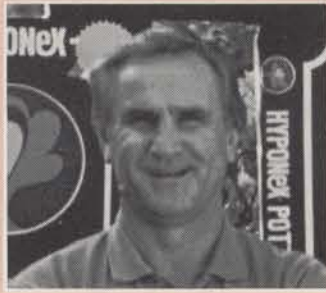


The do-it-yourself push—competition or support?

By **ELLIOT MARAS**
Editor

Suppliers of lawn care products see a renewed demand in the do-it-yourself market. This spring, they've introduced several new products and are promoting them with vigor.



Don Shula for Hyponex!

Liquid fertilizers and liquid fertilizer/herbicide mixes have been available to consumers for years. The number of available brands, however, has jumped in the last two.

"Everybody's out there with a new product on the market," particularly the specialty products, said

Jack Biddle, retail sales manager for Dries Building Supply, Macungie, Pa.

A boom in new home ownership, brought on by new construction and lower interest rates, fuels the drive. Which means the market is ripe for professional service providers as well.

Lawn care companies see the do-it-yourself products as both competition and support.

"This is the first time in recent years people have mass marketed to the do-it-yourself market," says Steve Hardyman, spokesman for ChemLawn

See **MARKET** Page 29

LAWN CARE INDUSTRY

Serving lawn management and chemical lawn care professionals

VOLUME 11 NUMBER 6 \$2.50

AN **(HBJ)** PUBLICATION

JUNE 1987

MORE GROWTH, HIGHER COSTS, SAME ISSUES

Make no mistake about it: despite growing public concern about government regulation and chemical safety, the lawn care industry is alive and well.

Companies set new records for lawn care and lawn management revenues in 1986, chalking up \$1.3 billion and \$1.5 billion in gross sales, respectively. The totals show both industries maintaining strong growth.

Figures were based on information provided by 310 companies that responded to LAWN CARE INDUSTRY's 1987 State of the Industry Survey. Companies that were primarily involved with chemical lawn care and lawn management responded in almost equal numbers.

STATE OF THE INDUSTRY 86/87



LAWN MANAGEMENT
(IN BILLIONS)



LAWN CARE
(IN BILLIONS)



COMBINED TOTAL: \$2.8 BILLION



Chemical lawn care revenue posted a net gain of 18 percentage points while lawn management revenue grew 15 points. This represents the narrowest gap prior to the early 1970s, when the

chemical lawn care market boomed at 25 percentage points annually.

The lower growth curve for chemical lawn care is the natural result of growth (the higher the revenue, the

more business needed to maintain the same growth rate) and increasing competition.

Total revenues were determined by
See **SURVEY** Page 4

INSIDE

TODAY'S TURF

Tank mixing and weather conditions impact heavily on a pesticide's efficiency.

8

COMPUTERS

Contractors say computers make bidding and financial tasks easier.

18

CLASSIFIED

See what's for sale, employment opportunities, miscellaneous items

32

Immigration law requires stricter hiring practices

By **JAMES E. GUYETTE**
Associate Editor

LONG BEACH, CALIF.—Changes in the immigration law will require new hiring practices by lawn management contractors who employ foreign-born workers.

Agents from the Immigration and Naturalization Service are likely to step-up enforcement efforts once the one-year "education period" is over and penalties go into effect, says Martin B. Greenbaum, an attorney who specializes in immigration

cases.

He spoke at the Landscape Industry Show in Long Beach, sponsored by the California Landscape Contractors' Association, Inc.

"The cowboys are going to be riding in ... and they're going to be gunning for you," Greenbaum says. (He routinely refers to INS agents as "cowboys.")

When the grace period is over "those guys are going to be out there writing tickets just like brand new meter maids."

Greenbaum cautions business operators to avoid getting a reputation for hiring illegal aliens. "They (INS agents) will have their hot sheets for the 10 Most Wanted on every block and you can bet that a lot of landscapers will be on that

See **LAW** page 23

LATE NEWS

Rollins purchases NE Green; Ever-Green merges with Superior

ATLANTA—After acquiring several other lawn care firms in the last two years, New England Green, Inc., has been bought by Rollins, Inc., owner of Orkin Lawn Care. Purchase price was \$6.5 million, said Jim Hicks, vice president, secretary-treasurer for Atlanta, Ga.-based Rollins.

Combined revenue for 1987 is projected at \$26 million, giving Orkin the fourth highest lawn care revenue in the country.

Close behind will be St. Louis, Mo.-based Ever-Green Lawns Corp., which has merged with Superior Lawn Care, Inc., Louisville, Ky. Superior had sales of \$11 million in 1986, said Tim Chalcross, president, and Ever-Green had slightly more.

Both acquired companies will operate under their existing names and management.

New England Green, originally based in Springfield, Mass., moved its headquarters to Michigan after merging with Turf Pro Industries, Plymouth, Mich. in January. Turf Pro and New England Green were the second and third fastest growing companies, respectively, among companies with chemical lawn care revenue over

See **MERGERS** Page 22

NEXT MONTH

- National roundup survey on the 1987 business season.
- Focus on the southern California market.



Melanie Reinhold Sawka with Excel Hustler Model 400

Smart Investment

"No question about it, the switch to Excel Hustler has been a very positive move."

Melanie Reinhold Sawka, owner and president of Wm. Reinhold Landscape, Inc., oversees operation of a large commercial landscape maintenance and contracting business with offices in two states: Flat Rock, Michigan and Memphis, Tennessee. Her client list reads like a National Who's Who: Ford Motor Company, Federal Express,

Detroit Diesel Allison and Federal-Mogul Corporation, to name a few.

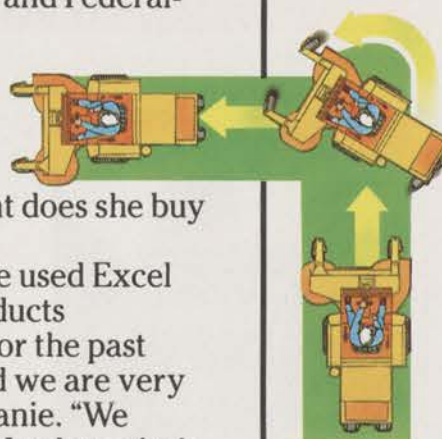
And, what brand of turf equipment does she buy and use?



"We have used Excel Hustler products exclusively for the past three years, and we are very pleased," says Melanie. "We currently operate 12 Hustler units in

our two locations; a combination of Model 295s and the new Model 400s with the big Ford engines...Hustler offers us great dependability and maneuverability."

That's the Hustler story of "Productive Innovation", made



possible by Hustler's dual-hydrostatic drive concept with twin-lever steering and true zero-degree turning radius. You can even mow square corners without wasted motion.

"The Hi-Lift" BAC-VAC™ which we use on the Model 400s is just excellent," Melanie points out. "It's especially great for spring and fall cleanup jobs."

What about other mower brands? "We tried the others in the past, but now we use Hustler exclusively," says Melanie. "I have no reason to try anything else again, the mechanics are happy, the operators are happy, so why change!"

Why not visit your dealer soon and put a Hustler to work for you. Or, call toll free for more information.

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Model 340
28.5 hp, 72"



Model 400
34 hp, 72"



Model 602D
32 hp, 72" hillside

Canadian concern buys Monroe Tree

ROCHESTER, N.Y.—Monroe Tree & Lawntender, Inc. has been bought by Canadian-based Laidlaw Transportation, Inc., the largest bus contractor in North America. Rochester, N.Y.-based Monroe will continue to operate under its present management.

Thomas Terry, Sr., former owner of Monroe, will remain its president, said his secretary, Diane Faville. Faville would not reveal the amount paid or the reason for the sale.

The acquisition marks Laidlaw's first entry into the lawn and tree care industries. The company, based in Burlington, Canada, is also one of the largest waste contractors in North America.

"The tree (and lawn care) service is mainly on wheels," said Michael DeGroote, president and chief executive officer of Laidlaw, "It's a natural expansion for us."

Monroe ranked 27th in the United States with lawn care revenue of \$1.9 million in 1985, according to LAWN CARE

INDUSTRY'S 1986 Million Dollar Lawn Care List. Lawn care represents only 12 percent of the company's business, however.

With 50 years in the tree care business, Monroe does tree care work for utilities and municipalities in New York, Pennsylvania, Florida and Rhode Island. The lawn care work is only in New York, said David Sek, who has run the lawn care program since it began in 1979.

There will be capital available for Monroe to expand, DeGroote said, depending on its performance. "A lot will depend on the management of Monroe," he said.

Laidlaw has grown 30 percentage points per year for the last 15 years, half of which has been through expansion, noted DeGroote.

Laidlaw began in 1924 and went public in 1969. The current stock price on the NASDAQ exchange is around \$21. LCI

Use gloves, and the right kind, when spraying

BALTIMORE—"Impervious gloves are the most important thing an LCO can have when handling pesticides," said Dr. Bruce Augustin, director of technical support for LESCO, Inc., Rocky River, OH. He spoke at the Maryland Turfgrass Conference in Baltimore.



Augustin: Change your laces.

"Neoprene gloves are impervious, not latex gloves," he said.

"I have seen LCOs using latex gloves that got more exposure than they normally would have because they thought they were safe."

Augustin also said most impervious boots guard against

pesticide handling problems, but that there is a problem with the laces, which soak up pesticides.

"Keep the laces changed often, and wash your hands after tying your shoes," he said. "You can get more exposure from tying your shoes than most things." LCI

MEMOS

The landscape is the only element of a property that truly appreciates in value. Just ask the California Department of Real Estate.

That fact was pointed out by Randall Ismay of the Mission Viejo Co., Mission Viejo, Calif., during the Landscape Industry Show in Long Beach, Calif. sponsored by the California Landscape Contractors Association.

Ismay spoke on xeriscaping, introducing specific plants to enhance the landscape. Xeriscaping makes landscapes easier to manage, Ismay said, since the plants and turf don't need to be replaced as often.

Lawn care and lawn management specialists can use the statistic Ismay cited in marketing their services to customers.

Need new company t-shirts? Get your orders in twice as early as you have in the past! The big shortage of major brand t-shirts is into its second year, says Marge Parvin, general manager for Manatee Screen Printing Co., Chatsworth, Calif.

Parvin, whose company screens t-shirts for several lawn management firms, said some contractors are waiting up to seven weeks for their orders. So severe is the t-shirt shortage that she's made as many as 40 calls to fill one order!

Hope for eliminating annual bluegrass? Possibly. David L. Roberts, academic specialist at the Michigan State University's

Botany and Plant Pathology Department, has discovered what he calls a "biocontrol herbicide" that totally controls annual bluegrass. It's a xanthomonas bacteria Roberts discovered that eliminates the weed from stands of Kentucky bluegrass or creeping bentgrass.

The bacteria selectively controls the weed, Roberts said. When sprayed, it effects nothing but the intended target.

Preliminary tests have shown the bacteria as slightly more effective indoors than outdoors. Roberts is presently studying it in different concentrations.

"We're trying to contact companies that may be interested in marketing it," Roberts said.

ChemLawn's merger is moving along smoothly, the company reports, despite a \$24 million suit filed by a British company that claims it had been promised the right to the merger. Fisons P.L.C. of Ipswich, England, claims ChemLawn's board of directors agreed in March to sell it all outstanding shares for \$353 million.

The British company claims ChemLawn reneged on the agreement when it agreed to merge with St. Paul, Minn.-based Ecolab, Inc. for \$370 million. Both Fisons and Ecolab are involved in cleaning and sanitizing services.

ChemLawn spokesman Steve Hardyman said there is no basis to Fison's claims, and said the suit won't interfere with the merger with Ecolab. The merger

should be completed in June.

Also at ChemLawn, around 100 management-level employees have been let go.

Michael Monahan, Ecolab's assistant treasurer, said the layoffs were designed to eliminate duplication in the treasury, risk management and insurance functions.

About half the layoffs were at the zone level and half were at the corporate level, Monahan said.

He also said Don Luke, executive vice president, was among the upper level management officials who have elected to leave ChemLawn. Bill Kaufman left after serving as vice president of human resources.

Mark Mahal, previously an assistant controller for Ecolab, has been named ChemLawn's new vice president of finance. The position has been open since Rick Ballantine left in December.

ChemLawn's research facility in Boynton Beach, Calif. was also closed.

Sandoz Crop Protection Corp. has formed a speciality agrichemical products group to service agricultural and non-edible crop markets. The non-edible crop products include Banvel herbicide, Mavrik Aquaflo insecticide, Ditek fungicide, Pentac miticide and Bonzi plant growth regulator.

Several additional products, including Blockade herbicide, are currently under evaluation. LCI

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Insurance, liability top list of concerns

For the second straight year, LCOs and lawn management contractors listed insurance and liability costs as their greatest concerns.

Respondents to LAWN CARE INDUSTRY'S 1987 State of the Industry Survey were asked to rank 11 areas of concern as major, minor or no concern.

The areas were inflation, vehicle costs, interest rates, insurance costs, liability costs, government regulations, maintenance costs, accounts receivable, employee turnover, employee benefits, customer retention and unethical competitors.

Insurance and liability costs were the greatest areas of concern, cited as major concerns by about 85 percent of the respondents in both groups.

About 80 percent in both groups said their liability insurance increased in 1986. The

jump was greater for LMCs—65 percent, compared to 47 percent for LCOs. More LCOs experienced an increase the previous year.

Most of the respondents in both groups said insurance costs accounted for 6 percent of their 1986 operating budget.

About 80 percent of both groups maintained the same amount of liability coverage in 1986.

A majority of the LCOs (74 percent) ranked government regulations as a major concern, and a majority of LMCs (63 percent) cited vehicle costs.

Government concerns and maintenance costs were cited as major by close to half the LMCs.

Customer retention was cited as a major concern by close to half the LCOs.

Unethical competitors and employee turnover both were cited as a major concern by about 40 percent of both. LCI

Landscaping, renovation work on the upswing

WASHINGTON, D.C.—Landscape work posted significant gains in both the commercial and residential sectors in 1986, according to the 12th annual economic survey of the National Landscape Association. Gains surpassed expectations in both new landscaping and renovation in the commercial and residential sectors.

Increases are expected to continue in 1987, the survey found, with the greatest increase expected in new residential landscaping. Respondents were more optimistic about 1987 sales than they were about 1986 sales a year ago.

Expectations in the new commercial landscaping category were about the same as they were a year ago. They were slightly less optimistic about commercial renovation. LCI

1986 LANDSCAPE BUSINESS (ACTUAL)

Direction of Change Reported

Region	New Residential (%)			New Commercial (%)			Residential Renovation (%)			Commercial Renovation (%)		
	Up	Same	Down	Up	Same	Down	Up	Same	Down	Up	Same	Down
Northeast	83	14	3	61	30	9	65	32	3	35	58	7
Southeast	64	24	12	68	12	20	54	38	8	43	36	21
Great Lakes	74	17	9	67	24	9	64	32	3	34	56	10
Great Plains	56	33	11	71	18	11	56	28	16	23	54	23
Other	31	54	15	62	23	15	54	38	8	8	61	31
National Average	70	22	8	65	23	12	61	33	6	33	53	14

1987 LANDSCAPE BUSINESS (EXPECTED)

Direction of Change Reported

Region	New Residential (%)			New Commercial (%)			Residential Renovation (%)			Commercial Renovation (%)		
	Up	Same	Down	Up	Same	Down	Up	Same	Down	Up	Same	Down
Northeast	69	25	6	39	47	14	40	47	13	16	68	16
Southeast	64	31	5	53	32	15	51	49	0	24	64	12
Great Lakes	63	35	2	51	38	11	46	47	7	28	59	13
Great Plains	28	60	12	42	23	35	41	50	9	13	61	26
Other	42	50	8	17	50	33	41	42	17	18	55	27
National Average	60	35	5	45	38	17	44	47	9	21	63	16

LANDSCAPE BUSINESS % CHANGE INDICATED

	1986 Survey		1987 Survey	
	Actual 1985/1984	Expected 1986/1985	Actual 1986/1985	Expected 1987/1986
Northeast	+29.6	+20.4	+28.3	+17.9
Southeast	+35.9	+26.9	+19.5	+26.3
Great Lakes	+24.8	+20.8	+21.2	+16.8
Great Plains	+22.1	+13.3	+14.9	+6.4
Other	+17.9	+2.8	+14.4	+4.8
National Average	+26.1	+16.8	+21.7	+16.5

Source: National Landscape Association's 12th annual economic survey

Chemical lawn care firms

Lawn management firms

Industry Averages

Technician's hourly wage \$7.00

Regional Breakdown-

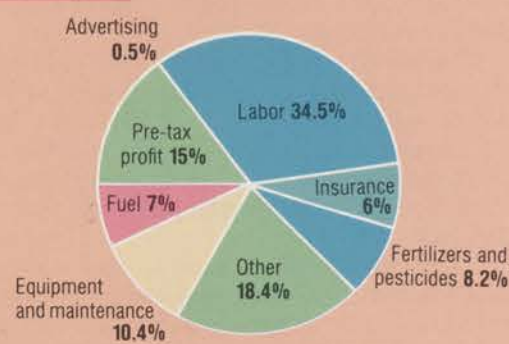
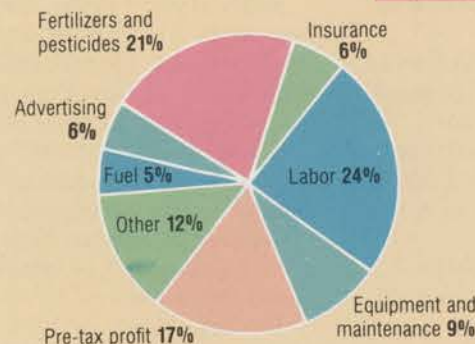
Northeast-\$7.70, South-\$7.60, North Central-\$6.60, West-\$7.75

Technician's hourly wage \$7.50

Regional Breakdown-

Northeast-\$8.30, South-\$6.90, North Central-\$6.60, West-\$9.40

Operating averages



Use low volume spray technology



Use a computer



More customers are asking about chemical safety risks

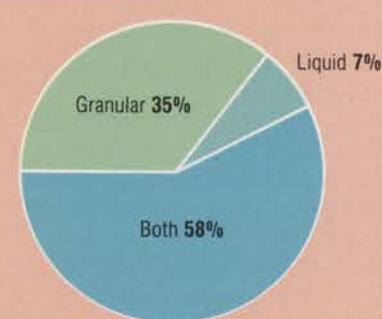
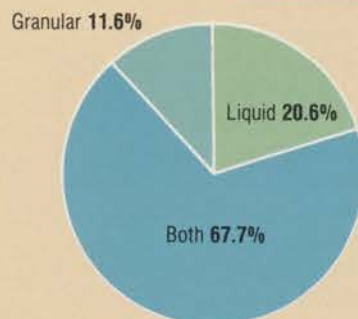


Greatest areas of concern

1. Liability costs
2. Insurance costs
3. Government regulations

1. Insurance costs
2. Liability costs
3. Vehicle costs

Types of fertilizer applications used



Plan to post warning markers for chemical applications

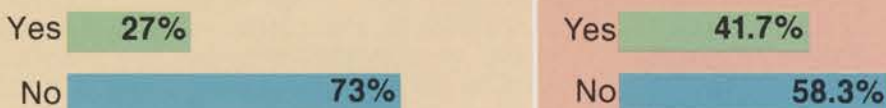


Regional breakdown

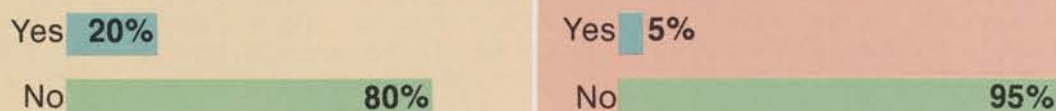
Northeast—Yes 13%, No 87%
 North Central—Yes 23%, No 77%
 South—Yes 8%, No 92%
 West—Yes 18%, No 82%

Northeast—Yes 26%, No 74%
 North Central—Yes 18%, No 82%
 South—Yes 21%, No 79%
 West—Yes 37%, No 63%

Plan to switch to more non-phenoxy herbicides



Have a recycling system



Source: State of the Industry Survey

SURVEY

from Page 1

average revenues multiplied by the number of LAWN CARE INDUSTRY readers in the two categories.

Companies that largely did chemical lawn care had mostly single-family residential customers. Those that were more in lawn management had primarily commercial and multi-family customers.

Chemical lawn care companies serviced an average 2,137 residential and 85 non-residential accounts. Lawn management firms serviced an average 80 residential and 410 non-residential accounts.

Most of the respondents, in both categories, were from the Northeast and North Central regions. Lawn management companies were more prevalent in the South (28 percent of total) than the chemical lawn care firms (15 percent of total).

The West was highly under-represented in the survey—home to 8 percent of lawn management and 6.5 percent of chemical lawn care firms.

A great disparity between the two groups was in how much of the market was controlled by larger firms. The top 20 chemical lawn care companies, one half percent of all such companies, claimed almost half of all chemical lawn care revenue. Lawn management firms in the top half percentile, 55 firms, claimed less than a tenth of the revenue.

Another disparity was in attitudes about how to address chemical issues. Lawn management companies, which use less chemicals, were more willing to yield to public pressures. They were more willing to post pesticide warning markers and to switch to non-phenoxy herbicides.

Lawn management companies outspent chemical lawn care firms on labor, 34.5 percent compared to 24 percent, while chemical lawn care firms spent more on fertilizers and pesticides, 21 percent compared to 8.2 percent. The two groups spent about the same on equipment and maintenance, and had comparable pre-tax profits.

An increase was reported in computer use over the previous year, with about half of all companies now on-line.

A slight drop was reported in the number of customers asking questions about chemical safety. Just less than half of the respondents said they were getting more inquiries this year, compared to a little more than half last year. More than half the chemical lawn care firms still said they were getting more inquiries.

A small drop in the amount of pesticide legislation introduced at the state level was reported this year; about half reported proposals in their states compared to 65 percent last year.

LCI

Fertilizer buying to rise

LCOs and lawn management contractors expect to spend more this year on fertilizer, both liquid and granular, according to LAWN CARE INDUSTRY'S State of the Industry Survey. Liquid outlays will increase slightly more than granulars.

Liquid and granular fertilizers are the industry's two largest single product expenditures.

Overall, more will be spent on products this year. The larger increases

are projected in liquid fertilizer, post-emergence herbicides, riding mowers, broadcast spreaders, tree care equipment and irrigation equipment.

Grass seed buys are projected to rise a bit, as are walk-behind mowers, spray equipment and string trimmers.

Buyers for aeration equipment, plant growth regulators and fungicides are expected to stay about the same as last year. LCI

Most use chemicals

Chemical applications are the most commonly applied services among the 310 lawn care and lawn management firms that took part in LAWN CARE INDUSTRY'S State of the Industry Survey. All LCOs and 70 percent of the lawn management contractors offer chemical services.

Ornamental and shrub care was the second most commonly offered service, provided by 88 percent of the lawn management contractors and 42 percent of the LCOs.

Other services ranked as follows:

3) Dethatching/aeration—provided by 68 percent of LCOs and 61 percent of LMCs.

4) Plant disease control—71 percent of the LCOs and 52 percent of LMCs.

5) Renovation—66 percent of LMCs; 37 percent of LCOs.

6) Mowing—85 percent of LMCs and 13 percent of LCOs.

7) Sodding—69 percent of LMCs and 13 percent of LCOs.

8) Tree care—45 percent of LMCs; 33 percent of LCOs.

9) Irrigation—27 percent of LMCs; 4 percent of LCOs. LCI



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Circle No. 103 on Reader Inquiry Card

New homeowners are a target audience

AS MARKETS MATURE, THE 'SHOTGUN' APPROACH WON'T WORK

By **ELLIOT MARAS**
Editor

What a difference a year makes!

Last spring, we were grumbling about negative press coverage while our technicians waited indoors for the rains to subside. (Those of us in the South were praying for a little rain.)

This year, as if it were compensation, we've been blessed with good weather. Indications nationwide are that both sales and morale are up.

Free promotion has been bestowed upon us too, with all the advertising for do-it-yourself lawn care products. The benefits are indirect, but it's promotion nonetheless.

It's also a sign of all the new business that's out there, waiting to be had.

Finding new customers has become a major concern in recent years as markets have become saturated.

As pervasive as this concern is within the industry, it is rarely addressed at conferences. How do we address it?

Finding new business begins with defining our customers as specifically as possible.

Many in the lawn care business have an admirable sense of responsibility to their customers. They take it upon themselves to understand their customers' problems and needs.

But I wonder how many take it upon themselves to truly define their potential customers.

Does your company have a marketing plan that gives demographics of your customer base? If so, has it been updated since the time the business was considerably smaller than it is now?

I interviewed dozens of companies for the article on lawn care advertising that appeared in the April issue. I found that most companies do little more than what they were doing five years ago—promotional mailings to certain geographical areas followed by phone calls.

The time has come for lawn care companies to go beyond this stage and develop more targeted marketing programs.

Who might a target audience for lawn care include? Companies that market consumer lawn care products have done some useful research in this area.

They see the new homeowner as a target audience. The reason being that more people are buying homes thanks to lower interest rates and new construction.

The do-it-yourself marketers reach their potential customers through mass me-

dia advertising.

We can use mass media advertising too. But to reach the new home and property owners, there are more direct methods.

Consider the publications that go to these audiences specifically.

Every city has at least one publication whose purpose is to list available new homes. Such publications usually accept paid advertising from non-realtors.

There are also local publications for commercial and industrial property brokers that accept paid advertising. This latter type of publication, not being consumer-oriented, is more difficult to find. But the local chamber of commerce or library should be able to put you in touch.

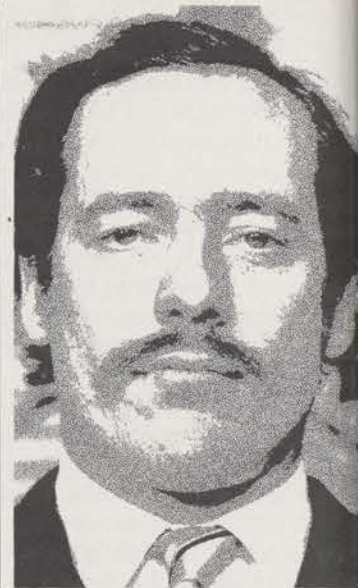
Another avenue for exposure to commercial property owners and managers is the local business magazine. Virtually all major cities have at

least one.

Advertising in publications such as these is marketing to a target audience. Let's do it.

Target marketing is essential for growth in a service business beyond the startup stage. New sales may be harder than they used to be, but the lawn care customer base continues to grow.

Elliot Maras



**Put more N in the turf,
less in the air and more
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With N-SURE.™**



Lawn care, management firms expanding services

MARKET RESEARCH SURVEY SHOWS SLOW RELEASE FERTILIZER USE RISING

MIDWEST REPORT—Lawn care and lawn management companies in the Midwest are adding new services and trying to overcome their image of being seasonal service providers. Those were two of the findings of a study conducted by Coleman Communications, Inc., an Atlanta, Ga.-based market research firm.

Coleman conducted in-depth interviews with 75 lawn care, lawn management and landscape companies in Indiana, Illinois, Kentucky and

Ohio. Part of the study was sponsored by the NOR-AM Chemical Co., Wilmington, Del.

"Opportunities for grounds maintenance service have expanded to whatever you see from the street that needs care on to what you don't see, including sprinkler heads," said Robert Coleman, company president.

More companies, small to medium in size, are diversifying, the study found. New services include landscape

installation, seeding, landscape construction, sod retailing and snow removal. Conversely, landscapers are moving into lawn care.

Turf managers are also working to change the perception that they are seasonal service providers to that of a year-round service provider. The study noted that today's homeowner is receptive to the idea of a step-by-step program of improving his or her lawn's appearance.

The study also found:

- Slow release fertilizers are becoming more popular. Companies reported using more slow-release in both liquid and granular form, primarily to provide a more consistent and uniform lawn appearance.

- Companies are showing more interest in irrigation, to reduce some of the risks posed by dry weather and homeowners' sometimes negligent watering practices.

- Turf managers, many of whom now have five to 10 years experience using chemi-

cals, are more willing to test new chemicals or new ideas on a limited basis.

- More are interested in knowing about low volume applications. Most, however, are reluctant to commit a lot of money away from the large trucks. The study speculated that low volume use could grow if a number of the large companies encourage it.

- Customer turnover remains a serious problem. Turnover was reported to be as high as 35 percent a year.

- A closer working relationship with extension agents and academics is developing. The study attributed this to the desire to answer those who criticize lawn chemicals, and an interest in training workers safer chemical handling practices.

The demand for professional turf services will continue to escalate, the study claims, due to the growth in two-income families with limited time for household chores.

"The family that we saw in place 20 years ago manicuring the lawn over the weekend is being replaced in many suburbs and communities by hard-working couples whose work/leisure lifestyle is more in tune with their 'world campus' for activities," Coleman said. **LCI**

This new and patented nitrogen source has low urea. And that means less nitrogen lost to the atmosphere.

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That's because new N-SURE from Arcadian is the unique slow-release, non-burning nitrogen source that contains the new technology of triazone nitrogen. With its high concentration of triazone and low

urea, there's not only far less chance of burn, but no plugged nozzles or clogged screens. You get a more consistent green over time because N-SURE provides a nitrogen release pattern that's ideal for custom lawn applications. What's more, you get a product that's stable, storable for the long term, and compatible with most commonly-used herbicides, insecticides and fungicides.

N-SURE is perfectly suited for low-volume applications. So less water and less handling are required. And that translates into greater efficiency, easier application, more lawns per man per day which means lower labor and equipment costs.

Best of all, because N-SURE works like no other fertilizer you've ever used, it means better plant nutrition. Nutrition that stays where you put it rather than losing it to the atmosphere and that's the kind of nutrition that can green up a lot more than lawns. To learn more about N-SURE and the new technology of triazone, write or call Arcadian Corporation, One Gatehall Drive, Parsippany, New Jersey 07054 1-800-524-0135.

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Irrigation equip. prices could fall

MADISON HEIGHTS, ILL.—Look for irrigation hardware prices to drop a bit due to fiercer competition and lower manufacturing costs, says Ernie Hodas, president of Century Rain Aid, a major distributor of irrigation supplies.

Hodas also predicts the \$300 million sprinkler irrigation business would grow this year.

"Last year was Century's and the industry's best year ever," he said. "We expect at least a repeat performance and maybe a slight improvement for ourselves and the industry." **LCI**



Hodas: Sales to rise.

How to get the most from your pesticide

CONSIDER TANK MIXING, SPRAYING CONDITIONS, VOLATILIZATION

By DAVID J. WEHNER

Most LCOs are acutely aware of the fact that new pesticides reaching the market are not only very effective at relatively low rates, but are priced similar to precious metals. It benefits each lawn care businessman to be aware of the factors that determine the effectiveness of the pesticide so he can maximize his investment and also reduce the overall amount of pesticide needed to provide good results.

The purpose of this article is to present many of the factors that can influence pesticide efficacy. When using pesticides, always remember to read the label, use common sense, and try to learn from your experience by documenting successful and unsuccessful results. I have divided the presentation into three sections: 1) Prior to pesticide application; 2) During pesticide application; and 3) After pesticide application.

Prior to pesticide application

Efficiency in the lawn care industry depends upon applying fertilizers and pesticides in combination. The first consideration in optimizing pesticide application is to make sure that the ingredients put into a tank or on a granule are compatible.

Because combinations of materials on granules are tested by the manufacturer prior to the sale of the product, I will concentrate on some of the problems associated with tank mixing of pesticides and fertilizers for liquid application.

The infinite number of possible combinations of different fertilizers with several frequently used pesticides make it imperative that proposed mixes are evaluated by the LCO prior to use. Mixes can be evaluated by doing a jar test. The components of the mix are added to a jar of water just as they would be added to the spray tank. If a precipitate occurs or if a component separates out or if an unusual appearance develops, the mixture should not be used.

The pH of the tank mix and the hardness of the water can affect pesticides. Most people are aware of the fact that a high pH (alkaline conditions) can cause alkaline hydrolysis of some insecticides. This is a chemical reaction which deactivates the insecticide.

Also, tank pH can affect the use of amine formulation herbicides and iron. Be careful when mixing iron sulfate with amine formulations of broadleaf herbicides as the herbicide can be removed from solution

under certain conditions. Hard water (water having a high concentration of magnesium and calcium) can also reduce the effectiveness of broadleaf herbicides.

The order in which pesticides are added to the tank is also important. Wettable powders should be added first, then flowables, then water dispersible granules or dry flowables, and last, emulsifiable concentrates, solutions, and surfactants.

Don't forget that the main ingredient—water—is by no means uniform from one location to another, so that if you have multiple branches over a wide geographic area, you may need to do a jar test at each location.

It is much easier to avoid problems than to deal with a 300- to 1200-gallon tank truck loaded with an incompatible mix. Read the pesticide label to determine if there are any specific mixes to avoid. Small, inexpensive pH meters that are available from laboratory supply houses or from some chemical distributors are useful for monitoring pH. A kitchen blender can be used for the jar test to simulate the mixing and warming of the solution that occurs in the spray tank over the course of a day.

It is useful to monitor the temperature of the spray tank as some mixes become incompatible when the temperature of the mix rises. Finally, it is helpful to have some samples of suspending agents available in case a problem develops.

Consideration should be given as to how much area can

be sprayed in a day's time and, if possible, only that amount of mixture prepared. Some chemicals do not lend themselves to being in solution for long periods of time prior to application. For example, iron sulfate can be converted into iron hydroxide which is insoluble and does not benefit the plant. Some herbicide labels specifically state that the herbicide should not be stored in a water diluted form.

During pesticide application

Probably the most critical factor affecting pesticide performance is proper application techniques. Insuring that the technician is well trained, the equipment is properly maintained, that the ingredients and the area to be treated were correctly measured, and that the spray system or spreader was calibrated will minimize problems in this regard.

The centrifugal spreaders used for granular materials are more difficult to calibrate than drop-type spreaders because the width of spread can vary widely with the technician. A calibration kit for centrifugal spreaders is available from LESCO (Rocky River, Ohio).

Make sure that technicians understand how to properly spray narrow areas and how to adjust their arm movements when approaching barriers such as fences or buildings. Applicators can practice by spraying water on asphalt or some warm surface and watching the way the spray dries or by spraying a gravel road or dusty area and looking at the

distribution of spray droplets.

Spray drift generally is more of a concern in regard to phytotoxicity to ornamentals and non-target plants. However, if drift is significant, the amount of active ingredient applied to the target pest is reduced. Thickening agents can be used to reduce drift under mildly windy conditions.

Common sense dictates that spraying should be discontinued when the wind velocity is moderate to high.

After pesticide application

Most lawn care companies are doing a good job insuring that chemicals are applied properly. Let's assume that a suitable mixture was applied at the correct rate and at the proper time. There are several factors that can alter the effectiveness of the pesticide.

When we refer to processes that determine the length of control and effectiveness of pesticides, we use the term "pesticide fate." The processes that affect pesticide fate are volatilization, photodecomposition, leaching, adsorption to the soil, chemical degradation, and microbial degradation.

While the LCO does not have much control over these factors, understanding them is important if a decision is being made to retreat an area. Volatilization and photodecomposition are two processes that can occur immediately after pesticide application.

Volatilization is the loss of pesticide in the vapor phase. The volatility of a pesticide is determined by the nature of



About the Author

David J. Wehner is associate professor of turfgrass science in the Horticulture Department at the University of Illinois.

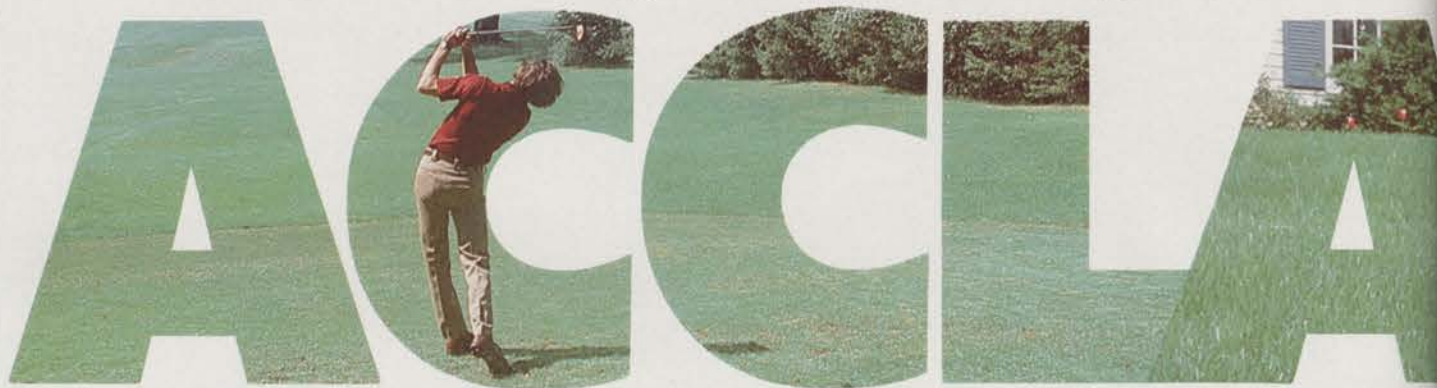
the active ingredient and the formulation. Ester formulations are more volatile than amine formulations.

Manufacturers have developed low-volatile esters in an attempt to get the benefits of the ester being able to penetrate the waxy surface of weeds while at the same time reducing the loss of the herbicide through volatilization.

Photodecomposition is the breakdown of the chemical structure of the pesticide by the ultraviolet rays of the sun. Photodecomposition usually is not a problem for most turfgrass pesticides. Since the sprays and granules usually enter the turf canopy, they are somewhat protected from the rays of the sun unlike a surface application to the soil that a farmer might make prior to planting.

Photodecomposition is also reduced by movement of the active ingredient into the soil with rainfall. Most pesticides give information on how to properly apply them if volatilization or photodecomposition is a particular

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problem.

Broadleaf herbicides require that the spray remain on the surface of the leaf and are more effective if sprayed on a sunny day since photosynthesis is required to move the chemical through the plant. Photodecomposition of broadleaf herbicides would not be a significant problem since the materials rapidly enter the plant.

Leaching is the movement of the pesticide through the soil with water. Most turfgrass pesticides are not affected by leaching. An exception is the herbicide dicamba which can move through the soil and be taken up by the roots of desirable ornamentals.

Although not quite the same as leaching, movement of contact fungicides past their intended target will occur if appreciable rainfall occurs after application just as insecticides and broadleaf herbicides can be moved off the leaf surface to the extent that they might not control surface feeding insects or broadleaf weeds.

Pesticides can be adsorbed to soil particles. Adsorption means that the pesticide binds to the surface of the soil parti-

cle and may not be available to act on the target pest. Soil type will influence the adsorption of the pesticide.

Some herbicides carry specific instruction regarding the rate to be used on light soils (sandy soils where adsorption is low) versus the rate to be used on heavy soils (clay soils where adsorption can be greater). Adsorption occurs with preemergence grass herbicides used on turf. In this case, the adsorption of the herbicide helps keep the material in the surface layer of the soil where weed seed germination is occurring.

The herbicide glyphosate (Roundup) is also adsorbed to soil particles. This property allows reseeding to take place shortly after herbicide application.

Probably the two most important fates that await an applied pesticide are chemical and microbial decomposition. These processes result in the deactivation of the pesticide. They are also important in the removal of the pesticide from the environment.

The degree to which a pesticide is degraded microbially versus chemically is determined by the nature of the

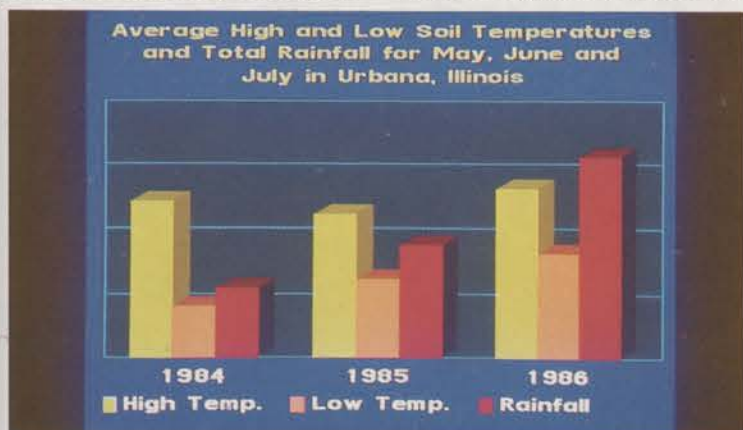


Figure 1: High and low soil temperature and total rainfall were recorded for May, June and July in 1984, 1985 and 1986 in Urbana, Ill.

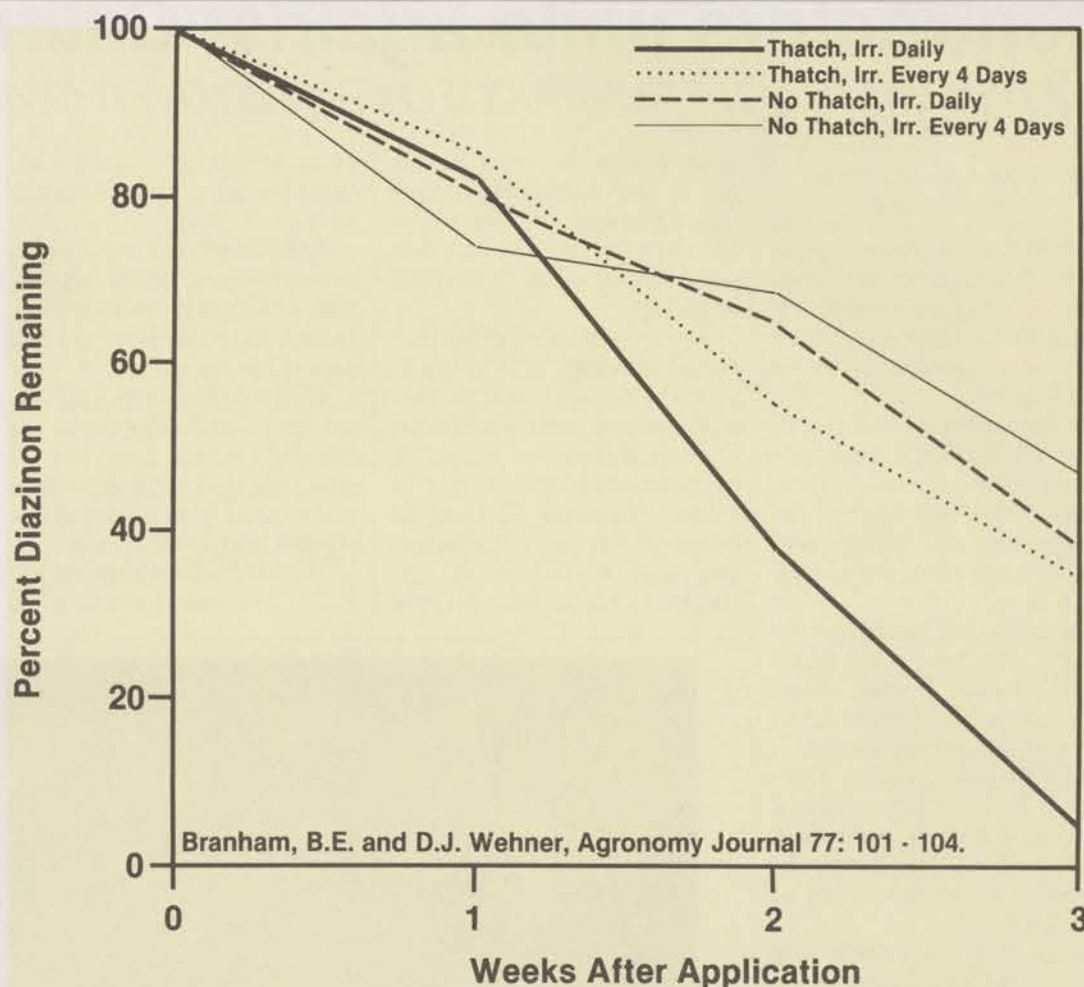


Figure 2: Degradation of diazinon was noted three weeks after application to Kentucky bluegrass with and without thatch under daily irrigation or irrigation every four days.

chemical. It is important to realize that environmental conditions affect the rate at which these decomposition processes occur.

Both processes are favored by increases in soil temperature and rainfall. For example, in 1986, poor crabgrass control was observed on our plots in Urbana, Ill. compared to previous years. The weather conditions in Urbana for the months May, June, and July of the past three years are illustrated in the accompanying slide.

You can see the large increase in rainfall that occurred in 1986 and the increase in soil

temperature. Warm wet conditions favor the growth of microorganisms in the soil. These microorganisms degrade pesticides and reduce the effective period of control.

An example of a chemical degradation process is the alkaline hydrolysis of an insecticide in the soil. Another factor influencing the degradation process is the distribution of rainfall.

Microorganism activity increases with increasing soil moisture, but at some point activity no longer increases. In other words, microorganism activity will remain high once the soil moisture is above a

certain minimum level.

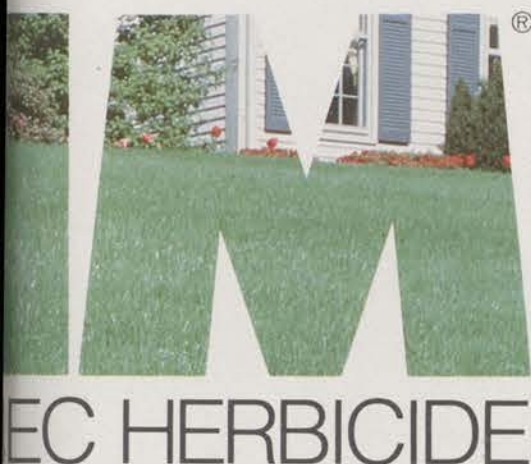
Thus, if four inches of rain occurred on the first day of June and there was no rainfall the rest of the month, the soil would dry out and microorganism activity would decline. There would probably be more microorganism activity resulting in more pesticide degradation when the same amount of rainfall (four inches) occurred at the rate of one inch each week. In research conducted at the University of Illinois, DCPA (Dacthal) degradation increased with soil moisture to a certain point and then the rate of degradation leveled off with increasing moisture. Increasing soil temperature resulted in a similar trend.

Consider thatch

A final consideration should be mentioned regarding the presence of thatch. Thatch can alter the effectiveness of pesticides used on turfgrass stands. Thatch can intercept a pesticide, preventing it from getting into the soil as is the case with some insecticides, and in some cases increase the phytotoxicity of the pesticide by causing it to remain close to the roots of the turfgrass plant.

An example of the effect of thatch on the decomposition of diazinon is illustrated in Figure 2. Where thatch was present, and turf was irrigated daily, very little diazinon was present after three weeks. Where thatch was absent more of the diazinon was present at the end of three weeks. This graph also shows the effect of frequent irrigation on diazinon decomposition in that frequent irrigation increased decomposition with or without thatch.

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Contractors unite against California blower bans

GOLDEN STATE CONTROVERSY CONTINUES OVER GIVING LEAF BLOWERS THE BRUSH-OFF

By JAMES E. GUYETTE
Associate Editor

PALO ALTO, CALIF.—People involved in California's landscape industry are beginning to organize to fight against the banning of gasoline powered leaf blowers.

Controversy continues to sweep California towns over the use of the blowers. Several communities have banned the devices because officials and residents say they are simply too loud.

People in the landscape industry, who are called "gardeners" in the Golden State, are cooperating in an effort to stop anti-blower legislation.

Los Angeles, Santa Barbara, Palo Alto, Santa Monica, Carmel, Belvedere and Hermosa Beach have considered ordinances relating to leaf blowers.

More than 200 contractors attended a council meeting in Palo Alto to successfully protest a proposed blower ban. Ben Nanjo, president of the Mid-Peninsula Landscape Gardeners Association, led a drive to mail 1,800 postcards to council members and get 1,300 signatures on a pro-blower petition.

The Palo Alto council is now considering a plan to impose a 9 a.m. to 5 p.m. time limit for blower use and set an 82 decibel maximum sound level.

The city fathers in Belvedere, another San Francisco Bay-area town, are going ahead with plans to ban gas powered blowers. However, the council also is pondering the enactment of an anti-noise ordinance instead of an outright blower ban.

Belvedere's city gardener estimates that the average \$200 monthly landscaping bill could grow to \$250-60 without the use of blowers.

One reason for the concern over blower noise is that yards in certain areas of California tend to be smaller and the houses closer together.

In the Los Angeles area, Santa Monica officials are considering an anti-noise ordinance that would restrict the use of gas powered blowers.

Leaf blowers under 80 decibels would not violate noise limits, while machines producing between 80 and 90 decibels would be limited to 15 minutes or less of use—depending on how much noise they make.

As an example, a blower making 80 decibels of noise in a residential zone could run for 15 minutes before violating the ordinance. A blower at 85 decibels could be used for seven minutes before breaking the law. An 8 p.m. to 8 a.m. ban on blower use also is included.

Meanwhile, Echo, Inc.,

Lake Zurich, Ill., is introducing a new backpack blower that company officials say is the quietest on the market with an output of 70 decibels at 50 feet.

Because blowers are rather simple devices, it is difficult to make design changes that will reduce sound without adding weight or harming performance, according to Echo's engineers. The engine combustion, air discharge, fan, engine cooling air, exhaust system and engine

combustion air intake all combine to generate blower noise.

Echo is sponsoring an education program called "Operation—Be Smart" to encourage more polite behavior on the part of blower users.

Brochures, posters and videos in several languages are available as are live demonstrations that offer tips such as the use of nozzle extensions, misters and lower speeds.

Robin F. Pendergrast, an Echo representative, flew



Blower ban planned: Belvedere city officials examine RakeMasters with Timeline Vice President Bob Humel, second from left.

Put the squeeze on
container disposal
problems.

from the Chicago area to address the Belvedere City Council about the quieter model PB-4500 and "Operation—Be Smart."

At that same meeting, the Belvedere councilmen were presented with four dozen RakeMaster leaf rakes by Rick Borg and Bob Humel of Timeline Distributing Co., Solvang, Calif.

"I've come to solve all your problems," Borg said. "We feel we can help end some of the controversy blown up here in Belvedere and other communities around the country," said Humel.

"We are offering a solution to the back-breaking rake and

shovel method without going to options that create other problems," he added.

The RakeMaster is a combination rake and shovel that eliminates having to bend over to pick up the debris.

Several witty news reports appeared after some Belvedere residents formed BLIB (Ban Leafblowers In Belvedere). Pro-blower forces have been dubbed SOB (Save Our Blowers).

One wag suggested forming NOBLOW (Neighbors Opposing BLOWers), LEAFF (Lovers of Environmentally Acceptable Filth Fighters) and RAKE (Residents Against Killer Earaches). LCI

EPA pondering pesticide fees from manufacturers for labels

WASHINGTON, D.C.—The U.S. Environmental Protection Agency is considering new labeling fees for pesticide manufacturers that would generate \$18 million annually. The fees would range from \$600 to \$163,000.

However, some manufacturers are challenging the authority of the EPA to enact such a program.

The money would be collected in one of two ways. One would be an annual fee, pro-

rating the average costs among producers of each active ingredient. The other would be a differential fee: fees would be weighted to reflect the pesticide's potential risks to human and environmental safety.

The proposed fee schedule includes: new chemical, \$163,000; old chemical, \$3,500; new use, \$29,900; amendment, \$600; new biochemical, \$56,000.

At present, fees for estab-

lishing tolerances or permissible pesticide residue levels are the only federal costs incurred by companies that license or register products, the agency reported in a recent bulletin. These fees recover about \$1 million to \$2 million of the agency's costs per year.

Fees are based on average agency costs of processing and reviewing certain registration applications: new pesticide, new registration of a previously registered pesticide, new use of a registered pesticide, new biochemical or microbial pesticide, experimental use permit to field test a pesticide, and food additive tolerances permit (regulation prescribing the conditions under which pesticides may be safely used as food additives).

Before a pesticide can be distributed for sale, it must be registered under the Federal Insecticide, Fungicide and Rodenticide Act. Manufacturers are required to provide the EPA with health and ecological data. The EPA then determines if the pesticide can perform its intended function without causing "unreasonable adverse effects" upon human health or the environment.

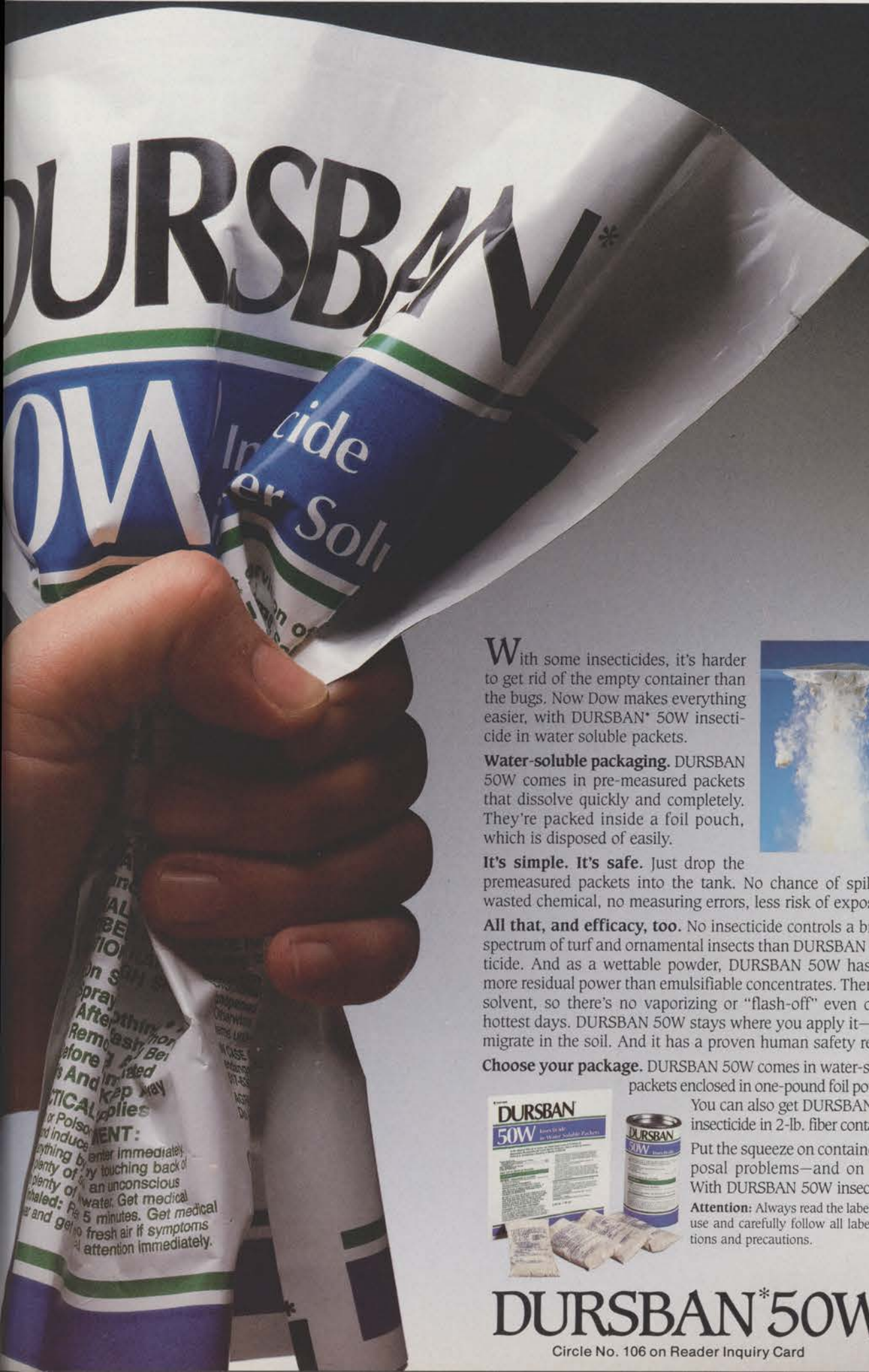
The \$18 million in proposed fees is slightly more than a quarter of all costs EPA spent in fiscal 1985 to conduct pesticide activities, the bulletin reported.

The EPA also is seeking comments from the public regarding the establishment of a more comprehensive fee system that would cover the scientific and administrative costs of maintaining all registrations of both new and used pesticides.

Such fees would pay for activities not covered in the recently proposed plan. These include re-registration of pesticides, which is the review of data for older pesticides to determine the safety of the products in light of current scientific standards; determining data gaps in older pesticides and requiring the data from the registrants; conducting special reviews of chemicals that pose concerns due to perceived health or environmental risks; auditing laboratories and their data to assure that studies used are complete and valid; and other scientific and administrative work.

The system would almost double the agency's collections to a total \$40 million.

Comments on the proposal should be addressed to: Information Services Section, Program Management and Support Division (TS-757C), Office of Pesticide Programs, U.S. EPA, 401 M St., S.W., Washington, DC 20460. LCI



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Circle No. 106 on Reader Inquiry Card

Industry urged to come forth with toxicity data

MOST PESTICIDES USED ARE BOTH SAFE AND EFFECTIVE, ENTOMOLOGIST SAYS

By **ELLIOT MARAS**
Editor

Industry has itself to blame for the public's misguided fear about pesticide use. It has failed to communicate the facts.

That was the message given by Robert Menzer, professor of entomology at the University of Maryland, to the Virginia Turfgrass Conference in Virginia Beach. Menzer said it is important for the industry to correct the misconceptions

about pesticides since overly restrictive laws are being enacted as a result.

"The overwhelming majority of the pesticides we use today are both safe and effective," he said.

The most alarming development to date for the industry, Menzer noted, is the passage of laws like the recently-enacted Proposition 65 in California. The governor recently released a list of restricted chemicals. In another year, it will be a criminal of-

fense for anyone to discharge those chemicals into drinking water.

Menzer analyzed some of the misconceptions that have been publicized and gone unchallenged about pesticides.

He showed a CBS News report from 1982 that claimed Temik, trade name for the insecticide aldicarb, was dangerous to humans. Aldicarb, used by farmers to control the Colorado potato beetle, had contaminated watermelons in California due to misapplica-

tion.

Scientists were interviewed saying there were no long-term studies on the effects of the chemical. Company officials disputed the claim but would not divulge the research for concern that their competitors would take advantage of it.

"We were left at the end thinking that there was something nefarious about the fact that the data on behalf of the chemical was generated by the company," Menzer said.

"The role of the governmental agencies was never even mentioned in that clip," he added.

In reality, Menzer said studies have shown Temik to have no long-term carcinogenicity, although there is reason to be concerned about its high water solubility.

What the public often isn't made aware of, Menzer said, is that high toxicity itself is not reason to restrict the use of a chemical. Exposure must also be considered.

Menzer said the higher a compound's acute toxicity, the lower the likelihood of long-term, chronic effects, and vice versa.

For example, The Environmental Protection Agency called for a special review, the first step towards changing the product's user status, on a fungicide with low toxicity, Captan. EPA wanted more information about exposure levels.

What about 2,4-D?

Another misunderstood pesticide is 2,4-D, Menzer said. The chemical was initially linked to cancer because it was a component in Agent Orange, even though it was not the harmful dioxin.

This past year, 2,4-D was linked to cancer again in a study by the University of Kansas (and the National Cancer Institute). Menzer noted that the study does not establish a cause-effect relationship between 2,4-D and the cancer, non-Hodgkins lymphoma, but it is a concern.

A mouse feeding study on the long-term carcinogenic effects of 2,4-D will be completed in June, he noted.

Industry must keep abreast of the toxicity and exposure levels of chemicals as new application technology becomes available, Menzer said. **LCI**

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Chevron Chemical Company

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Circle No. 104 on Reader Inquiry Card

PLCAA offers monograph on marketing

MARIETTA, GA.—"A Lawn Care Professional's Guide to Developing a Marketing Plan," the newest educational monograph from the Professional Lawn Care Association of America, is available free to all PLCAA members and to non-members for \$40. The monograph is authored by business consultants Ed Wandtke and Rudd McGarry and covers all the aspects of a marketing mix.

To order a copy, contact PLCAA at 1225 Johnson Ferry Road, Suite B-220, Marietta, GA 30068. Phone: (404) 977-5222. **LCI**

Use leasing to avoid payments during slow months

FIND OUT FIRST IF YOU REALLY NEED A PLANNED EQUIPMENT PURCHASE BEFORE BUYING

By JAMES E. GUYETTE
Associate Editor

CHICAGO—Leasing certain types of equipment can be beneficial, particularly if the terms allow you to avoid payments during the slower winter months, says Fernando Bensusaski, managing partner of Bensusaski, Delana and Luce, a financial consulting firm in Boise, Idaho.

When considering the purchase or lease of a piece of equipment, the first questions to ask include: "Should we have the equipment at all?" And, "what will it do for us?"

Bensusaski says it is necessary to know if the item will get enough use to justify its price.

Bensusaski conducted a seminar on leasing and money management at the Landscape Exposition in Chicago.

"Most of us who are self-employed are gamblers," he says. "We look at a piece of equipment and we say, 'that looks good,' and we buy it," he adds.

"When we talk about equipment needs we mostly consider technical need," he says. "We usually don't think too much about financial need."

Before buying, a business operator should ask, "Can we afford it?" Bensusaski says. "New equipment ought to help pay for itself."

Owners are warned to avoid piling up too much debt, because steep monthly payments can make the enterprise go broke if things turn sour. "The higher the equipment cost, the higher the risk."

The risks involved in running up too much debt can be lessened by leasing equipment, he says. It is especially beneficial if the terms can be arranged so that payments are not collected during the slow winter months when cash flow is low and the equipment is not in use. "That's good cash management."

To illustrate his point Bensusaski recalls growing up in Brazil, where his father was a mail clerk. The family got by with bartering for food and extras. However, times were tough in the winter when there were no crops to be bartered. "January was soup month—to this day I hate soup."

The concept can be applied to the green industries in regard to making payments on items that aren't bringing in any money: "You can't landscape on the snow."

Business owners are advised to avoid obsolete inventory. "What's obsolete inventory?" Bensusaski asks. "When you have fresh-cut Christmas trees on January 3."

Storing materials that are

outdated adds to the cost of doing business and wastes money. The "first in, first out" principle should apply to ensure that things are kept organized.

Bensusaski tells of an unorganized warehouse owner whose operation was in such a mess that instead of the FIFO principle, he used a FISH principle: "First In, Stays Here."

An accountant is an important addition to a business, but that person should be cho-

sen with care. "We have a tendency to shop for an accountant like we do for flour—how much does it cost?"

An accountant will help for better planning of finances, including figuring the average rate for the collection of accounts. This information can be useful, but a warning is in order. "Be careful of averages," Bensusaski says. "If you sit on a block of ice and set fire to your hair, by average you are comfortable."

For accounts that are reluc-

tant to pay, the response is to simply ask them to settle. "Most people will pay if you bug them enough."

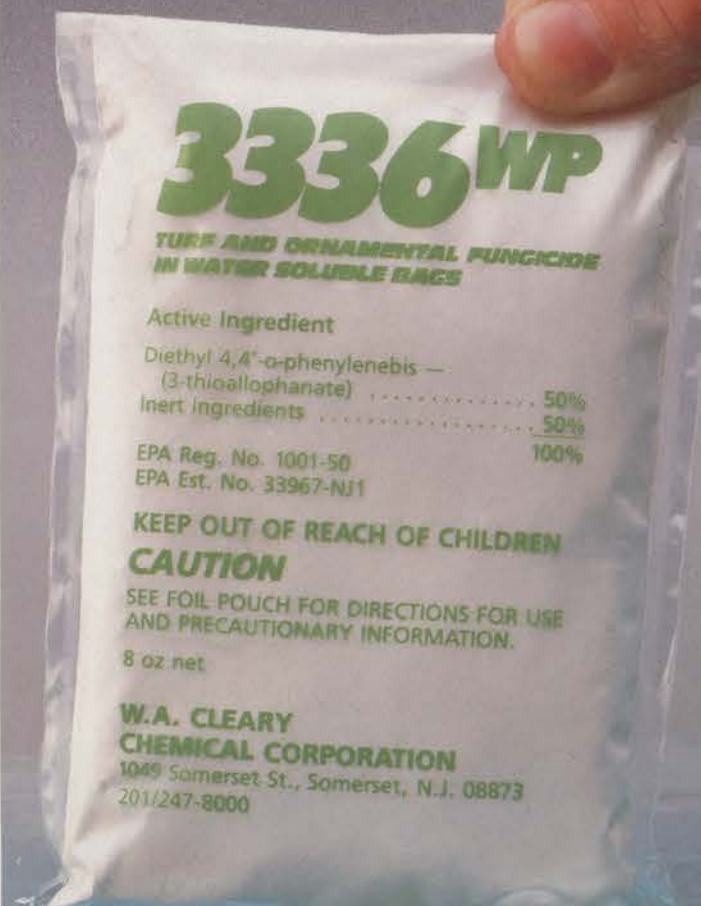
Business owners who are seeking financing for a loan are advised to make personal contact with the bank official in charge of that department. "Banks aren't good or bad—it's the loan officer," Bensusaski says.

If you are turned down, keep trying, either by re-packaging the proposal or going to another bank. LCI



Bensusaski: Avoid high debt.

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Part-time and entry level employees play a key role

LOW TURNOVER AT THE LOWEST RUNGS OF THE CORPORATE LADDER KEEPS MORALE UP

Companies that rely heavily on part-time and entry-level help have many reasons for minimizing turnover among these workers. Effective management of these employees is crucial to the company's performance.

Let's review some of the reasons for building loyalty and longevity among part-time and entry-level workers.

First, the ability of the workers to give a team effort depends upon their being together for a period of time.

Second, the company gets a more effective performance from workers who know each other and their jobs.

Third, managers can schedule jobs more effectively if they have a good understanding of their employees' abilities.

Fourth, the lower the turnover, the less supervisory time is required. New people need more supervision and training.

Fifth, the work atmosphere is more positive if the company is not undergoing constant personnel change.

Having stated some reasons for retaining part-time and entry-level employees, let us now consider the ways of doing so. There are two aspects involved in minimizing turnover: worker compensation and personnel management. Let's consider them separately.

Compensation

Low pay doesn't encourage part-time and entry-level employees to stay with the company. Lawn management, being hard physical work, doesn't add to an employee's motivation either.

Managers are advised, then, to look at possible incentive bonuses for employees, and not just financial bonuses. A paycheck alone will not induce people to remain with the company, particularly if the pay is low.

Incentives can either be a small cash bonus for good performance, or little perks like baseball tickets or an evening out.

Companies are limited, however, in how much they can offer employees in the way of incentives. The more important factor is in the personnel management.

Personnel management

Some keys to good personnel management are as follows:

1) Introductions. When an employee is hired, make sure he or she is introduced to co-workers. Employees are more likely to stay if they get to know their co-workers. (We have seen companies where a new person didn't know the

names of the people they were working with for a long period of time. These companies had high turnover rates.)

2) Expectations. Always let employees know what is expected of them when they join the company. If they have realistic expectations, they are much more likely to stay.

3) Support. Make sure new employees have someone around them the first few days and weeks to help them do their job. If a new employee

understands how to do their job, they are more likely to stay. Simply turning someone loose on the job without some type of help will guarantee they won't stay long.

4) Feedback. Always let the employee know how they are doing. Whether the feedback is negative or positive, letting the employee know his or her status is key to their retention.

If it takes three weeks to give someone feedback on a

job, the motivation fades. Keeping them up to date on their performance, on the other hand, helps them to have a sense of belonging to the organization.

If you can't give the feedback yourself, see that the supervisor does. This requires giving timely feedback to the supervisors.

The style of management will always reflect the organization's leadership. Attention to feedback for the personnel

reporting to you will transfer to those who work under them.

In general, the key to retention of part-time and entry-level employees lies in the personnel management style used. If the people working feel they can contribute to an overall effort, they will be likely to stay. If they are given feedback on a regular basis, they are likely to stay. And if they are treated as if they are valuable to the company, they are likely to stay.



Just because you can't pay part-time and entry-level people a large salary doesn't mean the workforce has to turn over constantly. The time needed to manage the employees must be weighed against the costs of high employee turnover.

For most companies, good management practices in the handling of personnel will be repaid in retention and effectiveness.

LCI



McGary

Wandtke

About the Authors

Rudd McGary and Ed Wandtke are senior partners with All-Green Management Associates, Inc., Columbus, Ohio.

Avoid spray drift and a breeze won't blow away your profits

COLUMBUS—Pesticide drift can be reduced, says Erdal Ozkan, associate professor of agricultural engineering at Ohio State University.

"It (drift) occurs wherever liquid sprays are applied, whether on farms, forests or front lawns," Ozkan says. "As long as we apply liquid chemicals, we can never eliminate drift. But we can reduce it to manageable levels."

"Rarely do conscientious and experienced operators get

into serious trouble with drift damage because they take steps to avoid it," he says. "By using good judgment regarding equipment and weather, the operator can minimize drift potential in virtually every case."

Ozkan's guidelines are:

- **Use nozzles that produce large spray droplets.** Nozzles that produce small droplets, less than 50 microns in diameter, drift longer distances. Ozkan acknowledges

that smaller droplets are often preferred because they offer more effective target coverage. However, research indicates that a rapid decrease in drift occurs as droplets increase to about 150 microns.

- **Operate sprayers at low pressure.** Spray pressure is a key factor in regulating drop size. High pressure generally decreases droplet size. Reducing pressure will therefore enhance drift control.

- **Use spray additives if necessary.** Thickeners or emulsifying agents can be added to a chemical formulation to produce coarse spray, and thus increase the viscosity of the spray mix. Increased viscosity means fewer of the fine droplets will be subject to drift.

- **Avoid spraying on hot, dry days.** Low humidity and high temperatures enable droplets to remain airborne longer and drift from the intended target. This happens because as spray droplets fall, molecules of water on the droplets' surfaces evaporate. The higher the temperature and the lower the humidity, the greater the rate of evaporation.

- **Do not spray when the air is completely calm or there is an atmospheric inversion.** Under normal conditions, as warm air rises, it carries suspended chemical droplets that eventually dissipate into the upper atmosphere. But when the atmosphere is highly stable, a blanket of warm air holds down cooler air. Particles suspended in the cool air move laterally, missing the targets and often landing on sensitive plants. These inversion conditions occur in early morning when the damp ground cools the air layer above it. Wait until late afternoon or early evening to spray.

- **Don't spray when wind speeds are more than five miles per hour.** This seems like common sense, but it's often ignored. Winds can cause even large droplets to move off target. A 100 micron droplet travels 500 feet when it is released into a 10 mph wind from a height of 10 feet.

- **Avoid spraying near sensitive plants.** Wind direction is as important as wind velocity in reducing drift damage. The presence of sensitive plants is one of the first things that should be evaluated. LCI

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If you are interested in obtaining any available or additional editorial research or reference materials published in this or previous issues, direct inquiries to Kathleen Maciuszko at 216-826-2839.

Contractors find computers make bidding easier

INITIAL INVESTMENT INCLUDES RESEARCH, HARD WORK AND LOTS OF PATIENCE

By ELLIOT MARAS
Editor

LONG BEACH, CALIF.—More lawn management contractors are finding that computers make their information management and bidding and job costing easier. LAWN CARE INDUSTRY'S 1987 State of the Industry Survey found 41 percent of the contractors online.

Some contractors, however, are intimidated by the maze of available packages and the time needed to learn to use a computer. Are the advantages so great for all lawn management contractors, they ask.

Yes, attest two who have been using them for the last several years. They say computers offer all their colleagues a savings in time and a better handle on finances and bidding. They also say the experience of working with a computer can be emotionally uplifting.

Owen Dell of County Landscape & Supply, Santa Ana, Calif., and Dave McLeroy of Green Leaf Landscape Management, Inc., Cupertino, Calif., gave an introductory computer seminar at the Landscape Industry Show in Long Beach, Calif. The show was sponsored by the California Landscape Contractors Association.

McLeroy, who grosses about \$1 million in lawn management, says computers are particularly useful for contractors whose sales are around the \$1 million mark. The overhead is as high at that volume as a company doing twice that much.

A job costing program can break a job into percentage costs. If the contractor wants to adjust the bid to adjust his percentage profit, he can do so without recalculating all the costs.

Time averages can be filed for every type of job. These averages can be used to determine monthly budgets for each individual task. The budgets can be produced in a matter of minutes. "It's put us in a position to know which jobs don't make money," McLeroy says.

Flexibility in adjusting finances is another big advantage. During the recent drought, the computer was instrumental in helping McLeroy determine how much he could raise prices without losing too many customers.

The word processing function enables the contractor to mass produce from scratch any written statement within minutes, Dell points out, be it an invoice, coupon, flyer, newsletter or proposal.

Those packages that have



Dell: Database invaluable.

graphics capabilities enable the business to print up a brochure within minutes without using a graphic artist.

The database function enables the contractor access to specific information about his customers. He can, for example, call up a list of all customers who paid out at least \$10,000 in a year, or he can get a list of all customer addresses within a given neighborhood.

"It's (the database function) really one of the most powerful tools of a computer,"



McLeroy: Introduce staffers gently to the computer.

Dell says.

The investment

Investing in a computer system starts with research. McLeroy encourages contractors to read computer magazines to get a feel for what software and hardware are available. Hardware refers to the actual machine itself, while software refers to the instructions that are fed into the machine.

Software is bought first. The contractor must decide

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firmed SEVIN® brand user, consider this:

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Including tough on

what software packages will perform the functions he is looking for. Computer magazines regularly review software packages.

Learning the system will take a fair amount of time, Dell says, so don't start unless you know you'll have time available. Be prepared to spend two or three times the amount paid for equipment on instruction, he says.

At first, a simple task like transferring information from one file to another will take as long as three hours. Once you learn how to do it, it will take three seconds.

Most software packages will include some free instruc-

tion. This, however, will not be enough to make the novice user proficient.

Professional consultants are helpful, McLeroy says, but be careful: many are fly-by-nights. Always check out a consultant's references, and pick someone willing to spend as much time as is needed.

If you have video equipment, McLeroy recommends having the video camera record the training sessions.

"Preferably, you want a consultant who knows the industry," he says.

Also, be prepared to encounter some resistance from your staff, McLeroy says. They, like you, might be in-

timidated by a computer at first.

"You've got to introduce it to your staff in a way that will make them feel it'll help them do their jobs," he says.

Software

McLeroy advises generic software packages over the tailor-made, "vertical" ones—packages designed for a specific industry. Tailor-made packages are often not applicable to the individual contractor's operation.

No software bidding program has been successfully used by contractors, McLeroy points out.

The best software is the

type that doesn't require the user to learn a lot of commands. The novice wants a package which uses the same commands for all the different program applications.

Some packages use as many as 900 different commands.

McLeroy advises his colleagues not to use a software package until it's been on the market for at least six months.

Hardware

Computer models are pretty much the same, except for the amount of memory—the amount of information that can be stored in the computer at once. The other elements—the keyboard,

monitor and printer—don't vary much.

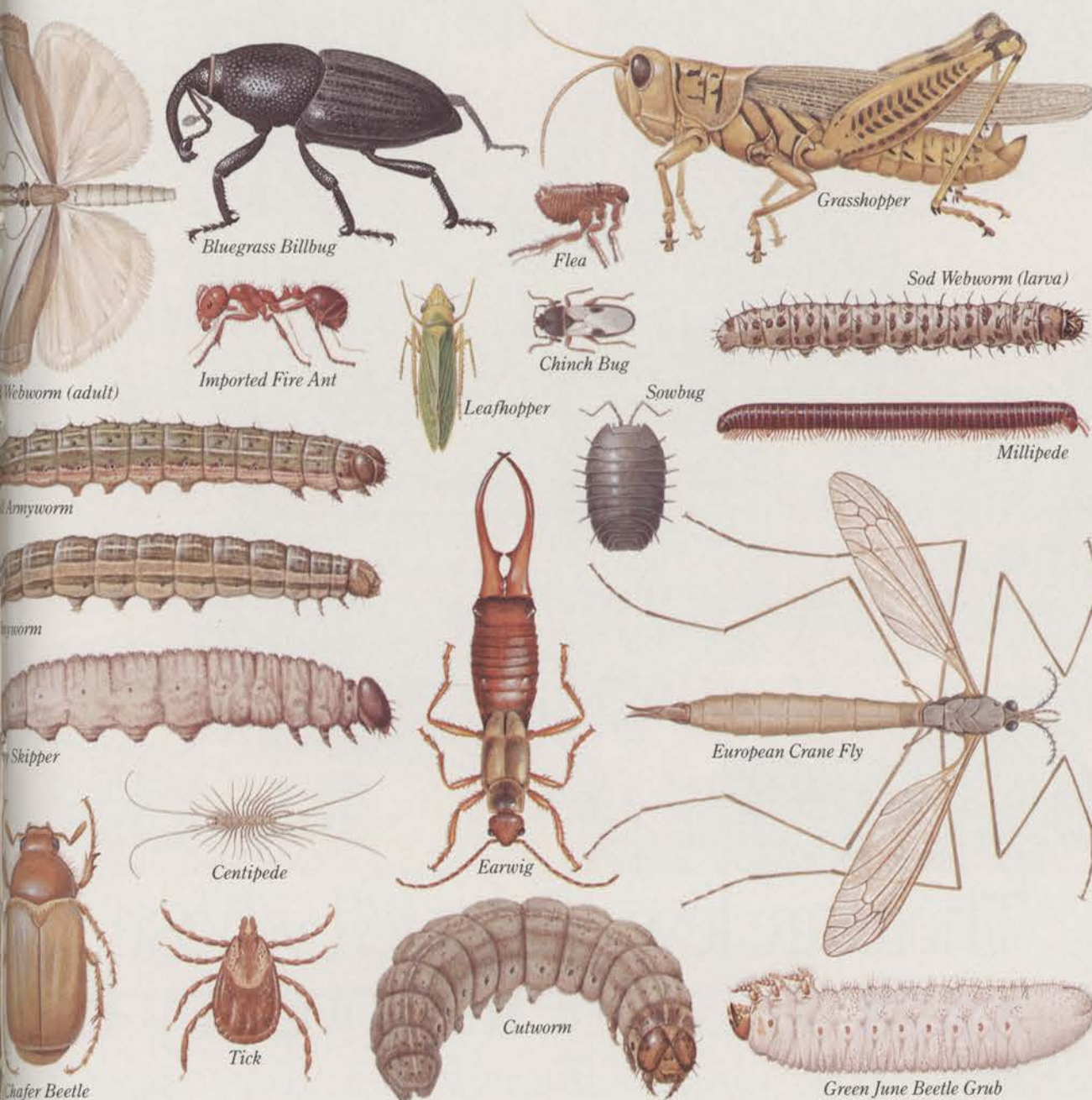
McLeroy notes that lawn management involves the use of a lot of information.

Dell prefers the McIntosh models to the IBM. IBM and McIntosh are the two major market brands.

The IBM is cheaper, they say, retailing at \$2,000 or under. But is more difficult to use, has inferior graphics and the monitor more difficult to read.

McLeroy and Dell advise contractors to shop at computer fairs and through mail order publications. Models can be found at half the retail price. LCI

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chinch bugs, billbugs, armyworms, cutworms, and webworms.

And SEVIN® brand SL carries a Toxicity Category Caution label. Which makes it ideal for use on golf

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example yet of getting more than what you pay for.

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Altec invests in trimmer market

BIRMINGHAM, ALA.—Altec Industries, Inc., a well-known manufacturer in the electric and utility industry, recently expanded its plant facilities in St. Joseph, Mo. to more aggressively pursue the tree trimmer market.

The company already sells the Aerial Devices and Bodies line of tree trimmers to lawn management firms, line-clearing contractors, municipal tree departments, park/forestry officials and others.

It recently developed a series of Aerial Devices specifically for tree trimming called the Linebacker LB lifts. The new manufacturing facility will help the company meet the growing demand for tree trimmers.

In 1986, Altec expanded the manufacturing plant by 103,625 square feet. Major expansions were made in the fabrication shop, installation center, the enclosed bay test area, the assembly plant and the new engineering offices.

The expansion raises Altec's total under-roof plant and office space at St. Joseph to 277,317 square feet.

Other major expansions are under way at Altec's distribution facilities in Birmingham, Ala. and at Altec Industries, Ltd. in Ontario, Canada. The company's total combined under-roof footage at all the plants is 534,000 square feet—the equivalent of more than 11 football fields!

Other capital expenditures have been made to improve the quality of Altec products and the efficiency of its manufacturing process. Two new Arc computer-driven steel cutting and punching machines are now in place and operational.

A total of more than \$6 million was spent in capital improvements in 1986. LCI

Extremists a threat | 'Organics' do offer benefits

The pesticide controversy is certainly heating up, not only in the public press but also within our industry itself. Lines are being drawn from those who don't care to those who care very much, with a large segment taking the middle ground, probably because they don't see the controversy as greatly affecting their business, at least yet. Maybe a few lessons from history will help bring things into sharper focus. First, let's take a look at who the

"environmentalists" are that are at the root of this controversy. Many, if not most, are well-meaning people who are justly concerned about the use and abuse of our environment. Although they labor for what seem to be good things, we need to take a look at what history and present day reality reveal about their initiatives.

Back in the late sixties a chemical called DDT was taken off the market in spite of the fact that evidence of its negative environmental impact was inconclusive. As a direct result, millions of people in the world die every year from malaria which previously was effectively controlled through the use of DDT. Why do the environmentalists support such destruction of human life? In 1978, a White House Executive Order, supported by the environmentalists, called for a ban on the support of, among other things, food that contained trace amounts of pesticides; food that often was destined for starving third world countries. What is humanitarian about initiatives that limit world food supply? The question remains as to what this has to do with our industry. The Rocky Mountain Chapter of the Sierra Club has gone on record that they are working for a "pesticide free environment." They, along with others, are also lobbying quite heavily for posting legislation. Obviously, posting will make it harder and costlier to do business, but we need to consider a further question.

Do we individually and as an industry want to in any way support the agendas of organizations who, through ignorance or intent, not only want

to affect our livelihood but also our food producing capabilities and our health? The ramifications of the agendas of environmental extremists deserve our utmost attention, not only to maintain our quality of life but to ensure the lives of our children.

Duane Moll
Supervisor
Lawn Care Dept.
B.D. Wilhelm Co.
Denver, CO.

I believe your February editorial regarding "organics" to be somewhat disconcerting. The analogy to the health food craze of the 1960s offers us more than the look of a mere fad. What the health food craze of the '60s did was help elucidate the nutritional problems of the average American diet and has, in fact, become incorporated into the mainstream of our nutritional thinking; low fat, low salt, no

preservatives, etc. So what? What does this have to do with lawn care? I believe the "organic" trend is a reaction to the symptoms exhibited by improperly nourished lawns, i.e., thatch, patch disease, poor rooting. I hope that it will act in the same way as the '60s health food "fad" to make our industry realize the agronomic shortfalls of the typical LCO fertilization program.

Too much quick release nitrogen, too many pesticides, and a complete neglect of the soil microflora and microfauna. We need balance. Balanced feeding with products that provide many of the nutritional aspects of which we are lacking. Fertilizer products, natural or synthetic, can provide this.

Jeffrey R. Johnson
Nor-Am Chemical Co.
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Toxicity and dose determine a substance's risk

NOTED RESEARCHER SAYS ALL CHEMICALS, NATURAL AND SYNTHETIC, CARRY RISK

By **ELLIOT MARAS**
Editor

LOUISVILLE—Chemical consultant Wendell Mullison gives a dose of perspective to the current furor over risks associated with pesticide use. That dose is dose itself—which, combined with toxicity, determines how dangerous a substance is.

Mullison, a consultant for the Dow Chemical Co., spoke on the misinforma-

tion surrounding pesticides to the Kentucky Agribusiness and Pesticide Workshop in Louisville.

He referred to a phrase coined in the 15th Century by the alchemist, Paracelsus—"The dose makes the poison."

"This is a very, very important concept," Mullison said. All chemicals, natural and synthetic, in some dose, are dangerous. Tear gas, for example, is a very toxic substance, but not



Mullison: Nature not benign.

harmful in the dosage it is used in.

"The real thing that makes a difference is you and me—how do we handle it?" he said.

Mishandling of pesticides should not be allowed, Mullison said. He said 2,4-D was recently sprayed near a playground where children were playing, an action that should never have been allowed.

As for the actual danger posed by 2,4-D in its labeled

use, Mullison said the public is perfectly safe. While one study has raised some questions about its safety, the conclusions of that study have been disputed by three out of four epidemiologists contracted by the U.S. Environmental Protection Agency.

In addition, Mullison said, 40,000 scientific papers have been written on 2,4-D, making it one of the best studied compounds in any industry.

"If we were to use the same standards for governing our toxic chemicals in food as we do in pesticides," he said a Thanksgiving meal would be reduced to sour cream, lettuce, crackers and an empty patty shell.

One of the great misconceptions is that natural substances are safer than synthetic ones, Mullison said.

Mullison also cited statistics from the U.S. Poison Control Centers showing very few hospitalizations have been connected to pesticides. **LCI**

Brochure has facts on lawn care safety

MARIETTA, GA.—A color brochure addressing fact versus fiction about lawn care chemicals is entitled: "The News Media's Lawn Care Scare." It is available at 10 cents a copy in multiples of 100 from the Professional Lawn Care Association of America.

The brochure points out some misconceptions people have about lawn chemicals. It notes that lawn chemicals help minimize homeowners' exposures to infectious diseases, noxious chemicals, airborne pollens, and poisonous and irritating insects.

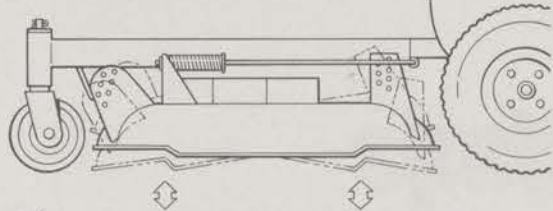
The brochure is one project supported by the PLCAA's recently-established defense fund.

Another project supported by the fund are a series of media relations seminars led by Ford Rowan, a professional media consultant. PLCAA officers and key members of local affiliate associations will participate in the seminars.

Rowan spoke on media relations at the 1986 PLCAA convention.

For information, contact PLCAA at 1225 Johnson Ferry Road, Suite B-220, Marietta, GA 30069. Phone: (404) 977-5222. **LCI**

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PLCAA plans for bigger show

MARIETTA, GA.—Seminars at the Professional Lawn Care Association of America's 1987 conference and trade show, Nov. 12-15 in San Antonio, will be split into three tracks.

The business management track will cover business image, leadership styles, customer retention, marketing, hiring and firing, data management and employee motivation and performance.

The agronomic and safety track will cover agromedicine, groundwater concerns, uniforms, exposure and employee health testing, new technology and new chemistry options, and transportation regulations. There will be an additional two-hour informal discussion with the experts.

The landscape maintenance track will cover cost estimating, management of trees, shrubs and ornamentals.

The program will be finalized in July. Information is available from the PLCAA at 1225 Johnson Ferry Road, N.E., Suite B-220, Marietta, GA 30068. Phone: (404) 977-5222. LCI



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MERGERS

from Page 1

a million dollars in 1986.

New England Green has nine branches and Orkin Lawn Care has 15. Together, they will serve 26 markets. All regions of the country will be covered except the Northwest; Orkin's branches are in the southern regions while New England Green's are in the Northeast and Midwest.

The acquisition is Rollins' largest in lawn care.

"This is part of a whole program we see as a major expansion into the lawn care business," Hicks said. He said Orkin will continue to look for companies to acquire.

New England Green is run by Mike McKee, who was president of the original Massachusetts-based firm, and Dan Chopp, who was president of Turf Pro. General manager for Orkin Lawn Care is Gordon Crenshaw.

Orkin Lawn Care is a division of Orkin Exterminating Co., the largest pest control firm in the country. Rollins has assets of \$120 million and annual revenues of about \$330 million.

The Superior merger with Ever-Green includes a combined total of 11 branches in the Midwest and Northeast.

Chalcross, who will continue to serve as general manager of Superior, said Superior has branches in Louisville, Lexington, Cincinnati, Dayton, Columbus and Indianapolis, and Ever-Green has branches in St. Louis, Kansas City,

Minneapolis, Milwaukee and Philadelphia.

Ever-Green is owned by the Hawley Group, Ltd. of the United States and the United Kingdom. The U.S. operations are based in Roseland, N.J. LCI



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LAW

from Page 1

list," he says. "Don't get on the cowboys' lists."

Because the new immigration law is a compromise version there are likely to be few public objections to the measure, which includes an amnesty program for illegals who can prove that they have lived in the United States since before 1982.

"The truth of the matter is that this will have a severe economic impact on labor-intensive industries, but there will be no sympathy," Greenbaum says.

"The cowboys will become more wild without societal control. They will love their new-found authority to step on the toes of employers."

The new law requires business operators to keep records that "verify the lawful right of the employee to work in the United States, and both the employer and employee are required to sign a verification form."

New penalties

The penalties include fines and jail terms for repeat offenders. Under the previous regulations employers were not punished for hiring illegals.

(The law is still not finalized, and LAWN CARE INDUSTRY advises those with questions to consult a qualified attorney.)

Employers and employees will be required to sign an I-9 form attesting that the worker is in the country legally. The employer is required to see assorted documents, such as a passport, certificate of naturalization or U.S. citizenship, an I-551 alien registration card (Green Card) and/or a driver's license.

When presented with a worker's document, "My recommendation is that you not only examine it, but you also make a copy of it," he says. "If you see a driver's license, keep a copy of it!"

These copies and the I-9 forms should be kept in a separate file for each employee. "Like a first aid kit, you should have an immigration kit." The kit should include a tape recorder or video camera in case of a raid by INS agents.

It is suggested that a personnel manual including hiring practices be prepared. Business owners should delegate someone else to process the I-9s.

"I recommend that it be neither you or people on the senior management level who fill out the forms. If there's ever a question you can say, 'Some other dude did it,'" Greenbaum says.

"We are trying to prevent somebody coming in and pointing a finger at you—the head guy."

Stay away from getting involved with helping your em-

ployees come up with the proper papers. "As employers, do not aid or abet the presentation of false documents," he says. "Do not have your foremen counsel job applicants," he adds.

"There will be people on the streets to counsel workers... without you or your foremen having to do it. It takes one disgruntled employee to turn you in."

Cheating not advised

Giving a worker a document needed to beat the law is an invitation for trouble. "That guy is going to get caught one day and they are going to ask him where he got

it from, and he'll say, 'from my employer.'"

To avoid discriminating against people who look foreign-born, Greenbaum suggests that applicants be told that providing the necessary documents is a condition of employment once they sign on. "Tell your workers that you intend to comply with the law."

It is important to break the habit of referring to employees by their ethnic background. "I want you to start calling all your workers 'the men' and 'the ladies.'" Avoid saying things like, "And then my Mexicans come along and do this."

At this writing the I-9 form has yet to be finalized—but when it is, copies will be sold in office supply stores. The I-9 form—or the information required on it—will have to be shown to an INS agent on request. An I-9 form is not required for a worker hired before Nov. 6, 1986.

Without warrants the INS agents can't walk through your private property and question workers and management. However, they can stop production and wait outside your yard to question anyone they want. "We all know that if the cowboys are standing at the gate that nobody's going to work today."

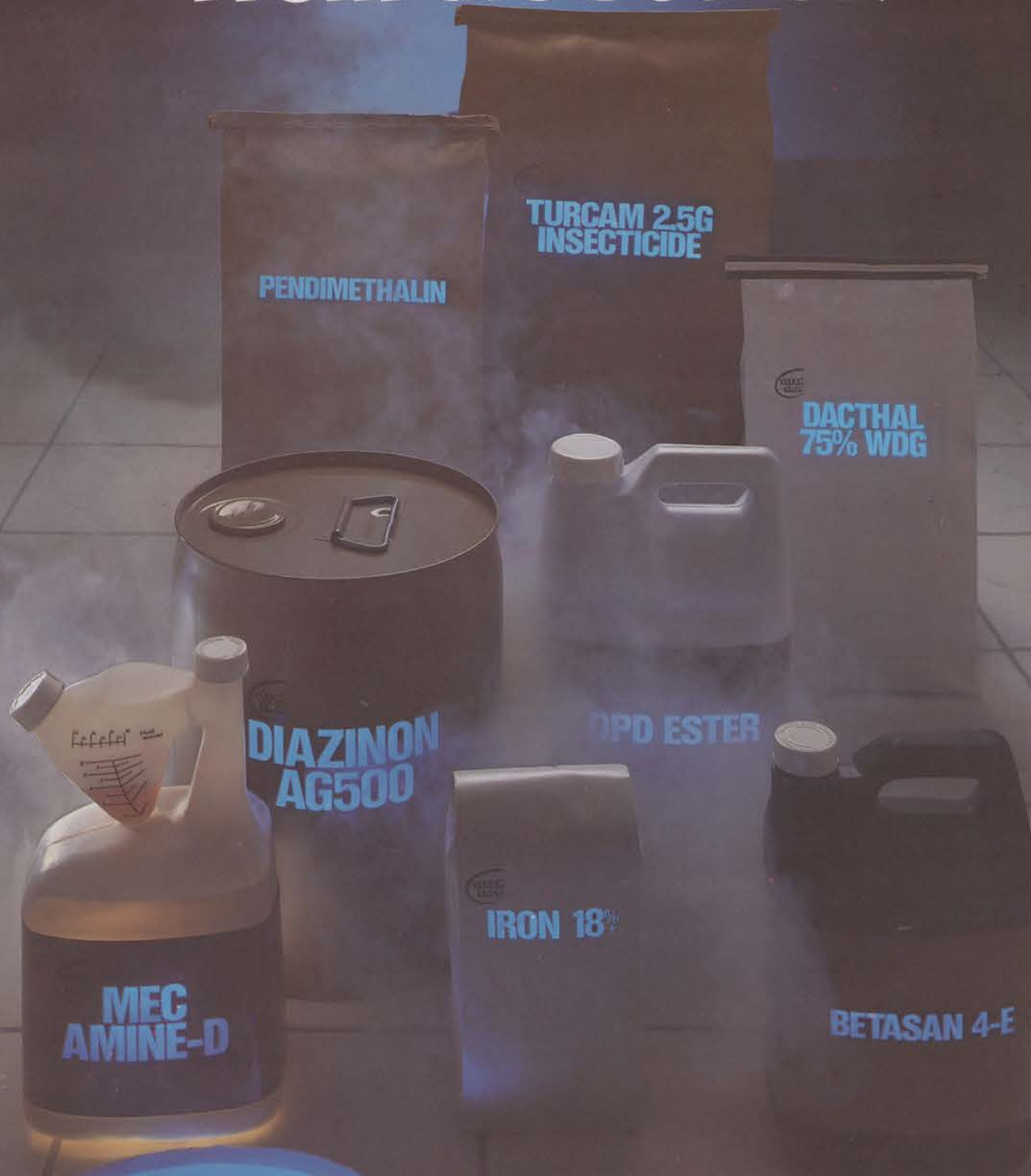
Greenbaum cautions business operators to avoid driving illegal aliens around in their trucks, lest the vehicles be confiscated for aiding in smuggling.

One man in the Long Beach area says an INS agent recently asked him, "How do you like your new truck?" It was a not-so-subtle threat.

Some may wonder about the wisdom of challenging INS agents who might be bending the law.

"Do you stand up to the INS?" Greenbaum asks rhetorically. Be prepared for the consequences, he answers. "If you can't stand the heat stay out of the fire." LCI

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Use backlapping compounds to join the reel world

BACKLAPPING METHOD OF SHARPENING SAVES TURF PROFESSIONALS TIME AND MONEY

By MARILYN CHAMPAGNE

Backlapping of reel mowers with a quality pre-mixed reel sharpening compound will help avoid problems associated with frequent grass cutting.

This method of sharpening can also save the turf care professional time and money.

Frequent grass cutting with a sharp, well-adjusted reel-type mower is one of the important factors in creating and

maintaining healthy and attractive turf.

Proper watering, seeding, fertilizing, as well as fungicides, weed killers and insecticides, are needed for top quality turf. However, the results of these treatments can be worthless if grass tips turn brown, become diseased, or clipping patterns show on the turf.

These problems are symptoms of incorrectly sharpened and adjusted reel mowers, according to the turf care spe-

cialists at Fel-Pro Inc., makers of Clover reel lapping compounds.

Pull gang mowers, and hydraulic power driven reel mowers create a scissor-like action between the reel blades and the bed knife. When properly ground and adjusted, this reel action slices grass cleanly, leaving no torn or jagged edges.

The edge of grass

It is the raw and torn edges

of grass that take on a brown appearance, no matter how well the turf is otherwise cared for.

These jagged tips also allow a greater opportunity for fungus and other diseases to attack the turf.

Mower grinding and lapping are complementary steps in sharpening a reel mower. Although there has been much debate, relief grinding seems to be recommended by more experts than flat grinding.

Better adjustment, closer cutting action plus longer life for bed knives is the reason for favoring relief grinding.

A ground, reassembled, and adjusted reel mower will cut fairly well. However, backlapping improves the cutting action by removing nicks and high spots from the knives.

The key benefit from backlapping is a perfect mating between blades and the bed knife to cleanly slice off grass. Many lawn care specialists backlap their reel mowers after every cutting to insure the sharpest possible blades.

The few minutes it takes each day for backlapping is time well spent for healthier grass. Grinding is generally done twice a year.

The daily grind

There are major drawbacks to more frequent grinding:

- Grinding is time consuming and keeps lawn care equipment out of action.

- A significant amount of metal is removed every time a reel mower is ground, thereby shortening blade life.

- Regular grinding of reel blades is unnecessary with the easy-to-use, pre-mixed, and biodegradable reel sharpening compounds now available across the country.

In contrast to grinding, lapping with reel sharpening compounds takes very little time, and removes very little metal from the blades. Pre-mixed lapping compounds offer several advantages over the "homemade" combinations created by some turf care people.

Ready-to-use compounds provide a consistent composition using high quality grit and carrier. The labor costs and time spent in preparing dry grit mixtures as well as the potential for variability in combining ingredients is eliminated when lapping products are used.

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About the Author

Marilyn Champagne is product manager for reel sharpening compounds at the chemical products division of Fel-Pro, Inc., Chicago.

grinding job, or renew cutting edges after use, requires minimal set-up time and work.

Turf care specialists using Clover compounds recommend the following basic steps:

1.) Always be careful to keep your fingers and hands away from all moving parts.

2.) Set the reel turning backwards. Hydraulic driven reels can be run in reverse, while wheel friction driven reels must be mounted on a backlapping machine.

3.) Adjust the bed knife from both sides to make even contact with the reel blades.

4.) Apply a reel sharpening compound, using a two-inch paint brush, to the blades as they are turning. Move the brush side to side along the reel to spread the sharpening compound the full width of the blades. After application allow the unit to run backwards until the reel is quiet.

5.) While the unit is turning, flush the reel with water from a hose to remove all abrasive grit.

6.) Turn off the lapping machine. Spin the reel backwards by hand and adjust for a very light uniform contact between reel blades and bed knife. When spun by hand, the reel should rotate two or three revolutions before stopping.

7.) Slowly turn the reel forward and make any additional fine adjustment so a piece of paper will be sheared along the entire width of the bed knife by every blade. Be careful not to touch the cutting edges with your fingers.

Sharpening program

The following is a typical sharpening program for reel mowers in medium service:

1.) At the beginning of the season and in the middle of the season relief grind blades on a professional grinding machine.

2.) Backlap the blades after each of these grindings and every mowing session to keep the cutting edges keen and sharp.

This type of regular lapping program will prolong the life of mower reels, prevent downtime, and provide a consistent, razor-sharp cutting action.

And—most important—turf will remain healthier and be more resistant to attack and diseases. LCI

Lawn Boy gets new PR firm

MEMPHIS, TENN.—The Lawn Boy Product Group is giving its advertising account to Bozell, Jacobs, Kenyon and Eckhardt.

According to the *New York Times*, the Memphis-based mower maker is in a fight with Toro for the No. 2 spot in the mower market. Sears is No. 1.

Lawn Boy billings for the Atlanta-based Bozell agency could be about \$4 million. LCI

Thermogas expands into Iowa lawn care

By ELLIOT MARAS
Editor

DES MOINES—The Thermogas Co. of Des Moines, a propane gas retailer, plans to be a major player in that city's lawn care industry. The company is trying to sign its propane customers up for its newest service line, professional lawn care.

Thermogas, which retails propane gas in 13 states, already provides lawn care in some of its Illinois and Wisconsin branches. The lawn care is called Turf Treet.

Pat Miner, district manager for the Des Moines branch, hopes to pick up 400 to 500 customers the first season. He says door stuffers have gone out to 9,500 homes. About 2,500 of these went out with the company's regular gas statements.

Miner's expectations are not unrealistic considering: 1) the Des Moines branch already provides an industrial weed control service, and 2) Miner serviced about 350 customers in his own lawn care firm, Miner's Green Lawn, Inc. He sold his year-old firm

to Thermogas in January.

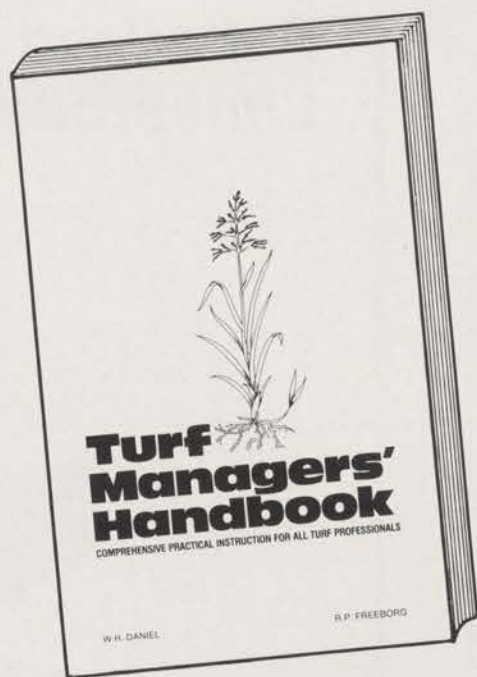
Des Moines is a tough market, Miner admits. There are about 50 lawn care companies already. But, "I know that within a three-year span Thermogas will be a major marketer in Des Moines.

"With our reputation as a gas company, 51 years old, just off of our customer list it'll be a heck of a good start," he says.

The existing staff will handle the initial response, Miner says, but he's hoping to have to add as many as six employees and two trucks by the end of the season.

Miner intends to emphasize personal service. "If you can keep it to that personal level, it (the response) is unreal," he says.

Will more Thermogas Co. branches be following Des Moines' example and add lawn care? Yes, Miner says, but bear in mind that many of the branches are in rural areas where the potential for lawn care is considered to be limited. Nevertheless, he notes that the branch in Monticello, Iowa, population 4,000, is adding lawn care this season. LCI



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LESCO posts record sales

CLEVELAND—LESCO, Inc., manufacturer and distributor of turf care products to the lawn care and golf course industries, reported record sales and earnings for the fourth quarter and fiscal year ending Nov. 30, 1986.

Net sales for the year of \$69,257,615 were 30 percent above the \$53,275,314 recorded a year earlier. Net income rose 8 percent to \$2,677,047, or 65 cents per share, against \$2,471,703, or 60 cents per share in the prior year.

Net sales in the fourth quarter, the company's seasonally strongest period, amounted to \$24,599,605, up 54 percent from the \$15,990,430 in the prior year's fourth quarter. Final period net income of \$1,473,672, or 36 cents per share, was up 25 percent from the \$1,174,753, or 29 cents per share, earned a year earlier.

Per share amounts have been adjusted to reflect a two-for-one split of the company's common shares in April, 1986.

James I. FitzGibbon, chairman and chief executive officer, said all major product categories contributed to the sales increase during the year, and that fourth quarter results benefited particularly from the sales of the company's branded pre-emergent turf control product to the nation's golf courses and lawn care companies.

"Our 1986 earnings were at a new high, despite the costs associated with a substantial investment in expanding manufacturing capacity and personnel at our Sebring, Fla. plant, which produces triplex greensmowers marketed directly by LESCO to the golf course industry," FitzGibbon said.

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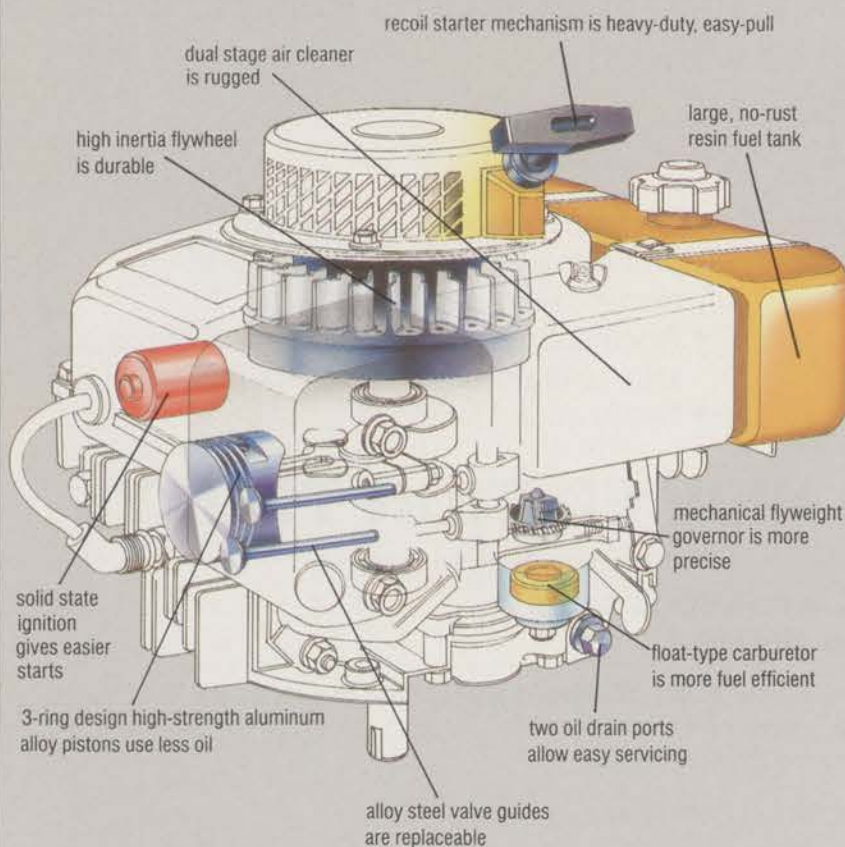
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MARKET

from Page 1

Services Corp. "Certainly that creates a more competitive atmosphere."

But Howard Evers, president of Atlanta, Ga.-based Tru Green Corp., welcomes the change. "It creates a higher level of awareness for lawn beautification," he says. Various market studies, adds Evers, show that professional service users rarely switch back to do-it-yourself products.

One television commercial features Miami Dolphins coach Don Shula with Hypo-nex Lawn Fertilizer. A recent article in *Fortune* reports the Atlanta, Ga.-based Hypo-nex Corp. is counting heavily on the product to boost sales this year. Hypo-nex, a marketer of consumer lawn and garden products, previously sold granular formulations.

"We feel it (the consumer demand) is on the upswing," says Peter Durbetaki, Hypo-nex marketing manager.

O.M. Scott & Sons Co., which markets fertilizers to both the consumer and professional markets, has invested more heavily in the consumer side this spring, says Ron Gagne, commercial sales manager. This is partly in response to the Hypo-nex product, he says.

Consumer was down

If the consumer market is now growing faster than the professional market, it could be because the consumer market suffered in recent years.

Larry Sullivan, senior consultant for the Kline Co., the Fairfield, N.J.-based market research firm, says manufacturers were actually losing customers in the consumer market three years ago.

Sales for consumer products were down 5 to 8 percent a year for the last few years for Lebanon Chemical Co., says Paul Mingle, manager of marketing and sales for the turf division. The company markets products to both sectors. This spring, however, has seen a turnaround.

"There's a switch back," Mingle says. "Our market penetration has improved on both sides."

"The professional market was growing 7 percent faster than the consumer market two years ago, says marketing consultant Tom McNamara, who heads NUVENTURES Consultants of La Jolla, Calif.

That gap has narrowed. "More people are first-time homeowners because of the lower interest rates," McNamara says.

Dean Ludwig, product manager for The Andersons, Maumee, Ohio, says both segments are growing. "The baby boom generation is moving into home ownership and lawn care. The whole category is blossoming, both professional

and retail," he says. "Both are growing, and not at each other's expense."

Buyers are different

The Andersons' market studies show considerable variance in the demographics of consumer and professional product users.

People who use professional services have higher incomes, are better educated and have larger yards, Ludwig says. They also are more concentrated in large population centers and in the Northeast region of the country. "I think that market is still growing. The professional workforce

isn't dwindling," he says.

George Horn, director of special products marketing for Rocky River, Ohio-based LESCO, Inc., agrees. "I think both segments are very strong this year," he says. He credits this to an early spring, reasonable prices, good products and more promotional advertising.

LESCO primarily supplies the professional market.

Sales are up in both markets for True Value Hardware Stores, which continues to open professional lawn care operations under the name Green Thumb Professional Lawn Care at its retail facilities. Ken Lemieux, coordi-

nator for the program, says the professional service isn't losing anything to retail sales.

Dries Building Supply, Macungie, Pa., is a True Value store that has operated a Green Thumb program since it began in 1983. Jack Biddle, retail sales manager, says business is up in both areas this year. He notes that the professional service is particularly strong in the commercial sector.

"They're not competitors with each other ... The people who want a spray service don't want to do it themselves."

Biddle attributes the growth to new construction.

LCI

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Circle No. 111 on Reader Inquiry Card

NEW PRODUCTS



Billy Goat gust adjuster blows competition away
A "gust adjuster" feature on a new Billy Goat Industries

blower allows the operator to pick up and move debris instead of just pushing it around, according to the firm, located in Lee's Summit, Mo.

The gust adjuster on Model BL-1100IC has a hand control that directs the airflow from front to side. Debris can be lifted and directed for greater placement control, the company said.

The 11-hp wheeled blower features a tote box for storing tools or bulky trash such as rocks.

Model BL-1100IC comes with either a Honda or Briggs & Stratton engine. It is designed for heavy-duty opera-

tions.

Circle No. 201 on service card.

LCI

Exmark Turf Rake also is commercial aerator

A spring-steel slicer assembly allows the Exmark Turf Rake to become an aerator that can be used all year round. The attachment makes the Turf Rake suitable for dethatching, turf renovation or preparing seed beds.

The Turf Rake powers through thatch and root bound grass with its 28 hardened steel, self-cleaning, cutting fingers. It comes with a 5-hp Briggs & Stratton engine,



and the forward movement of the cutting fingers helps propel it.

Height adjustments can be

made in seconds, according to the Beatrice, Nebr., company. The Turf Rake's deck is 20 1/2 by 22 1/2 inches.

LCI

Circle No. 202 on service card.

Kelch gauges for lawn-mower aftermarket

Kelch Corp., a manufacturer of gas caps and gauges, has introduced two pre-packaged gauges for the lawnmower aftermarket.

One gauge is designed to fit all Outboard Marine Corp. Lawn Boy Supreme Model lawn mowers, and the second is designed for the Briggs & Stratton 3 1/2 and 4 hp Max series engine with manual start.

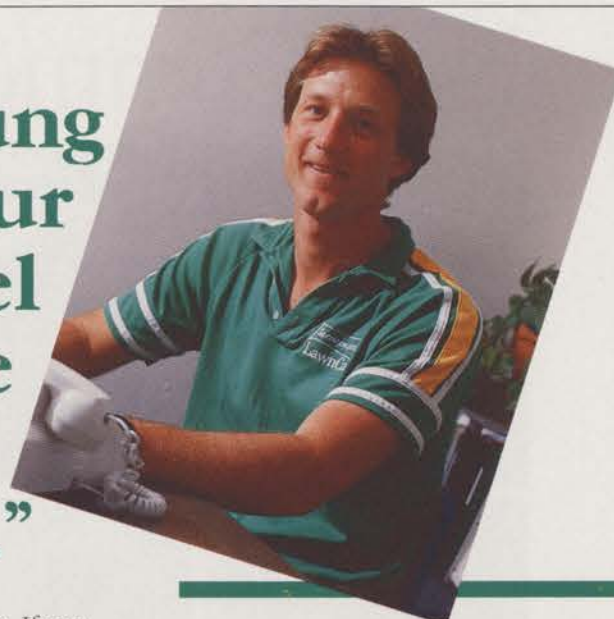
The gauges were developed to specifications of major equipment manufacturers and have been field tested for dependability, according to the company.

The gas level indicator is easy to read, and the sturdy construction makes it trouble free, the firm said.

LCI

Circle No. 203 on service card

"...As a young entrepreneur I definitely feel that I've made the right decision."



"The support ServiceMaster gives you is incredible. If you don't have marketing and management skills, ServiceMaster is the way to go.

Any novice can come in. ServiceMaster advises you every step of the way: bringing on a new employee, buying a new van, marketing...

I have several friends in business for themselves and they're quizzing me for advice. One friend, a landscape architect, is trying out his third bookkeeping system. And they all wish they had the same kind of support system we have in ServiceMaster.

The regional distributor has been a great help to me. Also, Rick White visits all the LawnCare licensees once or twice a year. If you need advice he's always available by phone, as well.

It's reassuring to have somebody to turn to. He hasn't led me wrong yet.

I find it a real advantage to be part of ServiceMaster. People recognize the name. In my door-knocking I've come across ServiceMaster cleaning customers and haven't had a negative response yet.

The materials are really effective. I was sold on liquid when I used to work with another lawn care company. I now see the use of both granular and liquid as a real benefit.

All my customers from last year stayed with me except one. The husband wants to try it himself. His wife says he'll be back next year.

I'm amazed at what's come out of all this. As a young entrepreneur I definitely feel I've made the right decision."

Ted Duncan

Ted Duncan
ServiceMaster LawnCare Operator
Littleton, Colorado

"Making the right decision can be a tough process, especially when you're thinking about going into business for yourself. You can really back yourself into a corner wondering if you'll be able to handle all the mysteries of being your own boss.

Setting up shop, bookkeeping, getting customers, keeping customers...it can seem pretty complicated. And it all boils down to one question: WILL I MAKE IT?

I know. I've been through it all. I had my own lawn maintenance company before I joined the ServiceMaster team. What attracted me was the beauty of franchising and the fact that ServiceMaster does it better than anybody else.

I personally oversee the technical training of every new licensee. When my students leave the Academy of Service, they can run their own business—and keep it running. They've got the whole ServiceMaster system working for them.

Are you interested in being your own boss? There's a lot of satisfaction to it. Thousands of others have gone before you to build successful ServiceMaster franchises. You can be one of them.

Ted Duncan went through the Academy of Service, our intensive training program, in March of '85. He's entering his second year as a ServiceMaster LawnCare operator, and I've asked him to talk about his experience.

Think about it. If you're interested give us a call, or write. We have a real opportunity for people like you."

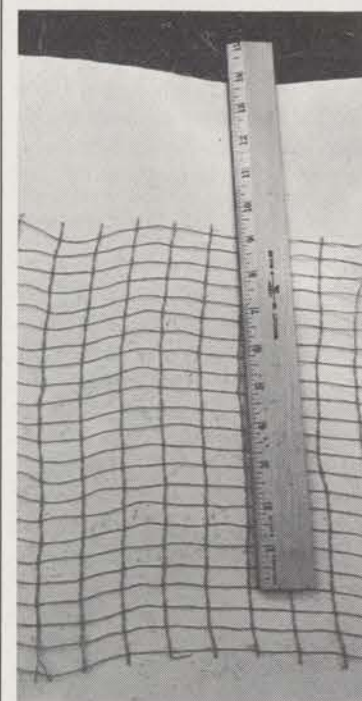
Rick White

Rick White
Vice President
ServiceMaster LawnCare

For information and a franchise application, please call or write:

ServiceMASTER
LawnCare

ServiceMaster LawnCare
2300 Warrenville Road
Downers Grove, IL 60515
(312) 964-1300



Erosion control netting is made out of paper

Hobbs & Hopkins, Ltd., Portland, Ore., recently introduced Saxolin-X erosion netting, a 12-foot wide, biodegradable cellulose paper netting that is strong and lightweight for easier handling.

The 12-foot width reduces the chance of breakaway on a slope, and less staking is needed, according to the company.

A woven material that absorbs moisture, Saxolin-X molds to ground contours—allowing plants to establish themselves through the netting.

It comes in two grid sizes.

LCI

Circle No. 204 on service card.

If you are interested in obtaining any available or additional editorial research or reference materials published in this or previous issues, direct inquiries to Kathleen Maciuszko at 216-826-2839.

Pitching lawn care with baseball is a hit

By JAMES E. GUYETTE
Associate Editor

Baseball: It's the Great American Pastime.

What could be more glorious than kicking back on a warm summer evening and taking in a game of professional baseball under the stars while enjoying a cup of ice-cold beer?

Baseball makes people feel good.

And get this—baseball makes people feel good even if the hometown team is losing.

I know. I'm an undisputed expert at this: I've been a Cleveland Indians fan for years.

It would seem that an advertising and promotional campaign tied into baseball is a sure-fire way to gain much good will and recognition for any green industry firm.

From the blended bluegrass sod (overseeded with rye) of Cleveland Municipal Stadium to the putting green-like Santa Ana Bermudagrass outfield (bluegrass infield) of the Big A in Anaheim, Calif., people are impressed with the beautiful turf at major league ballparks.

They think, "Boy, I sure wish my grass was like that," or, "Boy, I'd sure rather be taking in a game instead of taking care of my lawn."

A built-in marketing hook!

Just ask Paul Somich, sales manager at Modern Power Equipment in Cleveland. "I've always been behind the Cleveland Indians." His company sells Snapper products, and for 10 to 15 years it has increased its sales of lawnmowers through advertising and promotion campaigns with the Tribe.

Wouldn't you know it, last year was the first time in a long while that the firm did not buy television time. The Indians got hot and the TV viewership doubled.

This year the 50 Northeast Ohio Snapper dealers are prepared with a co-operative \$150,000 campaign.

Fans streaming through the turnstiles on Father's Day will receive Snapper beachballs and grills; and Indians manager Pat Corrales and former All Star pitcher Herb Score, who now is on the popular play-by-play radio team, are featured in Snapper commercials.

The topper is the "Snapper Mow 'Em Down Game," in which fans register at a Snapper dealer for a chance to win a 21-inch 351-D lawnmower. The contestant, chosen over the radio at the start of each game, wins if an Indians pitcher strikes out the side in order.

That exciting event happened during the home opener as Tribe hurler Tom Waddell whiffed three Baltimore Orioles.

"Give that fan a lawnmower," I shouted to the crowd in my section. They didn't seem too impressed—and judging from the rate of people who kept crossing in front of me—they were more concerned with their weak bladders. (Why do these people always have to sit in my row?)

Fans of the Mets, Reds,

Phillies, Twins, Royals, Tigers, Braves, Cardinals and Angels are all aware of Snapper merchandise through giveaways including seat cushions, ponchos, mugs and tote bags, according to David Bernhardt of Snapper headquarters in McDonough, Ga.

"They're very effective," reports Bernhardt. "Baseball season starts right at the beginning of our peak season."

It appears that any lawn care-oriented firm could reap a gold mine of positive pub-

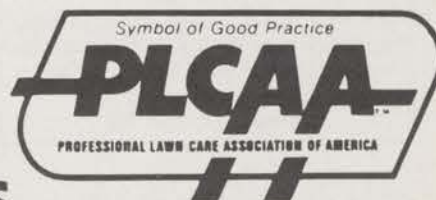
licity and name recognition by associating with its local baseball team—even a club that's losing.

People always ask how I can root for the Tribe when they lose so many games. The answer is easy. When my friends and I attend a game we go there to watch the game of baseball being played by the greatest players in the world. If the Indians happen to win, it's gravy!

James E. Guyette



1987 PLCAA Regional Seminars Focus on Environmental Awareness



The survival of your business into the '90s could well depend on your knowledge and management of safety regulations and practices. That's the reason behind the Professional Lawn Care Association of America's 1987 Regional Seminar Series. Environmental safety is the theme for this new format, and the educational sessions include guidance in business survival in a regulatory climate, and a workshop devoted to applicator training and awareness.

FOR THE OWNER/MANAGER

Risk Awareness and Management

1 PM to 4 PM – An afternoon of intensive training for lawn care owners and managers. The focus is on up-to-date, practical information and guidance in your safety concerns and solutions. The emphasis is on your area and your problems. Safety professionals, representatives from local regulatory agencies, and public health officials team up to discuss both responsibilities and solutions.

FOR THE APPLICATOR/TECHNICIAN:

Applicator Training: Safety and Emergency Procedure Techniques

5:30 PM to 7:30 PM – This early evening session is targeted to the applicator's role in safety and hygiene, and features the latest in application techniques and approved emergency procedures. The emphasis is on practical training, complete with demonstrations and role playing. A mock spill offers hands-on emergency training. The early evening program format avoids cutting into regular work schedules.

Outdoor Demonstration

4 PM to 5:30 PM – This is your chance to see what's new in lawn care equipment. Local distributors will be on hand to display and demonstrate their product line. Touch, try out and compare before you buy.

Applicator Safety Week

JUNE 1-5, 1987

Bring the message of Environmental Awareness home to your employees by structuring your own Safety Week. A PLCAA Guidebook on Environmental Awareness outlines an in-house training program for your employees, including five 15 to 30 minute sessions on safety. Alternately, run these sessions during the same week as PLCAA's 1987 Regional Seminar in your area and you have the impact of an entire week of safety awareness.

Environmental Awareness Certification

Upon completion of the Applicator Seminar and a written test, applicators will receive a PLCAA Certificate of Applicator Environmental Awareness.

Chuck Wagon Dinner

4 PM to 5:30 PM – Enjoy Tex/Mex food while viewing the indoor and outdoor exhibits – a fun time and a preview of the spirit of November's upcoming PLCAA Conference and Show in San Antonio, Texas.

PRE-REGISTER NOW!

Dates and Locations of PLCAA 1987 Regional Seminars

(Check the box with your choice)

<input type="checkbox"/> Atlanta, GA	June 11	<input type="checkbox"/> St. Louis, MO	July 28
<input type="checkbox"/> Washington, DC	June 18	<input type="checkbox"/> Kansas City, MO	July 30
<input type="checkbox"/> Philadelphia, PA	June 23	<input type="checkbox"/> Oklahoma City, OK	Aug 11
<input type="checkbox"/> Hartford, CT	June 25	<input type="checkbox"/> Dallas, TX	Aug 13
<input type="checkbox"/> Rochester, NY	June 30	<input type="checkbox"/> Minneapolis, MN	Aug 18
<input type="checkbox"/> Cleveland, OH	July 2	<input type="checkbox"/> Bolder, CO	Aug 20
<input type="checkbox"/> Detroit, MI	July 14	<input type="checkbox"/> Indianapolis, IN	Sept 1
<input type="checkbox"/> Cincinnati, OH	July 16	<input type="checkbox"/> Oakland, CA	Sept 22
<input type="checkbox"/> Chicago, IL	July 23	<input type="checkbox"/> Los Angeles, CA	Sept 24

FEES

ATTENDEES (indicate number)

PLCAA MEMBERS

— Owner/Manager(s) at \$25 ea. \$ _____
— Applicator/Technician(s) at \$10 ea. \$ _____

NON-MEMBERS

— Owner/Manager(s) at \$35 ea. \$ _____
— Applicator/Technician(s) at \$15 ea. \$ _____

TOTAL AMT. ENCLOSED \$ _____
(Payable to PLCAA, U.S. funds only)

Name _____

Company _____

Address _____

City _____ State _____ Zip _____

Telephone No. _____

Cut out and mail to:
Professional Lawn Care Association of America
1225 Johnson Ferry Rd., NE, Suite B-220
Marietta, GA 30068
Telephone: 404/977-5222

MAIL TODAY!

107

CLASSIFIED

RATES: 75 cents per word (minimum charge, \$25). Boldface words or words in all capital letters charged at \$1 per word. Boxed or display ads charged at \$70 per column inch, 1X; \$65, 3X; \$60, 6X; \$55, 12X (one inch minimum). Agency commissions will be given only when camera-ready art is provided by agency. For ads using blind box number, add \$5 to total cost of ad. Send ad copy with payment to: Dawn Nilsen, LAWN CARE INDUSTRY, 1 East First St., Duluth, MN 55802. (218) 723-9200.

BOX NUMBER REPLIES Mail box number replies to: Lawn Care Industry, Classified Ad Department, 1 East First St., Duluth, MN 55802. Please include box number in address.

FOR SALE

LAWN SERVICE CO. FOR SALE

North Central N.J. Well managed, long established, profitable. 3,000 plus customers; Gross - \$500,000 plus. Retirement minded.

Write to LCI Box 182

FOR SALE: Toro Parkmaster, micro adj., 7 gang, 5 blade, rebuilt cutting units, rebuilt engine, absolutely top cond., 100% ready for spring. \$12,900. Also, 1968 International rough terrain forklift, side-shift, \$7,900. Also, 7 Jacobsen fairway mowers no frames (rough) \$1,000. (313)653-5695. MI. 6/87

SPRAYERS: New Skid-mounted 300 Gallon Fiberglass Tanks. Electric Reel with 300' hose and gun. Unused - List \$3,470.00. Will take Best Offers. (216) 656-4200 6/87

FOR SALE: 1986 Lawn sprayer - 750 Gallon tank on Tandem Trailer - Hypr D-60 Pump - 8 HP Briggs Engine - Hannay 12 Volt Reel - 300 Ft. High-Pressure Hose - Chem Lawn Gun - Phone - Sue - 319-439-5316. 6/87

SPRAY TRUCK - INTERNATIONAL 1600: 57,000 miles, 12,000 gallon tank, 20/20 Bean pump PTO driven. Ready to use. Asking \$4,295. Call Jim (312) 790-1971. 6/87

(5) SKID MOUNT SPRAYERS - (3) LESCO VAN-MOUNT 200 GAL.; (1) PERMA-GREEN SUPREME LV2000, (1) FMC 50 GAL.; GOOD CONDITION, BEST OFFER. CALL TONY (317) 289-5200. 8/87

FREE PARTS CATALOG - If you own a 32-36-48-52-61" walk-behind or riding mower and feel you're paying too much for your parts and equipment call **PRECO DISTRIBUTORS** today. We have **BELTS, BLADES, WHEELS, GRASS CATCHERS**, Replacement parts that fit Bobcat, Bunton, Kees, Exmark, Scag & others. Engines and Parts for Honda, Kawasaki, Briggs + Stratton and more. Order your free catalog 24 hours a day. **TOLL FREE 1-800-428-8004, US, In Mass 1-800-421-3900.** Preco Distributors, 97 Center St., Ludlow, MA 01056. 8/87

USED CHIPPERS, BUCKET TRUCKS, BOOM TRUCKS: Stump grinders, stake bodies, tree trucks and dumps. New Morbark and Woodchuck Chippers. Rayco stump grinders at discount prices. We also buy trucks and equipment. Opdyke, Inc., Hatfield, PA (Phila. area) 215-721-4444. 11/87

1980 C-600 Ford Cabover Teco Vanguard 52' boom, dump box, newly painted 1987. Excellent condition, low miles, \$31,900.00. 1977 Ford C-600 dark blue, 4 speed split axle. New tires, 48,000 miles. 1,000 gallon single carbon steel tank Emron white. Myers 2695 2 stage 25 gallon per minute pump. 200 psi. 2 Hanney electric reels \$8,500.00. Hahn JR-4 aerifier self-propelled 23" swath aerifier. 26,000 sq. ft. in an hour at an easy 3 m.p.h. walk. 1 extra set of spoons used 1/3 of a season. \$1,200. E-Z Way Lawn Care, 4828 South Beach Daly Road, Dearborn Heights, MI 48127. 313-292-7110. TF

HANNAY HOSE REELS: New in the box. E1526's and E1530's - \$339.00. We will ship and pay freight anywhere in the U.S.A. and Canada. Immediate delivery. Other size reels and parts available at fabulous savings! Call 313-543-2200, in Michigan. Outside Michigan - 1-800-843-LAWN. TF

FOR SALE

CLOSEOUT SPECIAL! Save your back issues of **LAWN CARE INDUSTRY** and save money at the same time. We're closing out our line of permanent binders at the special low price of **two for only \$7.50!** (This is a \$7.00 savings over our regular price plus postage and handling.) Orders will be filled as long as our supply lasts - quantities are limited. Order your binders today from: Book Sales, HBJ PUBLICATIONS, One East First Street, Duluth, MN 55802. TF

HELP WANTED

LANDSCAPE MAINTENANCE SUPERVISOR: Looking for individual with ability to supervise and motivate own crew. Minimum of five (5) years experience. Send resume and salary requirements to: DeAngelis Landscape Incorporated, 22425 Van Horn Road, Woodhaven, Michigan 48183. 6/87

Landscape Maintenance Salesperson position available with Yardmaster, Inc. in Cleveland, Ohio. Excellent compensation plan and benefits. Join Ohio's largest design/build and maintenance firm. Send resume or call **YARDMASTER, INC., 1447 N. RIDGE RD., PAINESVILLE, OH 44077, 216-357-8400.** 6/87

MANAGER - Citrus County, Florida. Lawn, Termite, Pest Control experience necessary. College degree and/or previous management experience required. Excellent opportunity for growth. Good salary, company benefits, commissions. Send resume to ITM Tropicare, Inc., 10507 Hearth Road, Spring Hill, Florida 33526, Attn: Tim Hughes. 6/87

HELP WANTED? Does your company need qualified managers to run new or existing operations? We can locate key personnel quickly. Call: Beecher Smith, **GREEN INDUSTRY RESOURCES CORPORATION** (301)253-5787. 6/87

Executive Position Vacant? We currently have two excellent individuals with experience in high level executive management positions seeking new challenges and opportunities. If your company is in need of strong leadership or if you're looking for an experienced individual to take charge of your operation call or write: **GREEN INDUSTRY RESOURCES CORPORATION**, 25230 Conrad Ct., Damascus, MD 20872, (301)253-5787. These executives will be placed quickly! 6/87

NO PROMOTION? Company politics overlook excellent people if they don't fit their mold. If it's time to break the mold and promote yourself, we can help. We place managers nationwide in all areas of the "Green Industry". For those who are more aggressive and want to own their own business, we have some excellent franchise opportunities. All inquiries are kept confidential. Call Beecher E. Smith, (301)253-5787 or write: **GREEN INDUSTRY RESOURCES CORPORATION**, 25230 Conrad Ct., Damascus, MD 20872. 6/87

MANAGEMENT: Eastern PA lawn care company seeking management person. Must have production and sales experience, college degree in related field preferred. Excellent salary, bonus and benefits. Position available immediately. Send resume including salary history to: Moyer & Son, Inc., 113 E. Reliance Rd., Souderton, PA 18964, Attn: Ken. 215-723-6001. 6/87

TREE AND SHRUB CARE. America's fastest growing tree and shrub company seeking experienced, aggressive horticulturists for existing and expansion markets. Experience, degree and motivation key ingredients. Management, sales and specialist positions available. Tremendous advancement opportunities. Excellent salary, benefits. All inquiries will be strictly confidential. Send resume, salary history to: Wm. Scott Carr, Tru Green Tree & Shrub Care, 2360 Jolly Road, Okemos, MI 48864. **EXPAND YOUR POTENTIAL WITH AN INDUSTRY LEADER.** 6/87

Top firm needs top person. Quality conscious Texas based landscape management firm has immediate opening for detail oriented Operation Manager and/or Business Manager. If you have outstanding professional, managerial and horticultural skills and are not afraid of good, hard teamwork, then you could qualify for a top position with the finest landscape firm in the Southwest. Outstanding compensation and opportunity. Reply today to LCI Box 183. 6/87

HELP WANTED

Currently in a management position and don't feel you are achieving the advancement or financial rewards desired? Then it is time to take positive action to advance your future. Call **Green Industry Resources Corporation** and let us help you find a management position that uses your talent to achieve the financial goals and benefits you deserve. Call or write for free confidential information. Beecher Smith, (301)253-5787, 25230 Conrad Ct., Damascus, MD 20872. 7/87

MANAGEMENT CANDIDATES: Our recent expansion has increased our demand for qualified individuals for marketing and branch management. College degree and/or previous management experience required. Excellent salary benefits and bonus program. If you are aggressive and results-oriented and want to join one of the fastest growing companies in the industry, then contact: Sam Land, Orkin Lawn Care, 550 Interstate North, Suite 100, Atlanta, GA 30339 or call 404-955-8015. 6/87

CAREER OPPORTUNITIES: ChemLawn is now accepting applications for the positions of Lawn Specialist in our expanding Florida markets. Join the Nation's Leader in Lawn Care. Send resume to LCI Box 181. TF

REPS WANTED

MANUFACTURERS REPRESENTATIVE: Denver Leasing and Manufacturing, a major supplier of spray trucks, parts, and accessories for the lawn and tree care industry is seeking qualified manufacturers reps to represent our high quality product lines in multi state territories. Interested persons should send resume to Personnel Director, 6803 Joyce St., Golden, CO 80403. 6/87

WANTED

Thinking of Selling Your Business? Let's talk about your future opportunities. Contact Douglas Baker, President, Leisure Lawn Inc., P.O. Box 73, Dayton, OH 45449. 10/87

BUSINESS OPPORTUNITIES

Outstanding business opportunity available! Very, very fast growing tree, shrub and lawn care company on Long Island for sale by one of New York's leaders in the greens industry. Serving prestigious areas of Suffolk Counties North and South shore. Fully automated working environment. Three truck fleet completely equipped. Terms negotiable. Monday through Friday 9:00 - 5:00. 516-360-3361. 6/87

SERVICES

TRAINING DOESN'T COST - IT PAYS! There's no better investment to make in your business than in the development of your people. Call or write us and we'll help you get things started. Contact: **M.A.V.C. SERVICES CORP.**, 26548 Haney Avenue, Damascus, MD 20872. 301-253-5652. Attn: Philip E. Catron M.S. *Training and consulting since 1976* 6/87

MISCELLANEOUS

KELWAY® professional SOIL ACIDITY and SOLUBLE SALTS TESTERS available from distributors nationwide. HB-2 and SST brochures from **KEL INSTRUMENTS CO., INC.**, Dept. 2, P.O. Box 2174, Vineyard Haven, MA 02568. (617) 693-7798. 10/87

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San Antonio
PLCAA/87
NOVEMBER 12 - 15, 1987

Washing pesticide-stained clothes?

COLUMBUS—Double-check laundry procedures before tossing pesticide-contaminated work clothes into the washer. Judith Wessel, extension specialist, management and equipment, The Ohio State University, says such garments need special attention.

During pesticide application, clothing can pick up pesticide residue from drift and spills. If the residue is not removed during laundering, it may be absorbed through the worker's skin the next time the garment is worn.

Garments saturated with a full-strength spill of liquid concentrate pesticide should be discarded, Wessel says. Researchers have not found a way to decontaminate such clothing so it is safe to wear.

Heavyweight fabrics may give the worker more protection from the pesticide, but it's hard to remove residue from them. Using a soil-repellant finish on heavyweight fabric may reduce the fabric's absorption of a pesticide. Spray-on soil repellants would need to be renewed each time the garment is washed.

Wessel offers the following key steps in cleaning pesticide-contaminated clothing:

- Launder clothing immediately after each day's use. Allowing the pesticide to stay on the fabric—even 24 hours increases the difficulty of removal.

- Keep contaminated clothing separate from other garments, using a disposable plastic bag to hold them rather than a cloth bag or laundry basket. Wear gloves when handling contaminated garments.

- Prerinse contaminated garments. Hose them down outdoors, soak them in a separate tub or pail, and use the prerinse or soak cycle in your washer.

- Wash contaminated clothing separate from the family wash as residues can be transferred to other garments. Wash a few contaminated garments at a time, using lots of hot water.

- Use hot water, the hotter the better. Use a hot, not warm, water setting. Remember, a washer's warm-water setting delivers both hot and cold water. When the cold water is extremely cold, the hot water gets cooled off too much. Researchers found that more pesticide is removed when wash water is at least 140 degrees.

- Use the recommended amount of a liquid detergent.

LCI

NEW PRODUCTS

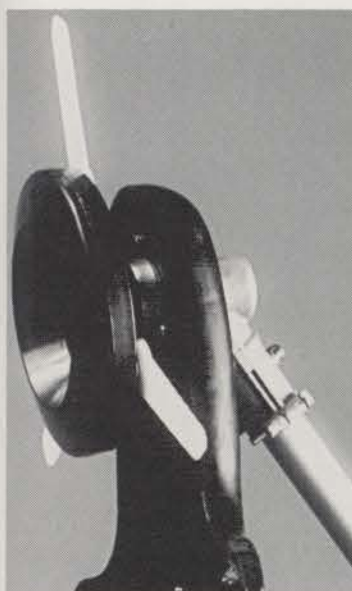
**New water hose nozzle flooding marketplace**

A new product billed as the world's "most talented" water hose nozzle is now being manufactured by Tri-Con, Inc., Cleveland, Ohio.

The lightweight, compact design operates on a high-tech ball-valve principle. It provides spraying patterns from soft mist to full-power stream. A finger-tip control lever also is featured.

LCI

Circle No. 205 on service card.

**Weed Butcher beefing up string trimmers**

The Source, Inc., Sacramento, Calif., is introducing an attachment that turns string trimmers into heavy duty weed cutters.

The Weed Butcher II-Professional Model has a 12-inch cutting diameter with retractable swivel blades.

The unit has a keyway adapter with a universal fit that accommodates 24cc to 36cc gas-powered trimmers. A skid plate is included.

The Weed Butcher II-Professional Model is available through Echo, Inc., Lake Zurich, Ill.

LCI

Circle No. 206 on service card.

**Hustler trailer tilts for turf equipment**

Excel Industries, Hesston, Kan., is introducing the Hus-

ter Tilt-Deck Trailer for hauling turf equipment.

The trailer automatically tilts down and locks into place through the use of hydraulics.

A twist of a knob returns the trailer to normal position.

When not used for hauling mowers and other devices, the product can carry clippings, nursery stock, etc.

LCI

Circle No. 207 on service card.

Cordless Porta-Power is an uplifting experience

Powerwinch is unveiling a new self-contained winch powered by a built-in high power battery pack.



The Porta-Power weighs 26 lbs. and delivers 1,000 lbs. of pulling power, according to Powerwinch, Scott Fetzer Co., Bridgeport, Conn.

Because it does not have a power cord, the unit, which sells for \$375, can be used for a number of applications such as land clearing, removing stumps and rocks, pulling shrubs and trees and dragging

vehicles out of mud or snow, the company said.

A remote control cord is supplied so the user can tend to the job at hand and still operate the winch. It also comes with an ecology strap to protect trees and shrubs, along with a battery charger, 20 feet of 5/32-inch cable with a safety hook, an owner's manual and a canvas carrying bag.

LCI

Circle No. 208 on service card.

**Teledyne Total Power has new 7.5 hp engine**

Teledyne Total Power, Memphis, Tenn, is introducing the Wisconsin Robin

model WO1-210, a 7.5 hp overhead valve gasoline engine. The air-cooled motor is one of a line of lightweight Wisconsin Robin OHV engines ranging from 3.5 to 7.5 hp.

DEEP DOWN TURF PROTECTION WITH

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NOW AVAILABLE IN
NEW GRANULAR
FORMULATION



Now you have two choices—TURCAM[®] WP liquid or new TURCAM[®] 2 1/2 G granular. Whatever your choice, TURCAM's advanced carbamate chemistry goes right to work knocking down white grubs, mole crickets, chinch bugs, sod webworms and many other destructive pests. TURCAM's federally-approved nationwide label provides these positive benefits...

- Fast action
- Good residual
- Doesn't tie up in thatch
- Easy to apply (liquid or granular)
- Cost-effective
- Odorless
- Doesn't damage turf or ornamentals

Powerful reasons for assigning TURCAM to your toughest turf pest control problems. For more information on TURCAM, including full labeling and recommendations for use, contact your local distributor or write to...

NOR-AM
NOR-AM CHEMICAL COMPANY

3509 Silverside Road, P.O. Box 7495, Wilmington, DE 19803

IMPORTANT: Please remember always to read and follow carefully all label directions when applying any chemical.

Circle No. 118 on Reader Inquiry Card

NEW PRODUCTS

With a peak torque of 124.0 in.-lbs at 3,200 RPM, model WO1-210 has a heavy duty forged steel crankshaft, forged aluminum alloy connecting rod, and die cast aluminum cylinder and crankcase with a cast iron lining.

Teledyne Total power markets 71 air- and liquid-cooled engines, plus customized models, from 3.5 to 101 hp. LCI
Circle No. 209 on service card.

Solar backpack sprayer shining in remote areas

The Broyhill Co., Dakota City, Nebr., has redesigned its rechargeable backback "quiet zone" sprayer to be lighter and



more compact.

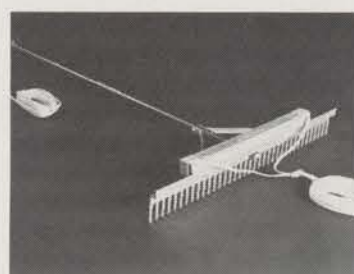
A solar version is available for use in remote areas.

The six-gallon unit comes with a battery charger. It will operate for two to three hours per charge.

Model 2330 can be used for quiet zone operations, such as

hospitals, schools, offices and apartments.

The backback has an optional cart for towing. LCI
Circle No. 210 on service card.



Rake pulls seaweed from lakes or ponds

Aquatic weeds are pulled up by their roots when the Lake Rake is used, according to

Lake Rake, Inc., Hilton Head Island, S.C.

The Lake Rake is simply pulled through the water—and can be used by one or two people. Ropes allow it to be operated by one person at any depth.

It clears a 36-inch path.

Retail cost is \$74, plus \$9 shipping and handling. LCI
Circle No. 211 on service card.

Turf-Plugger aerators getting new engines

The 1987 models of Classen Turf-Plugger core aerators are getting new 5-hp Honda engines.

The models involved in-



clude the 400, 500 and 600.

In addition, a twist grip throttle is being added. It shuts down the unit when the operator releases the controls, according to Classen, Norfolk, Nebr.

A 1987 option is swivel mounting for front and rear wheels. LCI

Circle No. 212 on service card.

This Is What PGMS Is Doing For The Grounds Manager



If you haven't checked out the Professional Grounds Management Society recently, then you're in for a surprise. We're offering a bundle of new benefits that make joining PGMS more rewarding than ever! Here's what we've been up to and how you can benefit:

ANNUAL CONFERENCE AND TRADE SHOW - The yearly forum bringing together grounds managers, top speakers, and suppliers for the sharing of knowledge and ideas.

NEWSLETTERS - A newsletter is mailed monthly to keep members current on the affairs of the Society and the latest developments critical to successful grounds management.

CERTIFICATION - Voluntary peer review of acceptable competence to enable you to become a Certified Grounds Manager.

RETURN OF DUES PROGRAM - All renewal dues will be credited to your return of dues account. Upon retirement all renewal dues paid by you will be refunded.

INSURANCE - Included in your membership fee of \$5,000.00 accident and dismemberment insurance.

No matter how large or small your operation, PGMS is your source for the best, most meaningful grounds management information and help. Your membership investment goes to work for you immediately — that's the PGMS promise. Join now and grow with us!

AWARDS - Members are recognized for outstanding achievement in grounds management. Annual Grounds Maintenance Awards Contest.

GROUND'S MAINTENANCE ESTIMATING GUIDE

GROUND'S MAINTENANCE MANAGEMENT GUIDELINES

GROUND'S MANAGEMENT FORMS & JOB DESCRIPTIONS GUIDE

WORKSHOP TRAINING - Management skills covering all aspects of grounds management. Available to all sections of the country.

DISCOUNTS - Members receive discounts on Hertz, Avis and Alamo Rental Cars as well as discounts on a complete line of horticultural publications.

Clip and mail to:
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MANAGEMENT SOCIETY**
12 Galloway Avenue
Suite 1E
Cockeysville, Maryland 21030

(301) 667-1833

Send me more information on what PGMS can do for me.

Name _____
Company _____
Street _____
City & State _____
Zip _____ Phone _____

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112	Lebanon Chemical	22
113	LESCO	36
114	Mallinckrodt	24
115	Monsanto	16-17
116	Moyer and Son (regional)	25
117	Nice N Green	26
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119	PLCAA	31
120	Professional Turf (regional)	22
121	Servicemaster	30
122	Teledyne Total Power	26
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124	UAP Special Products	23
125	Union Carbide	18-19
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NEW PRODUCTS

201	Billy Goat Industries	30
202	Exmark Turf Rake	30
203	Kelch Corp	30
204	Hobbs & Hopkins, Ltd	30
205	Tri-Con Inc	33
206	The Source, Inc	33
207	Excel Industries	33
208	Powerwinch, Scott Fetzer Co	33
209	Teledyne Total Power	33
210	Broyhill Co	34
211	Lake Rake, Inc	34
212	Classen Turf-Plugger	34
213	Tanaka Kogyo (USA) Co, LTD	34

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Gas-powered trimmer starts with push-button

The Auto-Start 7000 gas-powered trimmer, made by Tanaka Kogyo (USA) Co., LTD., Bothell, Wash., starts with just a push of a button.

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Circle No. 213 on service card.

MEETING DATES

JUNE

■ ALCA Educational Seminar; Advanced Interior Maintenance, Entomology and Insect Control,

June 6, Sheraton Renton Inn, Renton, Wash. Contact: Rebecca Crocker, Associated Landscape Contractors of America, 405 N. Washington St., Falls Church, Va., 22046; (703) 241-4004.

■ ALCA Educational Seminar; Enhance Your Visual Presentations with Graphics,

June 6, Radisson Mart Plaza-Airport, Miami, Fla. Contact: Rebecca Crocker, Associated Landscape Contractors of America, 405 N. Washington St., Falls Church, Va., 22046; (703) 241-4004.

■ ALCA Educational Seminar; Basic Interior Maintenance, Technician's Short Course,

June 12, Sheraton Denver Airport, Denver, Colo. Contact: Rebecca Crocker, Associated Landscape Contractors of America, 405 N. Washington St., Falls Church, Va., 22046; (703) 241-4004.

■ Turf Research Field Day,

June 25, University of Massachusetts Turfgrass Research Center, South Deerfield, Mass. Contact: Dr. Rich Cooper, Dept. of Plant & Soil Sciences, Amherst, Mass., 01003; (413) 545-2353.

■ ALCA Educational Seminar; Basic Interior Maintenance, Technician's Short Course,

June 26, Hyatt Regency Dearborn, Dearborn, Mich. Contact: Rebecca Crocker, Associated Landscape Contractors of America, 405 N. Washington St., Falls Church, Va., 22046; (703) 241-4004.

■ ALCA Educational Seminar; Advanced Interior Maintenance, Technician's Short Course,

June 30, Holiday Inn Tysons, Vienna, Va., 33126. Contact: Rebecca Crocker, Associated Landscape Contractors of America, 405 N. Washington St., Falls Church, Va., 22046; (703) 241-4004.

JULY

■ International Lawn, Garden and Power Equipment Expo 87,

July 27-29, Kentucky Fair and Exposition Center, Louisville, Ky. Contact: Andry Montgomery & Associates, 101 N. 7th St., Louisville, KY., 40202; (800) 558-8767.

AUG.

■ ALCA Exterior Landscape Contracting Division Conference (Farwest Show),

Aug. 27-28, Red Lion Inn, Portland, Oreg. Contact: Rebecca Crocker, Associated Landscape Contractors of America, 405 N. Washington

Church, Va., 22046; (703) 241-4004.

OCT.

■ 30th Annual National Educational Conferences and Exposition,

Oct. 10-15, Clarion Hotel, St. Louis, Mo. Contact: Jean Day, Environmental Management Association, 1019 Highland Ave., Largo, Fla., 33540; (813) 586-5710.

■ ASIC National Convention,

Oct. 15-18, Concord Hilton, Concord, Calif. Contact: American Society of Irrigation Consultants, Jim Eddy, 1666 Oakland Blvd., Walnut Creek, Calif., 94596; (415) 939-3985.

■ ALCA Interior Plantscape Division Conference (and trade show),

Oct. 24-29, Hyatt Regency Crystal City Hotel, Arlington, Va. Contact: Rebecca Crocker, Associated Landscape Contractors of America, 405 N. Washington St., Falls Church, Va., 22046; (703) 241-4004.

■ 1987 International Irrigation Exposition & Technical Conference,

Oct. 25-28, Orlando, Fla. Contact: Mark Williams, Irrigation Association, 1911 N. Fort Myer Dr., Suite 1009, Arlington, Va., 22209; (703) 524-1200.

■ Southwest Turfgrass Conference,

Oct. 28-30, Holiday Inn Pyramid, Albuquerque, N. Mex. Contact: Charles L. Glover, Southwest Turfgrass Association, New Mexico State University, Las Cruces, N. Mex., 88003.

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