid urea lost the most ammonia at lower temperatures (22° C.).

- High relative humidity produced maximum losses for both liquid and granular urea.

- Periodic wetting and drying of the turf resulted in surges of ammonia volatilization.

- Irrigation applied after urea application reduced losses significantly for both liquid and dry urea.

"I'm very confident in what we found," notes Titko, who is now with Tru-Green in Fremont, Ind. "It's important to point out that this was just a laboratory study,



Steve Titko—formerly of Ohio State University, now with Tru-Green—shows results at the OSU field day last summer.

though. We just indicated the possibilities of what can happen by having artificial conditions that only simulated field conditions.

"The real purpose of the experiment was to find out what affects ammonia volatilization, not to apply it to field situations."

Titko did say, however, that Dr. John Allrich, a research soil chemist at ChemLawn, is conducting parallel field tests.

"He has some tentative results," Titko continued, "and he's finding similar trends. It's very important to assess the results in the field."

The results suggest that urea can be used more efficiently at cooler temperatures with irriga-

tion. Spring or fall applications of urea in temperate climates when cool temperatures and/or frequent irrigation are present, will reduce volatilization losses and

maximize efficiency of use of urea-nitrogen by turfgrass. This could reduce application rates and lower fertilizer costs, Titko said. □

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In the South

Proper weed identification key to successful turf maintenance

For turf managers, the annual battle against weeds seems never-ending. Just when the last weed disappears, another one is spotted germinating in the turf.

Managing turf in the South can be particularly difficult because of long growing seasons and short winters. A spring-to-fall management program is needed to keep

troublesome summer weeds out of turf during the warm weather season.

According to B.J. Johnson, turf specialist at the University of Georgia, crabgrass invades more turf acreage in the southern United States than any other grassy weed.

"Crabgrass is a very persistent

weed because of its reproductive abilities," he notes. "However, with the herbicides available today, controlling crabgrass is not as difficult as it was a few years ago."

Johnson says the key to a successful weed control program lies in the identification of weeds plaguing an area of turf, and appro-

appropriate treatments of herbicides to control these types of weeds. Crabgrass can be identified by the leafy clump it grows in and—unlike goosegrass—is not flattened at the base.



CRABGRASS

Johnson points out that there are many factors that affect the performance of herbicides, such as temperature, amount of rainfall, and application method, but timing of the treatment is critical in obtaining good weed control results.

"To be most effective, herbicides must be applied at the appropriate time in relation to germination or growth of the weed," he says.

Preferences

Johnson has researched pre-emergence and postemergence herbicides, and finds that both lawn care companies and golf courses prefer to use pre-emergence herbicides because they control the target weed before it starts emerging.

"In Georgia, crabgrass generally germinates by mid-March and goosegrass by mid-April," he says. "For optimum control of these grassy weeds, the herbicide should be applied one to three weeks before they germinate. Results from delayed treatments are usually poor because weeds have a chance to germinate and emerge before herbicide applications are made."

Some conclusions

By studying a number of pre-emergence herbicides for crabgrass control, Johnson concluded that Betasan and Ronstar controlled the highest percentage of the weed. The control of crabgrass was reduced slightly when treatments were applied a month before germination but drastically reduced when applied after the weed emerged.

"Since crabgrass germinations will vary at locations with different temperatures, it is important to know the germination date for optimum treatment dates," he says. "When the mean temperature reaches 55-57 degrees Fahrenheit or higher for a two-week period without a frost, crabgrass seed will usually initiate germination."

When preemergence herbicides are applied in the spring and control crabgrass effectively throughout the summer without

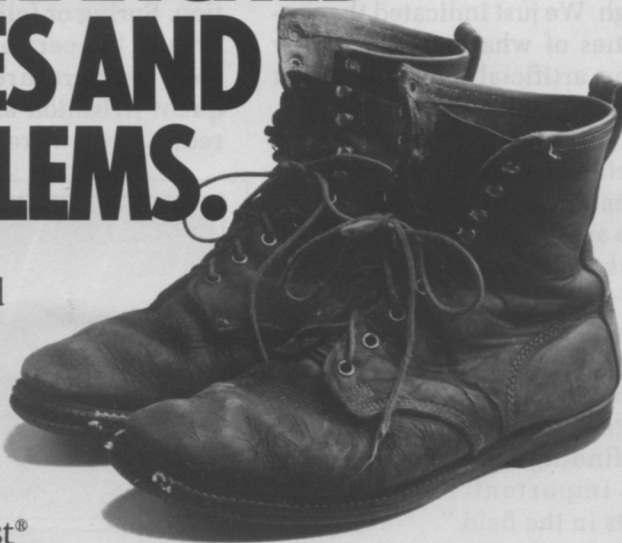
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additional treatment, this is referred to as full-season control. Economically, Johnson says, these herbicides may be cheaper than short-season herbicides which need to be reapplied two to three times.

"For full-season crabgrass control, it is important to select a chemical that will provide long-term control," he says. "I found that Betasan, Ronstar and Devrinol were the only treatments that controlled crabgrass effectively throughout the summer."

In some years, repeated Devrinol treatments were needed for full season control, Johnson points out. When treatments of



Johnson

preemergence herbicides are delayed one month or more after the normal application period, a combination of herbicides is usually necessary for effective crabgrass control.

"In Georgia, when treatments of pre-emergent herbicides were delayed until April 30, a combination of Betasan and MSMA improved crabgrass control when compared with Betasan applied alone," Johnson says. "The MSMA controls emerging crabgrass seedlings, and Betasan prevents additional weed germination."

He notes that MSMA mixtures may cause injury on warm season grasses other than bermudagrass.

Just as timing of herbicide treatment is important in the control of weeds, so is the amount of rainfall the turf receives after the application period. Large amounts of rainfall within a month's time after application directly affects the overall performance of the herbicide.

"Last year, we had poor test results with some herbicides because we received about 15 inches of rain in a short period of time," Johnson says. "Some herbicides are very persistent in the soil, like Betasan, but excessive water does cause leaching problems."

Split apps?

Johnson says some turf managers may want to consider split applications of herbicides, in March and May, so if leaching does occur after the first treatment, then the second treatment will boost weed control. Also, a second treatment of herbicide helps control crabgrass seeds that germinate in the late summer.

"For most lawn care companies, the second treatment should not be a problem since fer-

tilizer treatments are usually applied at the same time," he notes.

Possible damage

One thing turf managers should be concerned about when applying more than one treatment of a herbicide is possible damage it may cause to the turf. Treatments spaced too close together will affect the color and growth of turf.

Johnson has tested certain herbicides numerous times, and reports that Betasan has been rated as the herbicide causing the least damage to turf.

Johnson says that when a turf manager faces a situation where

his herbicide has given out in the middle of the season, he should consider coming in with a post-emergent treatment at whatever time the herbicide starts losing its effectiveness.

He adds, however, that crabgrass stops growing at the end of the summer and turf managers should not be applying post-emergent herbicides after that.

Each manager has to determine the period when weed growth stops, and develop a weed control program up to that time.

When a herbicide program has successfully reduced a crabgrass population to a few plants in a small area, a homeowner can aid

in control by removing stray plants. If this is done before the plant goes to seed, the chances of a weed problem occurring in that area will decrease.

Fall apps

Johnson has also done research with herbicides applied in the fall for control of winter weeds and how these treatments affect the growth of summer weeds the following spring.

"When Betasan was applied in September for winter weed control, crabgrass was effectively controlled throughout the following summer without any additional treatment," he says.

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NEWSMAKERS

The Nebraska Turf Foundation has taken a step forward with the appointment of a new executive director, **Don Ellerbee** of the Garey Management Organization, Hastings, Neb. Ellerbee is assisted by **Shirley Potter**, **Therese Kehoe**, and **Carmie Kimminau**.

David Minner has been named extension turfgrass specialist at the University of Missouri-Columbia. A native of Delaware, Minner received his B.S. degree from the University of Delaware, his M.S. from the University of Maryland



Beard



Hulbert

and his Ph.D. from Colorado State.

Dr. James Beard of Texas A&M University has been elected president-elect of the Crop Science

Society of America. A charter member of the organization, he previously served on the CSSA Board of Directors. Beard has degrees from Ohio State and Purdue universities. Formerly a member of the Michigan State faculty, Beard is the author of five turfgrass books.

Jeff Nolan has been appointed manager of product development and quality for the Excelawn Corp. Nolan, who has a degree in agronomy from the University of Kentucky, has been with the company since 1978.

Mike Hulbert, a former employee of Mister Lawn Care, Grand Island, N.Y., has started his own business, Turf Kare Specialist Division of TKS Inc., North Tonawanda, N.Y. Vice-president is **Lou Osmon**. TKS has completed its first full season of residential chemical lawn care.

Seed Research of Oregon Inc. has selected **Alan Van Dyke**, a recent graduate of Oregon State University, as its staff agronomist. Van Dyke, according to company president **Mike Robinson**, will



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Circle No. 124 on Reader Inquiry Card



Van Dyke



Smith

manage the research, work with seed growers and supervise warehouse operations.

The American Sod Producers Association has new officials: president **William Campbell** of Fairlawn Sod Nursery, Ontario, Canada; vice-president **Ike Thomas** of Thomas Brothers Grass, Granbury, Texas; and secretary/treasurer **Al Gardner** of A-G Sod Farms, Broomfield, Colo. New trustee is **Bob Johnson** of Emerald Turfgrass Farms, Sumner, Wash.

Bursleson Smith has assumed



Richards



Letsche



Podvia

the position of manager of educational and technical services at the National Fertilizer Solutions Association. Burleson—a native of San Antonio, Tex.—has a master's degree in soil science from Texas A&M University.

Lesco, Inc. has made three appointments/promotions. **Gregory Richards** is now product manager for turf chemicals, **Gregory Letsche** is salesman for northwest Ohio and **Harry Podvia** is lawn care Salesman of the Year. Richards was formerly mid-Atlantic sales representative following a position with Hydro

Lawn, Gaithersburg, Md. Letsche is a former assistant superintendent at Sycamore Creek Country Club, Dayton, Ohio. Podvia's territory runs from Pennsylvania to Georgia.

In addition, Lesco product development manager **Paul Morgan** received a special award for his development of the Lesco spreader and Jet-Action Deflector.

Eleven examinees have been awarded their Landscape Technicians Certificate by the California Landscape Contractors Association. They are: **Jon Alsdorf**, Heritage Landscape, Granada Hills; **David Byerly**, Evergreen Landscaping, Camarillo; **John Dounias** and **Jose Sandoval**, Kumme Landscaping, Chatsworth; **David Fleming**, Pardee & Fleming, Malibu; **Brad Fowles** and **Mitch Stuve**, Heritage Landscape, Granada Hills; **Gilbert Navarro**, Navarro Landscape, Whittier; **Mark Shirley**, PDS Enterprises, Riverside; **Ray Turano**, Green Leaf Landscape, Cupertino; and **Leonadi Ward**, A Growing Concern, La Crescenta.

The new chairman of the Board of Directors of the National Agricultural Chemicals Association is **Albert J. Costello**, executive vice-president of American Cyanamid Co. Other board officers are: vice-chairman **Carl J. Kensil** of Ciba-



Fiene



Saiia

Geigy and vice-chairman **Joseph Downey** of Dow Chemical.

Jacobsen Division of Textron has a new vice-president of manufacturing and a new director of engineering. **Clifford C. Fiene** has been named to the former post, and **Anthony J. Saiia** to the latter. Fiene was most recently production manager while Saiia had been chief engineer.

The California Landscape Contractors' women's auxiliary has awarded four scholarships totaling \$2500. Receiving \$750 scholarships were **Tom Vasquez** and **Karen Fisher**, both of California State Polytechnic, San Luis Obispo. **Robert Underwood** of Butte College and **Andretta Lopez** of the College of San Mateo each won \$500 scholarships.

The board chairman of The Fertilizer Institute has been named one of 20 agribusiness leaders to the National Commission on Agricultural Trade and Export Policy. **L.L. Jacquier** is executive vice-president of W.R. Grace & Co.

Ron Sestili of Sestili Nursery, Pittsburgh, has been elected president of the Pennsylvania Nurseryman's Association. Vice-presidents are **Theodore R. Fritzinger** and **Thomas McCloud**.

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PLCAA's new officers



Elected to offices of the Professional Lawn Care Association of America at its last convention were the following six LCOs. They are: (top row, left and right) **Bill Fischer**, president; **Jim Marria**, vice-president; (bottom row, left to right) **Keith Weidler**, secretary/treasurer; **Paul Moore**, director; **Dr. Paul Schnare**, director; **Jerry Garnett**, associate director.



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*Comments of university extension experts available on request.

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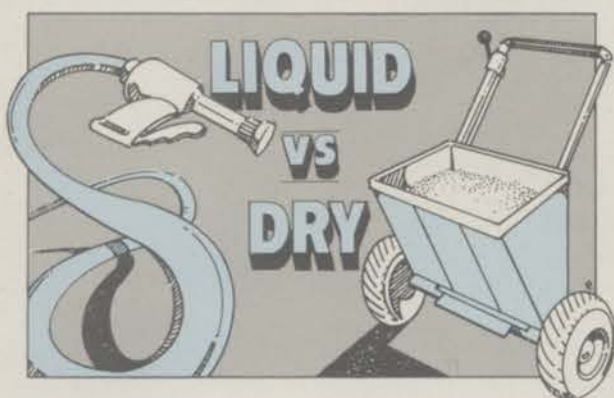
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Circle No. 138 on Reader Inquiry Card

Liquid vs. granular

Insecticides: a standoff



ED. NOTE: This is the fourth of six stories on the attributes of liquid versus granular formulations for the application of lawn care fertilizers and pesticides.

By Dr. Pat Vittum
Univ. of Massachusetts

Recently, turf managers have been wondering whether liquid or granular insecticides differ in their ability to control insect populations in turf. The purpose of this article is to discuss some of the advantages of the various formulations,

their effectiveness on insects, and some things to consider when selecting a formulation.

Table 1 summarizes some of the advantages and disadvantages of handling liquid and granular formulations.

Granulars tend to be less toxic to handle than their liquid counterparts in the concentrated form, and tend to be less subject to drift onto non-target areas, particularly on windy days.

However, granulars often cannot be applied accurately in small areas (for exam-

ple: a narrow grassy section jutting between a sidewalk and a driveway), unless the area happens to match the size of the spreader. And granular spreaders do not distribute particles evenly over rough terrain or slopes. Liquid insecticides are more likely to be applied evenly over rough terrain, although the applicator must take care to maintain a constant speed across the entire area.

Combinations

Perhaps the most notable advantage of liquid insecticides is that they can be used in combination with fertilizers, herbicides, and/or fungicides. The turf manager can keep all of the appropriate liquid materials on hand and prepare the appropriate mixture as needed.

Technology exists to produce similar combinations in granular materials, but logistically it is impossible for the formulator to anticipate, produce, and store each of the possible combinations until it is needed.

(NOTE: Never use a new mixture of insecticides until you have first tried that same blend on a small section of turf and observed no harmful effects. Often two or more chemicals will behave differently when combined than when separate, and may chemically burn or stunt the grass.)

No difference

More than 20 insecticide trials have been conducted in eastern Massachusetts over the past four years, primarily screening insecticides against Japanese beetle grubs. Several of these tests have included two or three different formulations of the same active ingredient. In every case, there has been no statistically significant difference in grub mortality between formulations.

Table 2 shows the results of one such test, representative of the many tests conducted. Both formulations of Dursban failed to reduce the grub population compared to the untreated check. Note that there was no statistically significant difference in effectiveness of either diazinon

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formulation, nor was there a difference in the isofenphos (Oftanol) or trichlorfon (Proxol, Dylox) formulations.

Table 3 shows some of the results of another test conducted recently in eastern Massachusetts. Note that some active ingredients (notably trichlorfon) tended to reduce grub populations much more rapidly than other active ingredients. However, again there was never any significant difference between formulations of the same active ingredient.

Procedures

There are several major differences, however, between the application procedures for research-oriented insecticide trials and actual field applications.

For example, all of our trials in Massachusetts include a series of small 10-foot-by-10-foot plots. We apply granular materials by hand-shaking the granules from a glass jar with a perforated lid. We apply liquids in about half a gallon of water in a watering can. In each case, we apply half the materials while moving across the plot once. Then we turn 90 degrees and apply the rest of the material. This assures very even coverage, and in fact we sometimes can see a checkerboard effect where some treated areas are lush and green while neighboring plots, treated with less effective materials, are brown and weak.

In contrast, the commercial lawn applicator is charged with applying insecticides evenly to an area which may have lots of bumps or slopes and some peculiar shapes. Regardless of the formulation being used, the applicator must calibrate his equipment before he begins the season's applications (see box on page 36).

Get training

Each person who is going to handle pesticides should be trained so that he understands the importance of even coverage with the material.

Often a drop spreader has a small hopper on the outside edge of the drop pattern. If flour (or lime) is placed in the hopper, it will trickle out and trace the route the spreader is taking. Similarly, some new dyes are available to be included in liquid sprays. These dyes clearly differentiate between treated and not yet treated areas, yet the dyes wash off or wear off within 24 hours.

Many people have blamed the resurgence of turf insect activity on the relatively recent loss of chlordane and related materials. Actually, the currently available insecticides are very good and are quite capable of controlling insect populations. However, none of the new chemicals persists in the

TABLE 1.

GRANULAR BS. LIQUID FORMULATIONS OF TURF INSECTICIDES	
GRANULAR	LIQUID
<p>ADVANTAGES: Relatively safe to handle. Not subject to drift</p> <p>DISADVANTAGES: Cannot apply accurately in small areas. Cannot apply accurately on uneven terrain. Relatively few combinations with fertilizers or fungicides.</p>	<p>DISADVANTAGES: More toxic in concentrated form. Subject to drift on windy days.</p> <p>ADVANTAGES: Can apply accurately in very small, odd shaped areas (can use to spot treat small areas). Can apply evenly over rough terrain. Can mix with fertilizers, herbicides, and/or fungicides in one application.</p>



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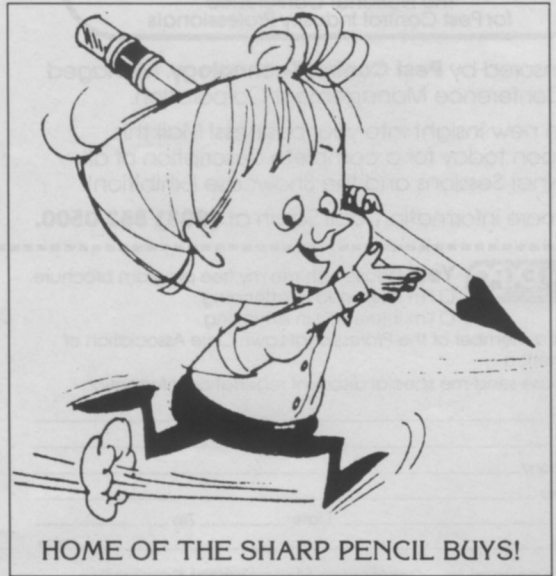


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ACTIVE INGREDIENT	TRADE NAME	FORMULATION	RATE (lb AI/A)	AVE. GRUBS PER SQ. FT. ^a	% CONTROL
Untreated	—	—	—	11.5 a	—
Diazinon	Diazinon	5G	6	4.5 b	61
Diazinon	Diazinon	2E	6	6.0 b	48
Chlorpyrifos	Dursban	2.32G	2	31.2 a	0
Chlorpyrifos	Dursban	2E	2	19.5 a	0
Isofenphos	Oftanol	5G	2	3.2 b	72
Isofenphos	Scotts IV	2G	2	1.8 b	85
Trichlorfon	Proxol	80SP	8	4.2 b	63
Trichlorfon	Dylox	4E	8	3.2 b	72

^aNumbers followed by the same letter are not significantly different from each other at the 5% level (Duncan's Multiple Range Test)

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Calibrating application equipment

According to Dr. Pat Vittum of the University of Massachusetts, here are proper application calibration techniques:

If he is using a drop spreader, the applicator should check the settings for each of the granular materials he will be using, since manufacturers sometimes change the inert carrier between seasons and such a change will effect flow rate.

Mark an area of known distance, multiply by the width of the distribution pattern of the spreader, and calculate the area (multiply). Apply a pre-measured amount of material to the area (either apply on a plastic drop cloth or rig up a catch basin to collect the dropping granules), and note how many times you walked the measured distance. Keep repeating the process, fine tuning the setting, until you are satisfied.

Distribution rates will vary with each applicator, since walking speeds vary, so have every applicator make his own set of calibrations.

Similarly, if the applicator is using liquids, be sure that the nozzles are clean and are set to deliver an even distribution pattern. Put water in the tank and treat a pre-measured area of 1000 square feet. Note how much water was used, and repeat two or three times, until you have determined how much water you really use per 1000 square feet. Then, when directions call for "so many ounces per thousand square feet" you would put that many ounces in the volume of water you measured.

environment like chlordane did.

This means that each insecticide application must be made at the right time when the target insect is in the most susceptible stage. This, in turn, means that the turf manager must identify the pest properly and know a little bit about its life cycle.

In other words, the strategy with the current chemicals is a rifle approach, where good aim is essential; whereas the shotgun approach was the norm with chlordane.

Summary

In summary, in terms of straight performance under ideal conditions, there is no significant difference in the performance of different formulations of the same active ingredient.

TABLE 3. Insecticide screening trial at The International Golf Course, Bolton, MA. Treated 10 August; sampled 17 and 30 August, 1984. (Sampling - one square foot per plot, 5 replicates.)

ACTIVE INGREDIENT	TRADE NAME	FORMULATION	RATE (lb AI/A)	7 days		20 days	
				AVE. GRUBS PER SQ. FT. ^a	% CONTROL	AVE. GRUBS PER SQ. FT.	% CONTROL
Untreated	—	—	—	35.2 ab	—	78.8	—
Isazophos	Triumph	1E	2	20.0 abc	43	16.2 bc	79
Isazophos	Triumph	2G	2	24.4 abc	31	11.6 bc	85
Isofenphos	Oftanol	5G	2	23.4 abc	34	34.8 ab	56
Isofenphos	Oftanol	1.5G	2	48.2 a	0	18.0 bc	77
Diazinon	Diazinon	5G	6	17.2 bc	51	29.2 abc	63
Diazinon	Diazinon	2E	6	11.0 bc	69	35.2 ab	55
Trichlorfon	Proxol	80SP	8	3.0 c	92	4.8 c	94
Trichlorfon	Proxol	6G	8	1.2 c	97	4.2 c	95

^aNumbers followed by the same letter are not significantly different from each other at the 5% level (Duncan's Multiple Range Test).

For example, it is the active ingredient, not the formulation, that tends to be tied up in thatch or tends to penetrate thatch more readily.

Guidelines

Here, then, are guidelines:

- The applicator must identify the pest correctly and select an insecticide which is effective against that pest.

- The applicator must use the right chemical at the right time, which involves applying the material when the insect is most susceptible to chemical control. This means, of course, that the applicator must know the life cycle of the pest.

- The applicator also must apply the chemical in the right way. For example, applications for most soil-feeding insects like white grubs must be watered in immediately so the chemical is driven through the thatch and into the soil. Also, many pesticides break down rapidly if the water pH is higher than neutral (pH 7), so the applicator should test the water and make any necessary adjustments.

- Finally, the applicator must apply the chemical at the right rate, calibrating equipment carefully and avoiding overlaps and misses.

The decision of granular versus liquid will depend partly on the equipment a turf manager has available, or on the investment he is willing to make, and on personal preference.

So, granular and liquid formulations perform equally well when applied properly, and either type of formulation can provide excellent insect control if it is the right chemical, being used at the right time of year, in the right way and at the right rate. ☐

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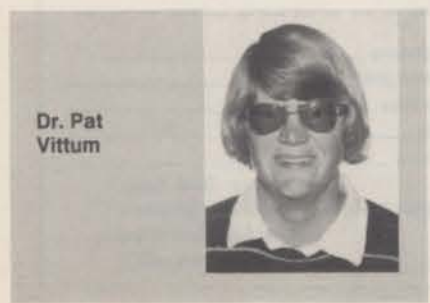
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Dr. Pat Vittum



ALCA draws 175

Bruce Wilson of Environmental Care, Calabasas, Calif. took the reins as chairman of the Landscape Management Division of ALCA at that organization's annual conference in Atlanta, Ga.

Wilson accepted the position from Jack Mattingly of Mattingly Associates, Charlotte, N.C. during the meeting, which was attended by about 175 members.

Named officers of the LMD were: Wilson; Mattingly, immediate past chairman; chairman-elect Richard Akerman of Oregon Landscape Maintenance, Tigard, Ore.; vice-chairmen David Frank of Frank Landscape, Germantown, Wisc.; Melanie Reinhold Sawka of William Reinhold Landscaping, Flat Rock, Mich.; Richard Reasoner of Dendron, San Ramon, Cal.; Tom Garber of Colorado Landscape Enterprises, Wheat Ridge, Col.; and past chairman Ron Kujawa of KEI Enterprises, Cudahy, Wisc.

The division's regional coordinators include: Carol Krogerus, North Haven Gardens, Dallas, Tex.; Brian Koribanick of Landscape Techniques, Nutley, N.J.;

(Photo identification on page 39)

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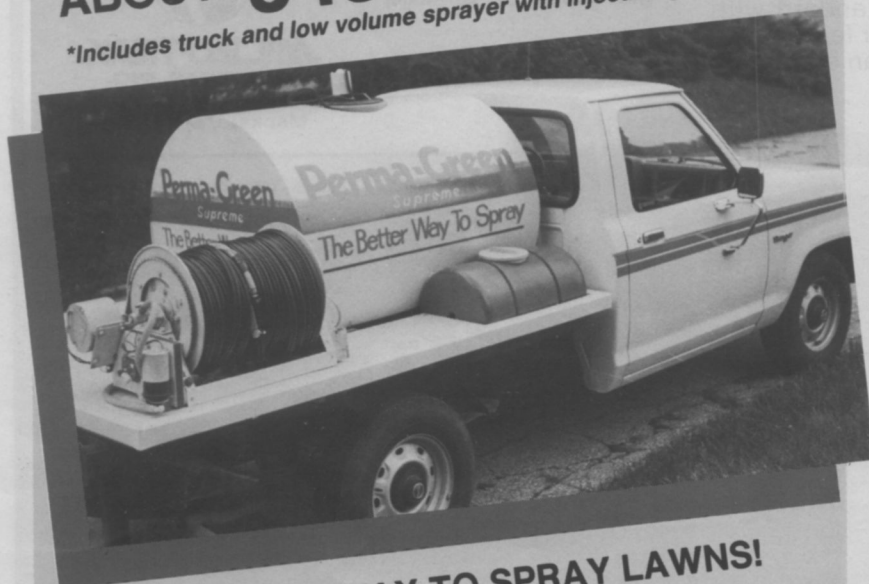
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LCI 1/85

Officers elected to serve the ALCA Landscape Management Division are shown on Page 38. They are, left to right: Bruce Wilson, David Frank, Ron Kujawa, Melanie Reinhold Sawka, Richard Reasoner, Tom Garger, Richard Akerman and Jack Mattingly. Wilson is chairman, Akerman chairman-elect, Mattingly immediate past chair and Kujawa past chair. Regional coordinators, shown on this page, are, left to right: Carol Krogerus, Brian Koribanick, Stewart Rom, Bruce McCormack, Robert Koca, Don Anderson, Pat Cullin, Bill Davids and David Marsh. For more information, see story.




Stewart Rom of Chapel Valley Landscapes, Woodbine, Md.; Bruce McCormack of Blue Ribbon Landscape Maintenance, Bothell, Wash.;

Robert Koca of Lied's Nursery, Sussex, Wisc.; Don Anderson of Green Scheme, Arvada, Col.; Pat Cullin of Gustin Gardens, Gaithersburg, Md.; Bill Davids of Clarence Davids & Sons, Blue Island, Ill.; and David Marsh of Industrial Landscape Services, San Jose, Cal.

The conference itself focused on personnel issues. Keynote speaker Richard I. Lehr of Sirote, Pirmutt, Birmingham, Ala. spoke on "Labor Relations and Personnel Issues."

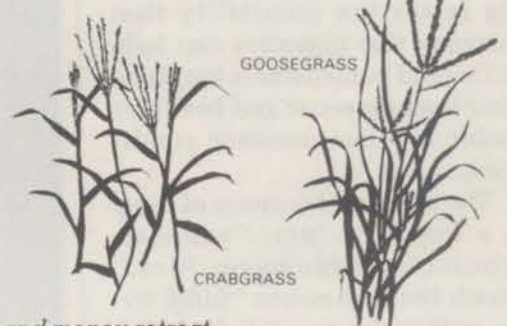
The first day's schedule was climaxed by a review of the 1983 Environmental Improvement Awards.

The second day consisted of split sessions and panels. On the final day, contractors had the opportunity to take a tour of three local landscape contracting businesses: Gibbs Landscape, Greentree and Clark-Morrell.

This month, ALCA is holding its annual convention at the Kona Surf Hotel, Kona, Hawaii. The Landscape Management Division will be joined by the Interior Landscape Division for the gala get-together. For more information, contact ALCA headquarters, 405 N. Washington St., Falls Church, VA, 22046. Phone number there is (703) 241-4004. 

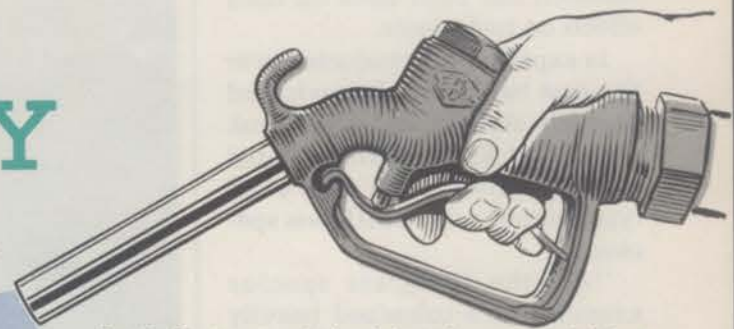
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Root-based fungi help potential for turfgrass growth

Dr. Martin Petrovic, assistant professor of turfgrass science at Cornell University, recently found that a group of fungi called "VA mycorrhiza" has a unique, symbiotic relationship with virtually all types of plants, including turfgrasses.

Petrovic discovered that these fungi take up residence in the roots of many types of lawn grasses, boosting the growth of the grasses—especially when these grasses are grown in soil poor in fertilizer and moisture.

Just how these fungi help the grass grow better remains a scientific puzzle, but the Cornell finding raises the possibility that someday this organism can help LCOs (and homeowners too) keep their lawns greener and healthier under low-maintenance conditions.

The name of this group of fungi is a tongue-twister: "vesicular-arbuscular endomycorrhiza," which literally means "fungi living within the root." Called "VA mycorrhiza" for short, these fungi have been known to scientists since the late 1800s, but little research has been done on their effects on turfgrasses.

In experiments conducted over the past two years, Petrovic and graduate student James B. Frank found that VA mycorrhiza fungi are widespread in the roots of all types of cool-season turfgrass species.

"All the turfgrass species examined are colonized heavily by this fungus, with levels ranging from a low of 58 percent to a high of 77 percent," Petrovic says. He also found that two widely used fungicides—triadimefon and benomyl—had little effect on the establishment of this fungus in grass roots.

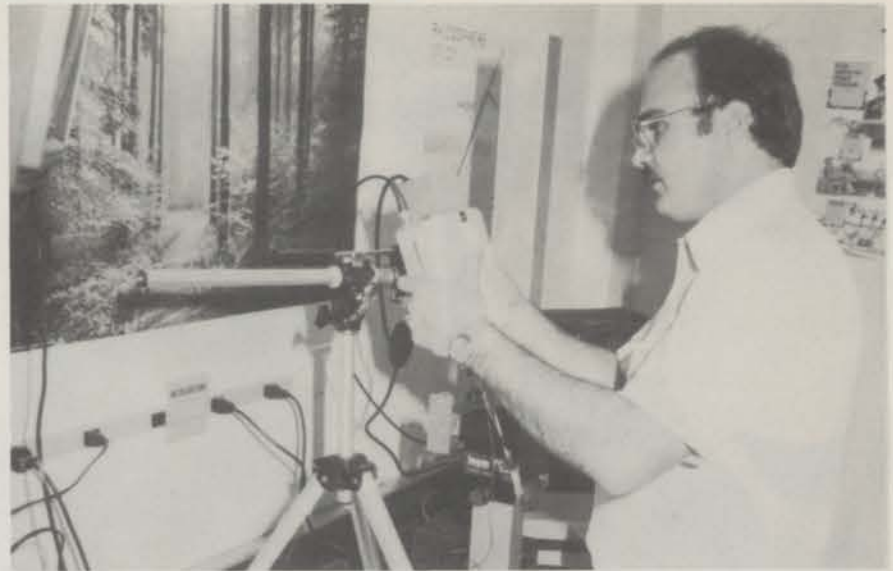
Growth stimulant

More significant, though, is the fact that the fungus in some way stimulates the growth of the grass dramatically, Petrovic says. For example, Citation perennial ryegrass, in which this fungus thrives more than other grasses, grew better by about 40 percent, even when this grass was grown in research plots extremely low in phosphorus, one of the major nutrients vital for plant growth.

Does the fungus manufacture phosphorus? Petrovic rules out that possibility, saying that the fungus does not eliminate the need to add phosphorus to the soil, because when this element is

adequate in the soil, the growth becomes even more dramatic.

"Apparently the fungus taps phosphorus and possibly other vital nutrients in the soil so efficiently that these nutrients are made readily available to the grass," Petrovic notes.



Dr. Petrovic conducting one of his Cornell projects



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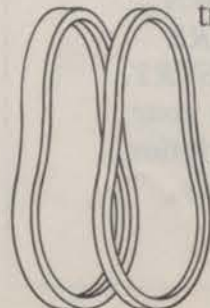
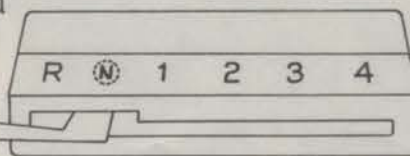
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This fungus also might be effective in tapping moisture from soil, thus enabling the grass to do well even under serious drought conditions.

Several functions

VA mycorrhiza fungi serve several important functions to plants, Petrovic explains. "Uptake of nutrients by a plant is enhanced because part of this fungus can extend as much as three inches out into the soil from the root, thus acting as an extra root hair.

"This is true for nutrients like phosphorus, zinc, sulfur, and copper," Petrovic says. "In some plants, an increase in drought tol-

erance has been associated with this fungus, which enables the plant to increase its water uptake."

Plants colonized heavily by this fungus also are less susceptible to invasion of many types of disease-causing microorganisms in the root zone, Petrovic says.

Whether this fungus produces these beneficial effects for turfgrasses is yet to be determined, but the overall effect shows up in a significant boost in growth of the grasses tested at Cornell.

Turf trends

Is this fungus going to be important in turfgrass management in

the future? Petrovic thinks so. Several maintenance trends in recent years for residential properties, he says, make the presence of this fungus important. For one thing, little phosphorus is being applied to turfgrasses today; most commercially prepared fertilizers for turfgrasses are low in phosphorus compared to nitrogen.

Another trend is that little or no topsoil remains after construction of many residential developments, thus resulting in low-phosphorus soil for lawn establishment.

"In these cases, better turfgrass growth could be realized by having VA mycorrhiza fungi in the roots of the grasses," Petrovic says.

Discussing ways to exploit the beneficial effects of this fungus, Petrovic says that new turfgrass varieties which are better adapted to the colonization of this fungus could be developed. Another possibility is to select or develop strains of this fungus that are more efficient than existing ones in boosting the growth of turfgrasses under drought and low-maintenance conditions.

More ahead

It will be several years before this novel fungus can be put to commercial use. With more research ahead, the Cornell scientist believes such a goal could be achieved because, he says, research findings made thus far are highly encouraging.

Petrovic presented a paper on his research findings at the Massachusetts Turf Conference, Springfield, Massachusetts, February 28, 1984.

News

Seedsmen congregate in Philley

The endophyte situation and labelling restrictions in various states—especially Maryland—were key points brought to the attention of the American Seed Trade Association's Lawn Seed Division recently.

The group, meeting in Philadelphia, Pa. after the ASTA general meeting, discussed the endophyte status, and learned that some seedsmen had endophyte labels. The matter was referred to the Legislative Committee, as more data is needed.

The seed label situation was covered as it pertains to Virginia, Pennsylvania, Maryland and New Jersey. Member Harry Butler said that efforts are being made to get data from Cornell University and elsewhere on production statistics.

The divisional meeting was presided over by Chairman Bill Junk. He announced that the next Lawn Seed meeting will be in Kansas City, Mo., in conjunction with the Western.

ASTA officers were elected at the general meeting. Bill Feury Jr. of The Terre Co., Clifton, N.J. took the reins from Jonathan Burpee of Burpee Seed as president.

The ASTA as a group passed two resolutions. One asked the Maryland Dept. of Agriculture to immediately begin accepting lawn seed products without the fine-textured/coarse-kinds headings. The other resolution opposed USDA regulations pertaining to federal analyses certificates.



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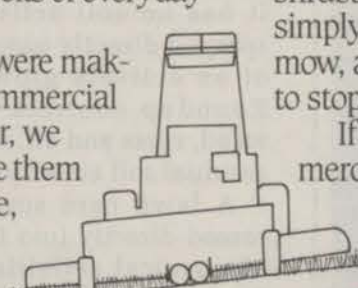
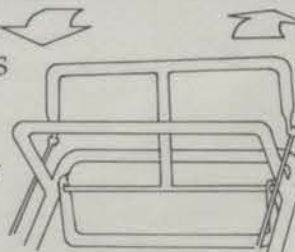
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Effectively renewing home lawns

By Thomas Larsen
Monsanto Chemical Co.

With more homeowners, golf course superintendents and grounds maintenance managers realizing the need to renovate turf, lawn care professionals face added business.

Until recently, conventional renovation, involving mechanical practices such as disking, leveling and raking, was the only effective method. Only a handful of chemicals were available, and none were completely effective.

Today, with the introduction of newer, more effective chemicals, however, conventional renovation practices are no longer the only option. Many LCOs have found chemical renovation quicker and more cost-effective than traditional mechanical methods.

Determining when renovation is necessary is the first consideration. In most cases, renovation probably should be considered whenever turf deteriorates so much that normal maintenance does not measurably improve a

lawn's health and appearance. In other cases, the need or desire to change turf variety may be the major factors in deciding to renovate.

Turf deterioration

Among the reasons why turf can deteriorate to a point where renovation is required are:

- locale and weather conditions;
- too much disease or weed infestation;
- improper turf varieties; and
- excessive thatch buildup.

Whatever the reason, a lawn care professional should first determine whether or not renovation is the better alternative. He then should examine existing options for complexity and cost. In some instances, for example, only partial renovation may be required, or else an existing problem can be solved more effectively with chemical weed control methods.

Renovation costs and the excessive time needed for producing new turf are two reasons many professionals avoid renovation. Effective turf renovation, however, actually can be less costly in terms of time and money than an alternative lawn renewal measure.

First decision

Mechanical renovation tools include cutting, disking, scraping and tilling devices. All of these can do an effective job of clearing visible vegetation. With any kind of mechanical device, however, active weed rhizomes will remain in the soil.

In addition, these tools usually serve only to move dormant seeds into new positions where they can readily germinate and infest turf later. Mechanical renovation will also disturb soil surfaces, often leaving sites mired and impassable by foot or vehicle in wet weather.

Chemicals, on the other hand, truly have become a more effective renovation tool. Traditionally, soil residuals and soil sterilants were the only available chemical options.

Today, however, with the availability of such proven chemicals as Roundup herbicide, lawn care professionals have been able to control undesirable vegetation, both above and below-ground. This makes the chemical renovation process faster and more cost-effective than conventional mechanical practices.

Roundup has gained widespread acceptance as a renovation tool because of its translocating capabilities. Also, it has no soil activity. When sprayed directly onto the leaves of an actively growing plant, Roundup controls the entire weed, roots and all, without any residual soil activity.

A lawn care specialist can reseed directly into treated turf. Mechanical activities are confined only to the work necessary for creating an ideal seedbed.

Minimum disturbance

The only mechanical device needed with chemical renovation is one for slit seeding. Similarly, in renovation projects where soil must be laid, chemical vegetation removal generally confines the



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Renovating a lawn with Roundup

need for mechanical devices just to the work necessary for leveling or rock removal. Where soil is tightly compacted, or where there is a heavy layer of thatch, however, more extensive mechanical work may be required.

Many lawn care professionals have been reluctant to recommend chemical turf renovation because of the initial high cost of the products. In addition, many feel that clients are not willing to accept the "brownout" of dead vegetation that accompanies chemical renovation.

Chemicals provide time and labor savings, though, that more than offset their initial costs. Clients also are more likely to accept the attendant "brownout" if they realize it leads to a new lawn faster. Timing and seed species or seed mixture used also affect how quickly and substantially a renovated area grows new turf.

Timing's important

Most grasses, such as bents, blues, fescues and ryes, can be sowed in either fall or spring. Sowing should always be done when temperatures rise or fall from 50 degrees. This gives the new species a chance to survive against tough weeds such as crabgrass and goosegrass.

Water is another important factor in renovation. There is usually enough water for germination and growth in the spring and fall 50-degree "windows." Most lawn care specialists, however, usually schedule renovations in fall because of heavier spring workloads.

Most LCOs also prefer fall over spring renovation since spring-applied preemergence crabgrass and broadleaf herbicides already will have dissipated from the soil.

With the exception of Tupersan, no preemergence chemical should be present in the soil when a renovation begins. If Tupersan is used, its label should be followed closely for proper application rates, timing and other important details necessary for successful renovation.

If Roundup is used, LCOs should determine that all target

plants have not been in a stress condition for at least a week before starting to spray. Target plants should have been well watered and not mowed.

Plants should not be watered, however, for six hours before and after being sprayed with Roundup, since dampening plants often reduces the effectiveness of the chemical. If it rains within two hours after application, a second application will be necessary.

To prevent the chemical from drifting onto desirable vegetation, Roundup should not be sprayed when windy conditions exist. Because the chemical does not vaporize, however, drift through

volatization is not a problem.

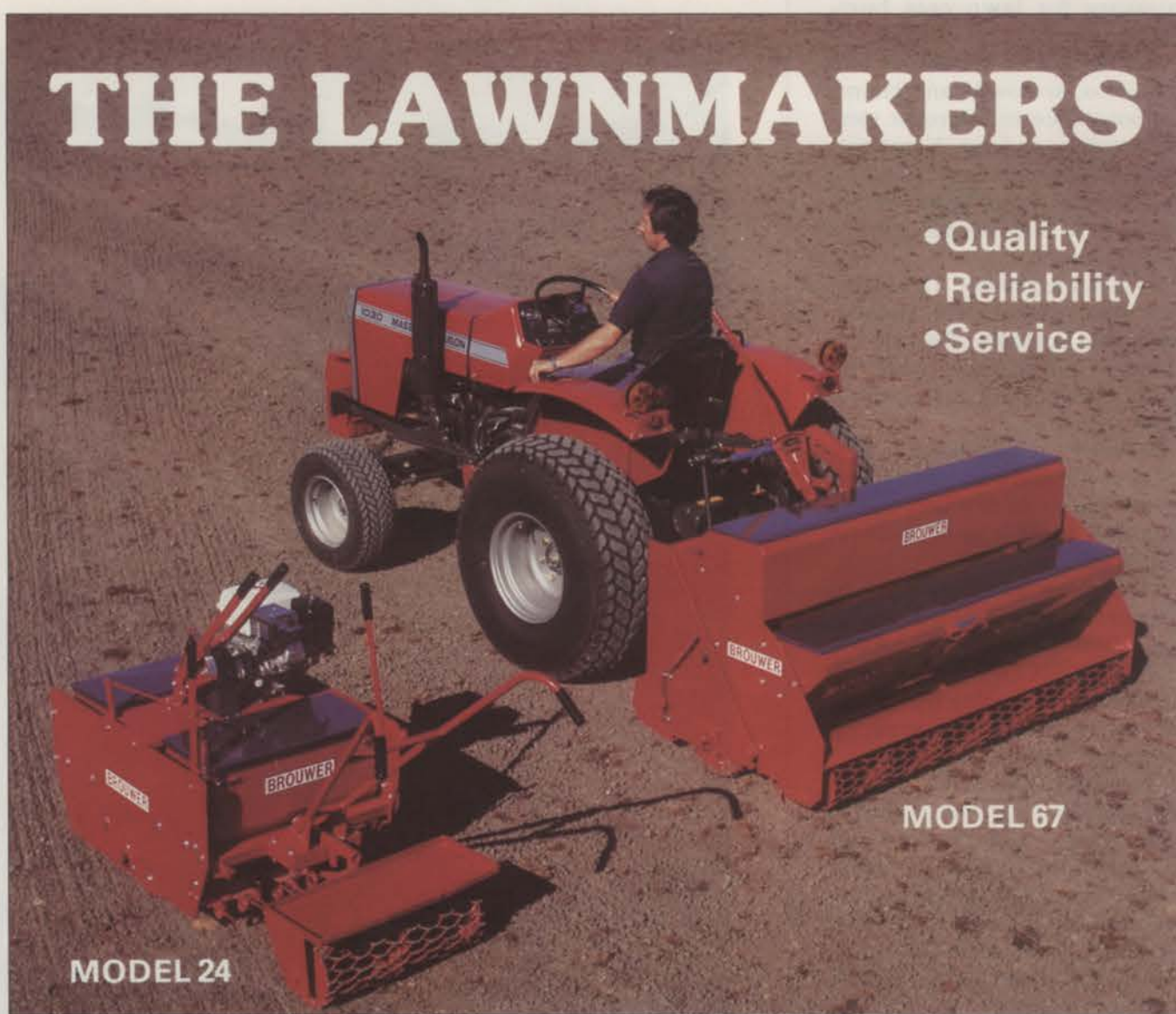
The renovated area should be closed off until the spray has dried to protect adjoining desirable vegetation. This sequestering period can take anywhere from a few minutes to several hours, depending upon temperature and humidity.

LCOs should determine the square footage of the turf to be renovated and then carefully follow label instructions. For renovations, the rate usually falls in the 1 to 2 percent range, or 2 to 4 ounces of product per gallon of water per 1,000 square feet to be treated.

Reseeding can follow a
to page 50

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Are you protected?

Liability insurance is one of those unusual business expenses where you don't know whether or not you enough, until it's too late.

Many LCOs don't read their insurance policies, assuming they're covered for anything and everything that could possibly come up. But that's rarely the case. All policies have exclusions and limitations, and there is special exposure for lawn care businesses, too.

For the use of herbicides and pesticides, accidents and claims can occur due to improper storage, handling and use. A common misconception is: "we assumed our insurance agent knew what to advise us to buy. We thought we were covered."

It's a fair argument. The insurance specialist should, indeed, know his business. But all too often you will be sold a policy the agent knows little or nothing about.

However, if you have a loss, you'll be the one who will have to pay the claim. At that point, your insurance agent is going to be no help at all.

"We have been specific in addressing the chemical question," Dave Dorward told LAWN CARE INDUSTRY. "I'm more interested in knowing that we're adequately covered for anything that might happen."

Dorward, Chief Financial Officer of Cagwin and Dorward, a lawn care and landscaping contractor in California, said: "Any major insurance carrier should ask questions themselves. It's incumbent upon them to know the operation and to cover us."

Yet, there is little recourse for you if a claim arises, and you're not protected by your policy. Even though you assumed you were covered, you would still have to prove the agent's negligence in not mentioning the need for more coverage.

Two losses

Dorward pointed out the two types of potential losses: "The two aspects are worker's compensation and public liability."

Dorward mentioned an example of a claim in which an automobile had been left with its windows rolled down. A sprinkler system went on and the upholstery got wet. The result: a suit for an all new interior.

Public liability is probably the area where most claims are filed. And the greatest possible number of different claims arise from the

public's damage or perceived damage. As Dorward told us, there are a lot of suit-happy people out there. In some cases, the small amount of income you receive doesn't compare to the

contingencies that could arise.

Workers' compensation will cover employees for accidents occurring on the job, a separate coverage than the liability policy most lawn care businesses must

buy. A requirement of law in most states, workers' compensation covers not only the medical costs, but payment for loss of work and other damages too.

So if employees are injured,



you will be covered. But this isn't to say you need less liability coverage. If an employee is injured seriously, and claims it was due to your negligence, you could be sued for more than the workers' compensation package covers.

The trend among service industry businesses is to buy more liability protection than ever before. The consumer is becoming more and more aware of remedies under the law, including damage claims. For attorneys it means good business. For the business owner, it means a need for more insurance. And a better insurance agent.

Finding a specialist

The more complicated your operation and potential liability, the greater your need for a specialist. Most insurance agents are generalists, offering a broad range of products, often from several companies. They understand how to market insurance, and probably possess a sound basic understanding of liability and the law.

But when it comes to special situations, chances are you won't find the expertise you need. It is dangerous to assume that, just because the insurance agent is knowledgeable and a specialist, he will know exactly what special liability protection you need.

John McCann, regional vice-president of the Insurance Information Institute, told us: "A critical point: it's important to determine that your insurance agent is familiar with lawn care requirements and special problems." Yet, most don't inquire, tending to give the benefit of the doubt. This could be a costly mistake.

From the insurance company's point of view, it is again dangerous to assume they have a responsibility or a desire to cover you completely. The company is motivated to sell coverage at a price that will yield profits to them. This means insuring the

lowest possible risks for the greatest possible insurance premium, within the bounds of competition.

This may be a rude awakening for some. The realization that insurance companies are not in the service industry usually comes only after a claim for benefits is rejected. The first time most businessmen read their policies with any interest is at that point: after a claim has been turned down.

In most cases, it would have been possible to buy extra insurance, usually for a relatively small premium in comparison to the size of the loss.

Other coverages

Besides public liability and worker's compensation, there is a range of other insurance needs, too often ignored by lawn care business owners.

Disability coverage is crucial to staying in business and keeping food on the table. Without it, an extended illness on the part of a sole owner or president of a small corporation, could mean total loss of a business it took years to build up.

The insurance industry refers to this situation as the 'economic death' of a businessman. You may have more than enough life insurance, but still lose everything due to a disability.

An important variation on disability coverage is overhead

Disability coverage is crucial to staying in business and keeping food on the table.

insurance. While a straight disability policy promises to pay you an amount of money as long as you're disabled, overhead coverage goes a step farther. It will pay your overhead expenses for you.

McCann made the point: "A business, every livelihood depends on continuing payments of overhead. Quite often, this insurance isn't bought when it should be. You can cover expenses, loss of income, and even the cost of relocating."

Even if your disability is a short-term one, you might not be able to recover the volume of business to which you're accustomed, sometimes for many years. McCann: "It's often very difficult to get back into business after six months, in terms of building a customer base all over again."

So why don't more business owners carry overhead or disability insurance? "Many don't know this coverage is available," McCann explained. "More often, they're not aware of its impor

to page 46

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As with any insecticide or herbicide, always read and follow label instructions. ©1984 Union Carbide Agricultural Products Company, Inc.

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TOOLS, TIPS & TECHNIQUES

The unseen killer

Desiccation damages or kills more grass than any other winter problem, according to the Missouri Valley Turfgrass Association. When the air warms and grass tops begin to grow while the soil is still cold, the roots can't take up enough water to make up for the water lost by the tops. The longer and stronger the wind blows, the more acute the problem, as wind removes water from leaf surfaces.

W.M. Lewis of North Carolina State Univer-

sity has these recommendations if desiccation occurs:

"Don't push grass too fast. Don't fertilize heavily. Roots and crowns can't function rapidly enough to keep up with the fast-growing tops. Further damage or death of roots can occur.

"Strengthen such areas slowly during the proper season (hot weather for warm-season grasses and fall and early winter for cool-season grasses)."

Liability

from page 45
tance."

Insurance is protection against unknown and unexpected occurrences. It's a sound move to research and determine you have enough of the right kinds of coverage, and a gamble to put it off.

McCann summarized the point well:

"A common complaint is that the agent didn't mention a particular type of insurance that you should have had. But the bottom line is the same: if you have a loss and you don't have insurance, you lose out."

—Michael Thomsett

Renovation

from page 43

Roundup treatment immediately, but waiting seven days is usually best. This allows the chemical to translocate throughout treated plants so they won't compete with the new, desirable seed. If mechanical work such as dethatching or core aerifying also is needed, it too should be delayed for at least seven days after spraying.

When thatch is a major problem, as much as possible should be removed to ensure solid contact between seed and soil. Vertical mowers and power rakes are excellent for removing thatch. Dethatching should be done after Roundup has taken effect, but before reseeding.

The thickness of the new lawn and the ability of the newly-seeded species to compete with undesirable grasses and broadleaves will also depend on the rate at which seed is applied and the application method used.

Many tests have shown that two passes with a slit seeder, so that sowing is "diamond patterned," provides ideal coverage. This results in both a thick stand of desired grass and reduces opportunities for competitors to survive.

Any undesirable grasses or broadleaves emerging in the new lawn or turf can be controlled with an application of a postemergence herbicide, normally part of the lawn care professional's summer program. The new lawn should be in ideal condition by the time that program begins.

While both mechanical and chemical turf renovation can result in a renewed lawn or turf, cost and time benefits are making chemicals more attractive to lawn care professionals.

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LAWN CARE INDUSTRY.



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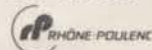
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If you'd like to find a simpler, safer way to keep weeds under control, find out more about

the pre-emergence herbicide that covers the landscape: CHIPCO RONSTAR herbicide.

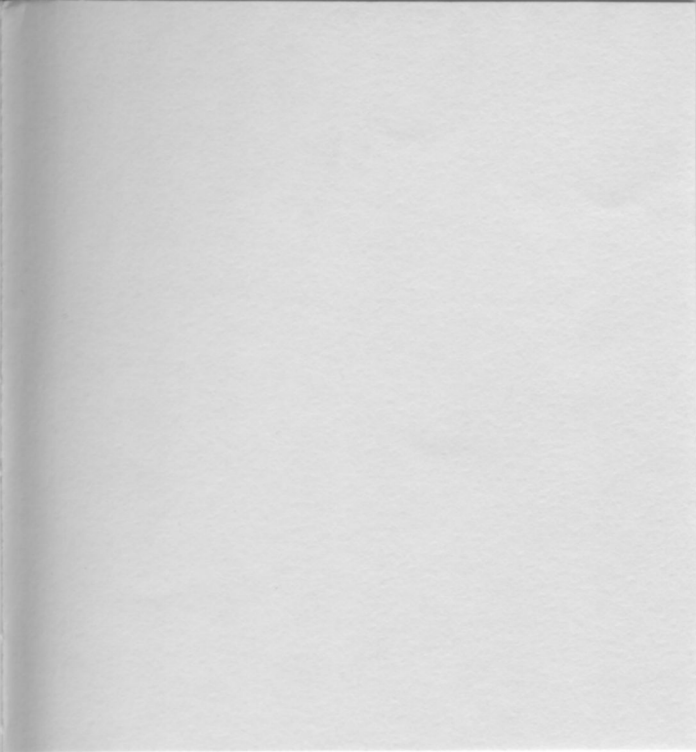
See your dealer, or write: Rhône-Poulenc Inc., Agrochemical Division, Monmouth Junction, NJ 08852.



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SPREAD THE WORD.**

Please read the label carefully, and use only as directed.

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Harder



Fawcett



Evans



Hassey



Green



Autrey



Anderson



Robinson

Stauffer plots publicity


from page 1

● "Tips for Rooting out Crabgrass" and

● "Lawn Chemicals: Safer Than You Think"

Additional releases deal with weed and insect problems of home lawns, and benefits derived from a well-kept lawn. Among the people quoted in the releases are Jim Brooks, executive director of the PLCAA, and Dr. Eliot Roberts, executive director of The Lawn Institute.

"The big job of submitting all of this information to the media—and doing so in such a way to help your business—will be handled exclusively by Stauffer and the PLCAA," Bushman noted. "You don't have to do anything. We hope you will want to be involved. It will make the program that much better."

Title of the press kit to be distributed to more than 800 news outlets is "The Case for Professional Lawn Care." 

LCOs like 1985



Parmley

from page 1

year," notes Hassey of the jump from carpet cleaning to lawn care.

"We exceeded our expectations, and we've seen things here (the PLCAA show) that have really impressed us," adds Green.

"We're looking to a great 1985," Hassey concludes.

Things went well down south, too—and appear to be locking up for '85.

"It was a heck of a year, volume-wise," notes Vern Autrey of the Tree Lawn Corp., El Paso, Tex. "The 25 percent increase was our biggest in five years.

"The country is coming out of the recession, and people are doing things they wouldn't normally do—like big renovation jobs."

Autrey expects business to jump nearly 25 percent more in 1985, about half the increase expected by Craig Anderson of Fertilawn, Bloomington, Minn.

"We're a rapidly-growing company," says Anderson, "and we're expecting another very good year—about a 50 to 75 percent growth on top of a 10,000-account base."

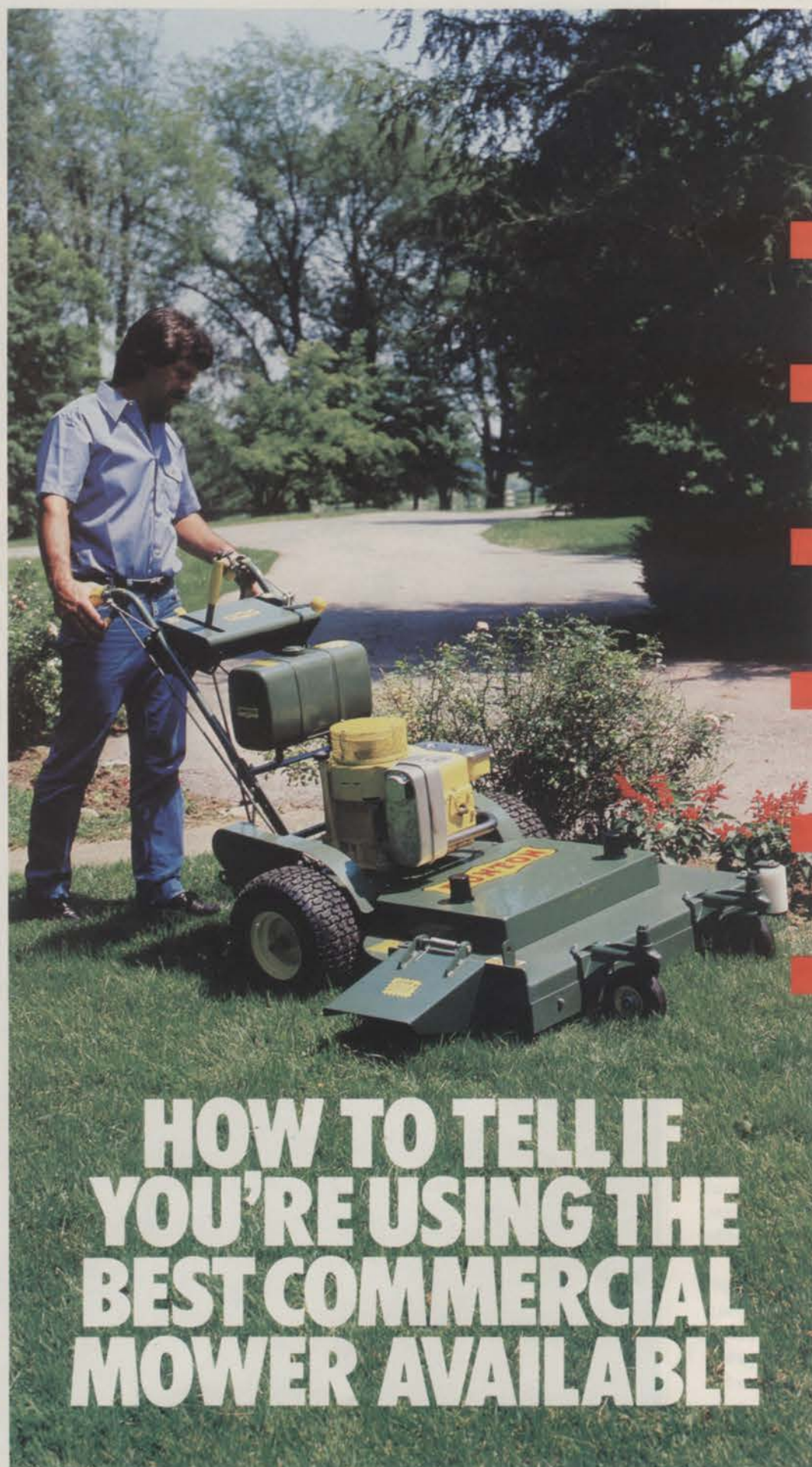
Nate Robinson of Leisure Lawns, Dayton, Ohio, is guarded in his optimism.

"1984 was excellent: we did what we wanted to do," he notes. "But, by the very nature of business, that sometimes isn't good enough. We'd like to be able to surpass our expectations."

Bob Parmley sees industry growth through diversification.

"We're doing winter lawn mower service," says Parmley of Tempo 21, Wheeling, Ill. "The biggest problem with that is educating the customer.

"So, I'm encouraged, looking ahead. I don't see the growth we had last year or five years ago, but I do see growth."



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Texas Tech studying three grasses to help homeowners save water

A three-year study is in place at Texas Tech University examining the use of buffalo, common bermuda and bahia grasses as alternative urban turf for water conservation, according to landscape architecture professor Garrett Gill.

"We know all three are among the most efficient grasses," Gill says. "They are drought tolerant, and don't require much maintenance or fertilizer.

"We are trying to determine the minimum acceptable limits of maintenance possible and still have appeal to urban homeowners."

Results of the study are expected to make an impact on the lawn care industry.

The project involves 16 test plots, measuring 10 feet by 20 feet. Four are planted in bermudagrass, four in Comanche buffalograss, four in Texoka buffalograss and four in Argentine bahiagrass.

They are being maintained on one-half inch of water per month, and one pound of actual nitrogen per 1,000 square feet per growing month. The plots are mowed as required to maintain an acceptable cut level.

In contrast, typical residential turfs in the South are hybrid bermuda requiring higher degrees of maintenance: much more water, fertilizer and greater mowing frequency. The hybrid bermudas also are generally less disease resistant, Gill says.

"With the three grasses we're studying, what the homeowner would see is a green turf, but one not as lush as the hybrids," Gill says. "We're maintaining the test plots on the verge of going dormant or brown, but the grasses can be green if a person wants them to be."

Except for the bahia, the bermuda and buffalo would be acceptable turfs in areas that have cold winters. Gill notes that the bahia is a coastal grass that would be suitable for areas south of San Antonio, Tex. and from Corpus Christi, Tex. around the Gulf of Mexico to southern Florida.

Bahia is quick-growing, but not cold tolerant, and can withstand temperatures down to only about 15 degrees. Last year, for instance, about 60 percent of the test bahia was killed by the cold.

"The bahia would be acceptable in some areas as an erosion cover crop rather than a lawn turf, kept until the dominant grass desired has been established," Gill observes.

He adds that the common bermuda could be maintained as a lush grass if it is kept at a higher

maintenance level. It is typically used in golf courses, parks, cemeteries or any other areas considered low- or no-maintenance.

"If the bermuda appears brown or weedy, it is not being maintained as a lawn turf," Gill says.


Buffalo is a transitional, native grass found north of the Lubbock, Tex. area and in the midwestern states. The main grass used in pioneer sodhouses, buffalo is a

tight-fitting grass with roots that can go way down into the ground. But it is slow to establish, and not competitive with weeds.

With common bermuda, a homeowner will have a very competitive grass that will yield an acceptable lawn in two to four months, compared to one to one-and-a-half years with buffalo.

"After the grasses have been established, you don't have to

water them very often if you didn't want a green turf," Gill says. "The grasses will go into summer dormancy and turn brown, but they'll come right back after the first rain."

The project, according to Gill, should illustrate that homeowners can obtain an acceptable turf requiring much less supplemental watering and maintenance by using water-conserving turfs. 



You said it...

A diary of quotable quotes from 1984

"We shall continue to be concerned first for our people."—Jack Van Fossen, ChemLawn

"There's more mythology and superstition about pesticides than anything in our culture."—Dr. Frank Dost, Oregon State University

"I'd like a strong, healthy economy so the customer will have confidence in the future."—

Robert Parmley, Tempo 21

"It is more important to retain a customer than to recruit a new one."—Jerry Faulring, Hydro Lawn

"Anti-pesticide activists ought to be put on notice that the time is fast-ending when they can run amok with misinformation, half-truths and headline-hunting."—David Dietz, Pesticide Public Pol-

icy Foundation

"A lot of people thought there was a slowdown the last few years, but if there was one, I didn't recognize it."—Allen Haws, Mobay Chemical

"There's a terrible storm coming, I see it. It's going to take us all and put us in the dumpster if we don't do something."—John Kenney, Turf Doctor.

"There's not enough time to do everything I feel should be done."—Jim Brooks, PLCAA

"You have to know when to talk about lawns and when not to talk about the Chicago Cubs."—Bob Parmley, Tempo 21

"Don't let the customer snow you."—Allen Duey, Jay-Lan

"Before you've attained customer satisfaction, you can't even think about trying to make a profit."—Jack Robertson, Lawn Medic

"Telemarketing is here to stay."—J. Martin Erbaugh, Lawnmark Associates

"The biggest problem with selling the service in California is that nobody knows what it is."—George Meeley, Chem-Turf

"Do you want to grow quality turf, or do you just want to grow green grass?"—Dr. John Proctor, Mobay Chemical

"The strong union-free track record of the industry is by no means assured to continue."—Richard I. Lehr

"The homeowner is the target, and service is the key."—Bill Fischer, Spring Green

"Preventative programs for thatch reduction should be built into every turfgrass management program."—Dr. John Hall III, VPI-SU

"We insist that our workers go to the local community college and take courses in soils, horticulture, irrigation and pesticides."—Richard Akerman, Oregon Landscape Maintenance

"In our competitive haste, are we remembering the small things?"—Peter Connelly, Hydro Lawn Spray

"Our industry's number one problem is that it can't find qualified people."—Dave Pincus, North Haven Gardens

"One of our major challenges is to figure out how to communicate with the general public, and translate some of our technical information to a level that people can comprehend."—Terry Witt, Dow Chemical

"In our society, people have tried to use chemicals as a scapegoat."—Mark Beliczky, ChemLawn

"While Saturday is not a great production day, it's a great day to chat with the customers, find out what they want and talk with their neighbors."—Brian Swingle, Nice N' Green

"We probably know more about the environment and our effects on the environment than do those people on the other side."—Kenney

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PRODUCTS

Computer program perfect for turf

The Lawn Care Business System (LCBS) by Rainbow Computer Systems handles everything from customer billing and account statuses to service route scheduling and the identification of new markets.

The company was formed by Donald Mayle, a computer expert from New Jersey, and Dennis Jones, a lawn care expert from Texas, in 1982. The company now provides for a variety of lawn care companies, including the largest

franchised lawn care company in the world.

Along with designing systems, Rainbow Computer Systems also provides custom programming, business management consulting and training.

Circle No. 201 on Reader Inquiry Card

Fixed-line trimmer head added to line

Shindiawa has added a fixed-line trimmer head to its assortment of trimmer and brush cutter accessories.



The metal head fits any unit in Shindiawa's line of seven models. It is set up to accept either one or two strands of cutting line, creating two to four cutting edges up to .13 inches in diameter.

The fixed-line trimmer head is a simple alternative to trimmer heads that accept continuous loops of line, and is popular in many areas among rental dealers and professional landscapers.

Circle No. 202 on Reader Inquiry Card

New trim roller increases life

An optional trim roller is now avail-



able on all 1985 model commercial rotary mowers from Bunton.

Manufactured from polyethylene, the trim roller is particularly suited for use with self-propelled models used in heavy trimming applications. It is especially effective around buildings.

The roller is available on mower sizes from 24- to 61-inch cutting widths.

Circle No. 203 on Reader Inquiry Card

Lawn insecticide kills grubs fast

Results of university and private tests during 1983 indicate that Triumph, from Ciba-Geigy, penetrates thatch quickly to provide fast-action residual control of grubs, cutworms and other turf pests.

"In our tests on a Syracuse golf course, Triumph had the most rapid action in the control of mixed populations of European chafer and Japanese beetle larvae in comparison with five other compounds," says Dr. Paul Baker of the Department of Entomology at the New York State Agricultural Experiment Station. "By the second week following treatment, Triumph had achieved 92 percent control of grubs."

Ciba-Geigy hopes to have Triumph registered in time for the 1985 use season.

Circle No. 204 on Reader Inquiry Card

Aerator boasts brand new design

The Ride-Aire II riding aerator will be on the 1985 lawn care market, according to its manufacturer, Ryan-OMC/Lincoln. The new Ride-Aire II aerates up to

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GREENSKEEPER 20-4-10 40% Org. for Fairways
GREENSKEEPER 20-8-8 50% Org.
GREENSKEEPER 10-6-4 50% Org.

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COUNTRY CLUB 19-4-9 with RONSTAR®
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LEBANON "PRO" 32-3-8 with 1.5% OFTANOL®

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GREENSKEEPER DURSBAN® 2.32G
LEBANON OFTANOL® 1.5G
LEBANON BETASAN® 7G

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JANUARY 1985

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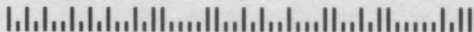
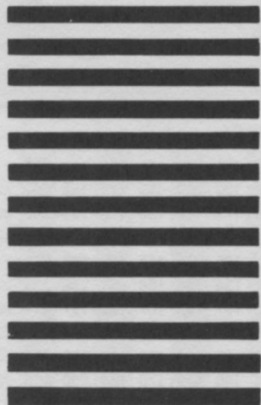
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Circle No. 205 on Reader Inquiry Card

Computer system now perfected

The Slice Computer System, pioneered and perfected over the last six years, is ideal—and exclusively for the landscape contracting industry.

The Slice System, from Thornton Computer Management Systems, is a true multi-user, multi-tasking data-based management system that is educated in English. It can perform more than 60 functions in estimating, job control, accounting and information retrieval.

"And we come with the system," says Gary Thornton. "You get our experience, both as systems designers and landscape contractors."

Circle No. 206 on Reader Inquiry Card

First cordless solar utility sprayer

Broyhill has introduced the world's first cordless solar utility sprayer line. The sprayers can operate two to four hours without recharging, or all day with an exclusive remote "intermittent pump operation."

Units come with 12 feet of hose and an adjustable ConeJet tip



spray gun. They are equipped with a standard 12-volt chemically-resistant viton diaphragm pump (two to seven amps) and a 12-volt rechargeable battery. Normal operation is at approximately 1.5 gpm at 25 psi.

Units available are: 16-inch wide, 10 gallon spray gun; 27-inch wide, 12 gallon three-wheeler; and 20-gallon three-wheeler.

Circle No. 207 on Reader Inquiry Card

Circle No. 113 on Reader Inquiry Card →

Tool straightens mower crankshafts

A new tool for straightening the crankshafts of lawnmower engines is being marketed by David Gasmire, who has applied for a patent.

The tool consists of a bending bar, screw, equilizer bar, toggle swivel pad and detailed instructions.

It allows straightening of crankshafts in less time, by not having to: remove the crankshaft, remove the motor from the deck, drain oil and disconnect cables.

The tool will straighten most crankshafts within 15 minutes,



with few exceptions.

Total time to straighten crankshaft, replace key in flywheel and sharpen and balance the blade is "usually under 30 minutes," Gasmire says.

Circle No. 208 on Reader Inquiry Card

Ground cover needs less water

Turfmat, a new ground cover from Modern Turf Products, is an alternative to sodding and seeding. Turfmat combines grass seed, starter fertilizer and a finely-textured straw mulch bonded together by a water-soluble adhesive.

Seed mixtures match the specific growing conditions of individual geographic areas. Turfmat can control hillside erosion, patch dead grass areas and grow in difficult environments.

Other advantages are: reduction of water needs for establish-



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*Choose from five models, diesel and gasoline, with three-wheel or four-wheel configurations and a variety of deck sizes.

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ment, provision of uniform seed distribution, easy cutting to fit shapes, and lightweight biodegradable form.

Turfmat is available in convenient roll packaging of 2x25 or 4x25 feet.

Circle No. 209 on Reader Inquiry Card

Landscape estimate software available

Two software packages from Landscape Management Systems have been put on the lawn care market for landscape irrigation and maintenance contractors, and nurserymen. They are called the Estimator and the Bookkeeper.

The software operates on many types of computers, including IBM PC, Xerox 820, Radio Shack 2000, Corona, Compaq, etc.

The Estimator categorizes job items in 10 groups: trees, shrubs, broadleaf evergreen, coniferous evergreen, groundcover, finish items, pipe and trenches, valves and controllers, heads and fittings and maintenance items.

The Bookkeeper has such functions as general ledger, accounts payable, accounts receivable, payroll and retail sales.

Circle No. 210 on Reader Inquiry Card

Backpack blower is more compact

The TPB-450 backpack blower from Tanaka has a newly restyled fuel tank to make the unit more compact and easier to store.

The 43cc blower is especially suited to LCOs for clearing areas



such as sidewalks, parking lots, etc.

The unit has an air volume of 530 cubic feet per minute and air velocity of 214 mph. The electronic ignition carries a five-year warranty.

Circle No. 211 on Reader Inquiry Card

MONEYWISE

Five years ago

Stanley Weber, general manager of Lawn-A-Mat, called the spring influx of amateur lawn "experts" a threat to industry credibility. "Newly hatched lawn care 'experts'...will suddenly appear in most areas, stimulated by inflation, general economic uncertainty and the anticipated recession," Weber said.

Twenty-eight lawn care companies were making more than \$1 million per year...Rain Bird Sprinkler Mfg. opened a facility in Tampa, Fla.

Last year

LCI reported that president John Kenney warned of government regulation at the PLCAA convention: "The storm is going to take us all and put us in the dumpster if we don't do something. We have to be the magnet to attract people into our fold. You ain't seen nothing yet."

Jerry Faulring, Ron Kujawa and John Street were named industry advisors to LCI...B.J. Lavoie was named executive director of the National Lawn-care Institute.



Automobiles and taxes

The U.S. Congress has changed eligibility rules for business automobile deductions on your 1984 Internal Revenue Service tax reports.

Now, taxpayers must demonstrate that the vehicle (or, in a larger sense, property) is used primarily for business purposes to claim a business deduction.

To that end, the I.R.S. has published proposed rules establishing the types of records that must be kept, including suggesting that

"the taxpayer shall make a separate entry in the log, diary, journal or other similar record for each use of the listed property."

Each entry, the I.R.S. recommends, shall specify:

- the date of the use of the property;
- the name of the user of the property;
- the number of miles or the amount of time that the property was used; and
- the purpose of the use of the property.



Diesel tractor is added to line

Designated the 1822D, a new Grasshopper tractor is powered by a 16.5 hp, three-cylinder, water-cooled Kubota diesel engine.

The 1822D features the same compact size, out-front deck and full control maneuverability of the gas tractors, Grasshopper claims—plus increased fuel efficiency and added life. Other features are an electric PTO clutch and a control console.

The diesel will accept all three mower decks: 44, 52 and 61 inches, plus a snowthrower, dozer blade, Sweepster and the Quik-D-Tatch grasscatcher.

Circle No. 212 on Reader Inquiry Card

Quality fertilizer high in potassium

A new high-potassium fertilizer from Scotts ProTurf Div. is formulated to help correct soil potassium levels and condition turf to tolerate stress.



Analysis of the product is 16-0-30.

The High K Fertilizer also supplies a controlled, light nitrogen feeding, producing a moderate level of greening. It is specially designed for use with a rotary spreader. The product consists of no chloride-containing salts, but sufficient sulfur to correct deficiencies.

High K Fertilizer improves tolerance of drought, temperature variations and wear.

One 36-pound bag will cover approximately 11,000 square feet at normal rates.

Circle No. 213 on Reader Inquiry Card

Lawn Blanket helps turfseed growth

The DuPont Lawn and Garden Blanket, due out this spring, speeds growth of new grass by holding in warmth and moisture for faster germination.

The blanket will assist lawn seeding by increasing soil temperature, which also means greater root length and greener, healthier grass. It can help reduce soil erosion, seed washaway and frost damage, and discourage insects and animals.

Circle No. 214 on Reader Inquiry Card



Crabgrass and spurge won't see the light of day

Unless you stop crabgrass and spurge weed seeds as they germinate, you'll end up fighting them day and night.

Crabgrass and spurge are your most serious weed problems. And if not controlled, both plants will produce thousands of seeds which can remain in the soil for years and become the source of new weeds season after season.

But with Dacthal preemergence herbicide, you've got the surest crabgrass and spurge preventive money can buy.

When it comes to spurge, Dacthal is the single most effective turf preemergent herbicide you can use.

And for more than 20 years, Dacthal has been the standard of excellence for the control of crabgrass.

What's more, *Dacthal effectively controls over 20 other annual grasses and broadleaf weeds.* Including foxtail, purslane and common chickweed.

The reason why Dacthal delivers such outstanding performance is because it won't leach or run off during wet weather as other herbicides do. So you get proven residual activity for unsurpassed weed prevention. Yet, Dacthal will not thin out turfgrass varieties such as bluegrass.

Plus, you can apply Dacthal to over 120 ornamental flowers and shrubs, too.

This season make Dacthal your turf preemergent herbicide. It's available in both wettable powder and flowable formulations. There's just no better way to prevent crabgrass and spurge from seeing the light of day.



Agricultural Chemicals Business
SDS Biotech Corporation
7528 Auburn Road, P.O. Box 348
Painesville, Ohio 44077

Dacthal® Preemergence Herbicide

Always follow label directions carefully when using turf chemicals.

Circle No. 133 on Reader Inquiry Card

BUSINESS SENSE

Time savers

Were you ever extremely busy when someone walked into your office? And then you couldn't get rid of him? Here's a time-saving tip: when that situation arises, simply stand up and remain standing when someone enters your office. It lets the other person know you're busy, but willing to give him a few seconds of your time.

One of the most neglected and overlooked ways to save money is by saving time—both yours and your employees'. And here are some

helpful hints for saving time from the experts:

- Make up and follow a daily detailed schedule.
- Avoid allowing others to waste your time.
- Get up early, and be ahead of the day all day.
- Be prompt for all appointments.
- Read rapidly.
- Make constructive use of between-times and waiting periods.
- Always do first things first.

Benefin-based products put you time and money ahead.

Spray.



Sprayable formulations of preemergence herbicide with benefin (Balan®) as the active ingredient provide the same dependable, economical weed control as benefin-containing granules.

Or spread.



Benefin-based annual grass control is also available in combination with fertilizer. This combination granule increases your savings by reducing application time and labor.

Now you can get all the advantages of benefin as the active ingredient in two preemergence herbicide formulations: sprayable and benefin-fertilizer granules.

Not only have benefin-based products—like Balan®—been proved safe, dependable and effective on more lawns and golf courses for more years than other herbicides, but they cost considerably less.

From controlling crabgrass and fertilizing in the

spring—to getting goosegrass, *Poa annua* and other turfgrass troublemakers later on—there's a benefin formulation that fits your application practices and your budget. For more information, see one of the many fine companies that formulate benefin-based products (at right).

ELANCO

Turf products with benefits that make the difference.

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Balan®—(benefin, Elanco)

Circle No. 109 on Reader Inquiry Card

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From the new president:

Being president of the PLCAA is certainly an honor. It is a sizable job that would be nearly impossible to perform if it were not for Jim Brooks, our executive director. Also making my job more manageable are vice-president Jim Marria and secretary-treasurer Keith Weidler. In addition, the entire Board of Directors is a very hard-working, sincere group of achievers.

Where do I see the PLCAA headed in the next year? The answer to that question, along with specific goals and objectives, will be finalized at the Board meeting next month in Atlanta. I look forward to sharing these plans after they have been finalized.

I would, however, like to share some of my thoughts regarding our industry and its future. Simply stated, I think our future is bright! I do not buy into that doom-and-gloom mind-set, and do not intend to spend my time or the association's resources dwelling on negative thinking.

Like all industries, we have problems and opportunities. Certainly pesticide regulation is a problem our industry must deal with in a positive manner. We are extremely fortunate to have the 3PF working so diligently on this issue. The 3PF is an entirely separate association from the PLCAA, and I strongly urge each of you to join and support its efforts.

I firmly believe our industry is in need of a strong public relations effort. Stauffer Chemical Co. and several of the larger lawn care companies are going to launch public relations campaigns. The timing appears to be perfect for the PLCAA to consider launching a public relations campaign that is coordinated with others already in progress to help solve existing problems and open new doors of opportunity.

As of now, the membership of our organization has grown to more than 600 members. We shall continue to increase the number of services available to our members beyond our technical resources manual, 142-page safety manual, bi-monthly newsletter, management and legal monograph series, health insurance and regional seminars. Besides expanding our regional seminar slate, we will be investigating commissioning an in-depth market research project to learn more about our customers

and the marketplace.

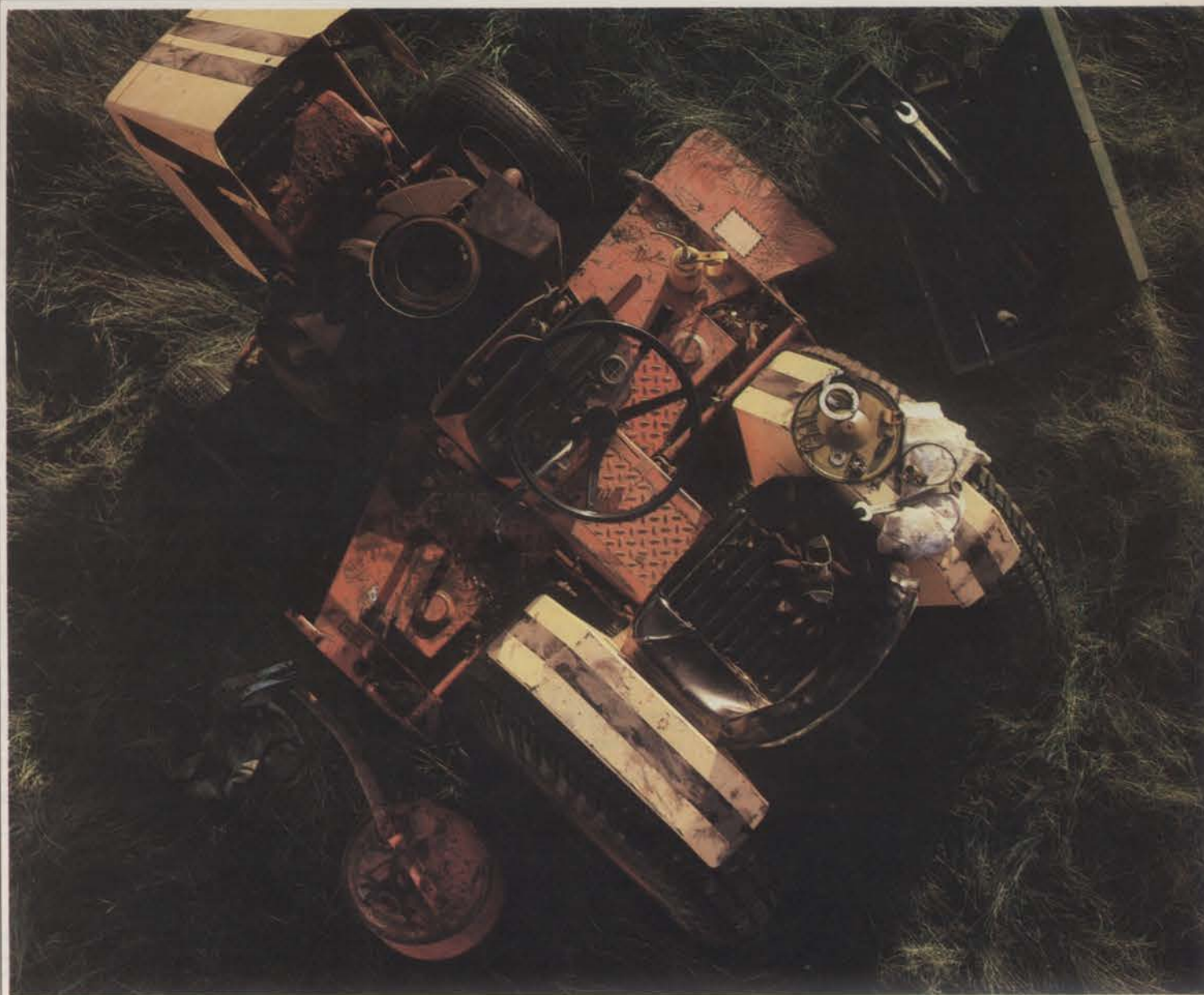
If you're not a member of the PLCAA, please don't hesitate another moment to join, so you can share in the exciting growth of our association.

Finally, I'd like to thank John Kenney for his efforts as president of the PLCAA last year. His leadership paved the way for significant growth in new mem-

bers, member services and the conference and trade show. John, a job well done!

William A. Fischer

Bill Fischer
President, PLCAA



A mower that doesn't work every day only cuts your productivity.

When you cut grass for a living, you can't afford equipment that's undependable. Or difficult to service. Because the longer your tractor is down, the longer the grass gets.

That's why so many people put a John Deere 650 or 750 Compact Utility Tractor to work on their mowing jobs. They're built with traditional John Deere quality and dependability.

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And both come equipped with features often reserved for more expensive tractors. Like a sliding-gear transmission with 8 forward and 2 reverse speeds. Like

differential lock, a Category "1" 3-point hitch, and 540-rpm rear PTO. And like hand and foot throttles, and optional front-wheel drive.

All that plus a reputation for reliability that's second to none. In fact we're so confident of the durability of our equipment that we're offering a new 2-year limited warranty.

See your John Deere dealer for more details. To get the name of the dealer nearest you, or a free folder on the John Deere 650 and 750 Compact Utility Tractors, call 800-447-9126 toll free (800-322-6796 in Illinois). Or write John Deere, Dept. 67, Moline, Illinois 61265.

Look into a John Deere 650 or 750. Because a mower that doesn't run every day will cost you a lot more money in the long run.



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FOR SALE

Trucks For Sale--1977 - 1982. 1 ton Chevy spray truck, mechanical agitation, electric hose reel, set up ready to spray. Call Ron Wilson (513) 845-0517. 3/85

Replacement parts that fit BOBCAT, BUNTON, KEES, EXMARK, ETC. Main drive belt \$17.00. DUMP-CATCHER \$100.00. Over 100 items in our new catalogue. Call 1-800-428-8004. Preco Distributors, 2400 Boston Rd., Wilbraham, MA 01095. 1/85

SPRAY TRUCKS 1977 Chevrolet C-60, PTO Drive, 350, 4 speed/2 speed rear, \$8,500. 1978 GMC Series 6000 Propane, PTO Drive, 350, 4 speed/2 speed rear, \$9,500. 1979 GMC Series 6000 Kohler, 8HP Drive, 4 speed/2 speed rear, \$10,500. All trucks equipped with Bean 10-10 pumps mechanically agitated 1200 gal Tuflex fiberglass tanks, 400 ft. hose, ChemLawn guns, fiberglass covered decks, 50 gal. side mount tanks, removable 1200 lb. capacity granular bulk bins, and radial tires. All trucks have had excellent maintenance and are ready to spray. Call Richard White (312) 293-1036. 1/85

1979 Chevy C-30, 60,000 miles, 650 gal. tank, Hydracell pump, 2 hose reels, set up for high or low volume. Good condition, reliable. \$4,500.00 firm. (919) 724-7075. 1/85

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Two year old (Professional Turf) lawn sprayer - has split tank (750 gal. & 250 gal.) mounted on 74 Ford F600, \$7,500. Four year old Finn Lawn Sprayer - 800 gal., mounted on 76 Ford F600, excellent condition, \$7,000. Five year old Finn Lawn Sprayer - 800 gal., mounted on 75 Dodge 600, excellent condition, \$6,000. Pictures upon request. Call: 616-669-0500. 1/85

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LAWN SPRAY UNITS-- Compartmentized 650 tanks with beds. You assemble or we will. Carso Inc. (217) 832-9031. 2/85

HELP WANTED

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EXCEPTIONAL GROUND FLOOR OPPORTUNITY- Orkin, the country's largest pest control company, is now expanding its lawn care operations in several states. We seek qualified individuals for the following positions: Branch Managers management skills and knowledge of branch operations essential. District Managers-communication skills and previous management experience necessary. Telemarketing Managers experience in lawn care telemarketing and understanding of telemarketing procedures required. Excellent salary and benefits plus the opportunity for professional growth await the successful applicants. All replies will be kept confidential. Send resume to: Mr. Gordon Cranshaw, Orkin Lawn Care, 4730 Hammermill Rd., Tucker, GA 30084. 1/85

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. Write LCI Box 119. 2/85

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LCI 1/85

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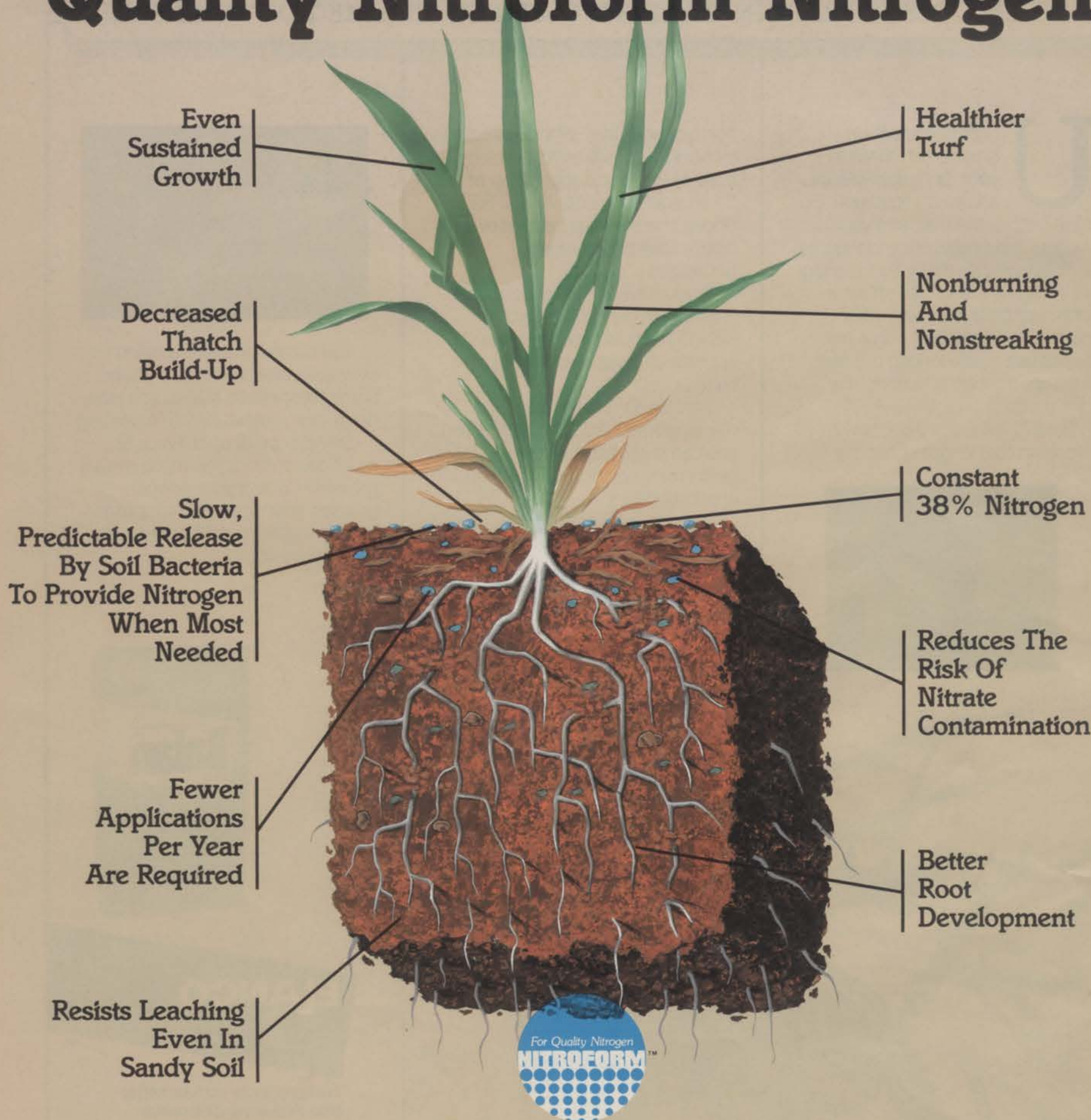
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