

Annual product expenditures

Product	Fraction of sample purchasing	Average per purchaser
Grass seed	73.3%	\$ 3,205
Dry-applied fertilizer	81.6	5,704
Liquid-applied fertilizer	37.9	12,399
Pre-emergence herbicides	78.2	6,085
Post-emergence herbicides	66.5	3,079
Turf insecticides	71.4	4,493
Turf fungicides	53.9	1,745
Soil amendments	30.6	1,195
Tree insecticides	34.9	1,811
Tree fungicides	15.5	851

Source: 1981 LCI survey

LCI SURVEY

8 of 10 fertilize dry, 4 of 10 liquid, many companies use both

More than eight of 10 lawn care companies apply dry fertilizer, and almost four of 10 apply liquid, but the liquid companies are spending more on fertilizer purchases, according to a recent survey conducted of the readers of LAWN CARE INDUSTRY.

This data indicates that while there are more companies using dry fertilizer, the larger companies

are using liquid. Also, many companies utilize both liquid and dry fertilizers in their customer programs.

In the survey, 81.6 percent of the readers of the magazine said they purchased an average of \$5,704 worth of dry-applied fertilizer annually. The survey also showed that 37.9 percent of the magazine's readers said they purchased an

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\$2.00

Volume 6, Number 1

JANUARY 1982

LAWN CARE INDUSTRY

Serving lawn maintenance and chemical lawn care professionals

774 ATTEND PLCAA LOUISVILLE SHOW

Erbaugh is PLCAA president

J. Martin Erbaugh, president of Lawnmark Associates, Peninsula, Ohio, was elected president of the Professional Lawn Care Association of America (PLCAA) at the group's recent meeting in Louisville, Ky.

Almost 800 lawn care businessmen attended the three-

day conference and trade show, about a 10 percent increase over the previous year's attendance. The trade show featured 84 exhibitors in 144 booths. This was about a 65 percent increase in exhibitors and more than a 100 percent increase in exhibit booths over the previous year's show.



Dealers and lawn care businessmen mingle on exhibition floor

Elected vice president was Ronnie Zwiebel, Green Care Lawn Service, Inc., Birmingham, Ala. Elected secretary-treasurer was Don Burton, Lawn Medic, Inc., Bergen, N.Y.

There were four new board members elected. They were: Bill Fischer, Spring-Green Lawn Care Corp., Plainfield, Ill.; Des Rice, The Weed Man, Mississauga, Ontario; Paul Bizon, Prograss Lawn Service, Hubbard, Ore.; and John Kenney, Turf Doctor, Inc., Framingham, Mass.

Board members who will be continuing their terms are: Doug Baker, Leisure Lawn, Inc., West Carrollton, Ohio; John Latting, Lawn Groomer, Normal, Ill.; Larry Brandt, Spray-A-Lawn, Cincinnati, Ohio; Dr. Robert Miller, ChemLawn Corp., Columbus, Ohio; Gordon Ober, Davey Lawnscape Service, Kent, Ohio;



Marty Erbaugh

and Rick White, Village Green Lawn Spraying, Ltd., West Chicago, Ill.

Continuing on the board as past president is Jerry Faulring, Hydro Lawn, Gaithersburg, Md. Chosen to be the associate member on the board to serve as supplier's liaison was Bill Stinson, O. M. Scott & Sons, Marysville, Ohio. Continu-

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3-5 YEAR LAWN QUALITY DECLINE?

Aerification: The missing link in today's industry?

The growth of the lawn care industry in the United States in the last 10 to 15 years has been nothing less than astronomical. The beautiful lawn that in the late 60's was within reach of only the wealthy who could afford a gardener or the local agronomic nut who missed

his calling, was finally put in reach of the average middle-class family by today's lawn care industry, says Dr. John R. Hall, turf extension agronomist at Virginia Tech.

"A nice lawn has always been an integral part of the 'Great American Dream,' and now part of that dream can be purchased just like a house, car and boat," Dr. Hall said. "The lawn care industry is well-entrenched and is providing a much-desired service to today's society."

He feels the future of the lawn care industry looks bright, but there are indeed some problems.

"The disturbing observation made by honest lawn service companies is that some lawns on their programs seem to have their best

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Dr. John Hall: "The disturbing observation made by honest lawn service companies is that some lawns on their programs seem to have their best quality after being on the program three to five years."

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UPFRONT



Next show it's Indy

Plans are already in the works for this year's Professional Lawn Care Association of America (PLCAA) Conference and Trade Show, which is scheduled for Nov. 16-18 at the **Indianapolis Convention Center**. Headquarters hotel will be

the Indianapolis Hyatt Regency, and further information can be obtained from: Jane Stecker, PLCAA, Suite 1717, 435 N. Michigan Ave., Chicago, IL 60611, 312-644-0828.

Yes, PLCAA is already planning

for next year, but what a show the group had in Louisville late last year. Booth space was up more than 100 percent, number of exhibiting companies was up more than 50 percent, and number of lawn care companies attending was up more than 15 percent. **Not bad** for PLCAA's second show.

The business and educational sessions were well worth the **crowded rooms**, and the smaller workshops proved to be very useful to the lawn care businessmen in attendance. Even the night workshops were well-attended.

Many exhibitors said that floor activity was **not as frenetic** as it was at PLCAA's first show, but that might be explained in part by the strong efforts most suppliers are putting forth with aggressive early-order programs, that begin working before the November dates of the show.

Lakeshore Equipment & Supply Co. has an aggressive early-order program available to lawn care businessmen, but their booth again proved to be the centerpiece of the PLCAA exhibits. The com-

ever, the liquid companies are purchasing more fertilizer, meaning that the larger companies, for the most part, are liquid.

There was also quite a bit of interest in **Container Mfg.'s** Tip 'N Measure for measuring concentrates, **Continental Software's** computer package, **Metromail Corp.'s** mailing services, the PLCAA insurance booth, among many, many others. Not to mention activity in the **Diamond Shamrock** booth to find out when Dacthal will be available again, and also in booths of **Rhone-Poulenc**, **Stauffer**, **Lakeshore**, **Mallinckrodt**, **The Andersons**, **Patterson Green-Up** and **USS Agri-Chemicals**, among others, to check on availability of alternatives to Dacthal for pre-emergence weed control.

At the annual meeting, Jerry Faulring turned over the presidential reins to **Marty Erbaugh**, of Lawnmark Associates, Peninsula, Ohio. Good luck to Marty and the PLCAA board for the future.



Lakeshore's booth: Focal point of the PLCAA show floor

pany has been zeroing in on the lawn care businessman for longer than most suppliers, and the traffic that came through its well-staffed booth was testament to how long they have been around.

Right next to Lakeshore in the center of the exhibit floor was the **Professional Turf Specialties/Bulkkem, Inc.** booth. Bulkkem's bulk concept of materials handling created a lot of interest at the show, and it will be interesting to see how the concept fares during the upcoming lawn care season.

Many lawn care businessmen stopped by **The Andersons'** booth to inquire about the company's fertilizers and Pel-Tech pelletized benefin. It was the same story at the **C. P. Chemical Co.** booth, where many were interested in the company's new liquid fertilizer. There were quite a few fertilizer suppliers present, including **BFC Chemicals, Inc.**, **Allied Chemical**, **W. A. Cleary Chemical Corp.**, **Estech General Chemicals**, **Hawkeye Chemical Co.**, **Howard Johnson's Enterprises**, **Knox Fertilizer & Chemical Co.**, **Lakeshore**, **Lebanon Chemical Corp.**, **Miller Chemical & Fertilizer**, **N-P-K-Ca Concepts, Inc.**, **Patterson Green-Up Co.**, **Plant Food Chemical Co.**, **O. M. Scott & Sons**, **USS Agri-Chemicals** and **Vogel Seed & Fertilizer, Inc.**, just to name some of them. This is a far cry from just a few years ago, when there were very few fertilizer suppliers who were interested in the lawn care industry. As you can see from the chart on page 1 of this issue, about eight out of 10 lawn care companies used dry-applied fertilizers and about four out of 10 use liquid-applied fertilizers. How-

At the recent ChemLawn-sponsored Symposium on Turfgrass Weeds, the company's Dr. Barry Troutman told the audience that "thatch is a time bomb waiting to go off." From all of the people we have spoken to in the industry, this very much seems to be the case. As Virginia Tech's **Dr. John Hall** says in the issue, "The disturbing observation made by honest lawn service companies is that some lawns on their programs seem to have their best quality after being on the program three to five years. After this time period, they seem to be declining in quality. One of the reasons for this decline in lawn quality is the **excess buildup of thatch** caused by annual maintenance programs which include three to five pounds of nitrogen per 1,000 square feet plus insecticides, herbicides and limited amounts of fungicides."

This issue carries three articles dealing with the **thatch problem**. The first contains Dr. Hall's comments, the second contains comments from Dr. Thomas Turner of the University of Maryland, and the third is the report on a panel that took place at the Missouri Lawn & Turf Conference late last year dealing with thatch on zoysiagrass.

If thatch is really a "time bomb waiting to go off" these articles are **required reading** for every lawn care businessman.

Bob Earley

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LAWN CARE INDUSTRY (USPS 397250) is published monthly by Harcourt Brace Jovanovich Publications. Corporate and Editorial offices: 757 Third Avenue, New York, New York 10017. Advertising offices: 757 Third Avenue, New York, New York 10017, 111 East Wacker Drive, Chicago, Illinois 60601 and 3091 Maple Drive, Atlanta, Georgia 30305. Accounting, Advertising Production and Circulation offices: 1 East First Street, Duluth, Minnesota 55802. Subscription rates: one year, \$15 in the United States, \$18 in Canada; all other countries: \$40. Single copies: \$2 in the United States and Canada; all other countries \$4.50. Second Class postage paid at Duluth, Minnesota 55806 and additional mailing offices. Copyright © 1981 by Harcourt Brace Jovanovich, Inc. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher.

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

Maintenance contractors brainstorm at Cherry Hill

The recent Associated Landscape Contractors of America 1981 Maintenance Symposium held in Cherry Hill, New Jersey was the subject of considerable national attention by lawn care maintenance companies interested in developing their marketing, budgeting, and selling methods for the coming maintenance season.

Attended by over 150 maintenance contractors from as far away as California and Texas, the symposium offered four areas of concentration: Marketing Potential, Budgeting for '82, Successful Selling Methods, and Equipment Costing. Each topic was presented by a principal speaker and then followed up with a group workshop in which attendees were invited to work out specific problems.

The marketing potential seminar, presented by Ken and Tom Oyler, Oyler Brothers Co., Orlando, FL, and Ray Gustin of Gustin Gardens in Gaithersburg, MD, defined marketing as the working balance between your company's sales vs. market potential. Among the significant points raised were:

Marketing guidelines

- There are five types of data sources available for determining market potential: population figures, income, employment rates, sales and state tax rates. These figures will provide you with "a nucleus of concentration of both consumer and industrial markets," said Gustin.

- Read reference publications, trade publications, and even publications of interest to your clients. They provide both specific and intangible knowledge of your market.

- Use consultants. They have been used widely by the landscaping industry in general. Find one with some industry experience.

- Define your geographic area. Determine who the most profitable clientele will be.

- Subtle marketing techniques. Membership in civic associations, trade associations, and neighborhood groups can provide you with valuable leads and give you greater knowledge of your marketplace, said Oyler.

- Many colleges and universities have business and marketing classes and are looking for companies for the subject of marketing research projects. It's inexpensive and you can get tremendous results.

Richard Reasoner of Dendron, Inc., Novato, CA, presented a seminar on how to budget properly for 1982. Among the principal issues raised was the reminder that "billings do not equal sales, earned revenue equals sales," Reasoner said.

One of the more popular seminars, Successful Selling Methods, was presented as a series of video-taped workshops conducted by Steve Brown, president of the

Fortune Group. The session was moderated by Irv Dickson of the ChemLawn Corporation.

During the presentation Brown explored the realities behind the common dictum that in order to be a successful salesperson, one has "to have the right attitude." Attitudes, said Brown, are not acquired by willpower, but changed only by environment and condition.

One of the ways to maintain a successful attitude, said Brown, is the development of product knowledge. Like a physician, he submitted, the lawn maintenance sales person must be totally informed of his product and field.

"Self confidence in sales is the result of product knowledge, people knowledge, and selling skills," said Brown.

A salesperson must have empathy toward his clients, said Brown. Empathy he defined as the ability to project yourself into the mind of the client. "The test for positive empathy," said Brown, "is determining how accurately you can predict how the other person will think."

Creating confidence

Brown closed his seminar with a guideline for successful sales in the form of an acronym. Creative sales, said Brown, is the result of the ability to Create confidence, Revitalize the mind, Evince logically, Arouse desire, Trigger urgency, and Effect closure: C.R.E.A.T.E.

The final presentation and workshop was moderated by Phil Christian of the ChemLawn Corp., who spoke on Equipment Costing.

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Brown: "Self confidence in sales is the result of product, people, and selling knowledge."



Oyler: "Membership in civic and trade organizations can provide valuable marketing leads."



Gustin: "You have to determine a nucleus of concentration of both consumer and industrial markets."



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Thatch control: the key to turfgrass management

One of the major recurring problems observed in turf is the formation of thatch. This is due in part to the interrelationship of the detrimental effects of thatch with the weather, but also in part to the failure of the lawn care businessman to stay on a program designed to minimize thatch.

Too often, an attempt is made to control thatch and then it is ignored and it builds up again to detrimental levels. Although thatch is certainly not a new problem, it is one of which the lawn care businessman must always be aware, says Dr. Thomas R. Turner, extension turfgrass specialist at the University of Maryland.

Thatch has been defined as a tightly intermingled layer of living and dead stems, roots and leaves which develops between the green vegetation and the soil surface, Dr. Turner said. It is formed from the periodic sloughing of roots, rhizomes, stolons and mature leaf sheaths and blades. However, clippings (leaf blades) do not appear to be nearly as major a contributor to thatch build-up as the other plant parts mentioned.

Where little thatch exists, clippings should not be expected to contribute to thatch and contribute to nutrient recycling. Where substantial thatch already exists, however, clippings may decompose more slowly and thus can

contribute to thatch. Therefore, return of clippings will probably be beneficial where little thatch exists, whereas clippings should be removed where a thatch problem already exists.

A thatch layer will begin to form and increase in depth whenever:

- Conditions are favorable for increased vegetative production and the subsequent death of plants or plant parts and/or
- Conditions are unfavorable for the decomposition of organic matter.

Excessive nitrogen

Many factors are involved in these processes, but several have been shown to be of particular importance. They include vigorous species and cultivars, excessive nitrogen fertility, poor soil conditions and use of pesticides.

Vigorous shoot, rhizome and root producers will tend to form thatch more quickly. Also, some

species — such as bermudagrass and zoysiagrass — contain greater amounts of plant constituents which are more resistant to decomposition than many other species. Thus, thatch tends to form more quickly. Bunch-type grasses also tend to produce thatch at a slower rate than rhizomatous or creeping-type grasses.

One advantage of perennial ryegrass (bunch-type) over Kentucky bluegrass (rhizomatous) is its tendency to produce much less thatch. Large differences can also exist among cultivars. Kentucky bluegrass such as Merion and Birka will produce more thatch than a less vigorous cultivar such as South Dakota common.

Increasing nitrogen fertility results in increased shoot and root production, Dr. Turner said. Applying more nitrogen than is needed for satisfactory recuperative potential and visual quality will thus increase the rate of thatch accumulation as well as contribute to a variety of other problems.

Since the breakdown of the organic debris which causes thatch is dependent on soil microbial activity, any soil condition which is detrimental to microbial activity will result in thatch accumulation. Thus, acidic soils (less than 6.0 pH), poorly aerated soils caused by compaction and excessively wet soil caused by either poor drainage or excessive irrigation will eventually result in thatch buildup.

Earthworm diet

The use of certain pesticides in the past has been shown to contribute to thatch buildup, either through a direct effect on earthworms or soil microbial populations or an indirect effect on these organisms through changes in soil conditions, such as lowering pH. Pre-emergence herbicides used in the past, such as bandane and calcium arsenate, have resulted in significant buildup of thatch, primarily due to their effect on reducing earthworm populations.

Pre-emergence herbicides such as DCPA, siduron, benefin and bensulide, have no detrimental effects on earthworms and do not induce thatch buildup. Continued

to page 27

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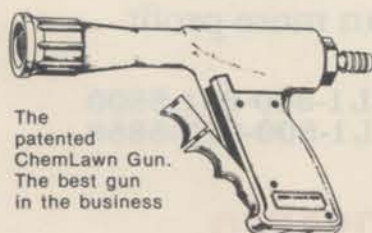
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CHART from page one

average of \$12,399 worth of liquid-applied fertilizers annually.

For grass seed, 73.3 percent of the readers said they purchased an average of \$3,205 worth of product. For pre-emergence herbicides, 78.2 percent of the readers said they purchased an average of \$6,085 worth of product. For post-emergence herbicides, 66.5 percent of the readers said they purchased an average of \$3,079 worth of product. For turf insecticides, 71.4 percent of the readers said they purchased an average of \$4,493 worth of product.

For turf fungicides, 53.9 percent of the readers said they purchased an average of \$1,745 worth of product. For soil amendments, 30.6 percent of the readers said they purchased an average of \$1,195 worth of product. For tree fungicides, 15.5 percent of the readers said they purchased an average of \$851 worth of product.

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Control thatch, control zoysia lawn problems

Most problems on zoysiagrass home lawns are related to thatch build-up. If the lawn care businessman can control the thatch, he can control many of his lawn problems.

This was the conclusion that was drawn by a panel of seven turfgrass experts at the recent Kansas State/Central Plains Turfgrass Foundation Turfgrass Conference held in Manhattan, Kan. Speaking on "Zoysia Lawn Maintenance and Problems" were:

Moderator Larry Leuthold of the horticulture department at Kansas State; Fred Crowe, of the plant pathology department at Kansas State; Dick Grey, Crestview Country Club in Kansas; Larry Stouse, Johnson County, Kansas horticultural agent; Doug Hawes, U.S. Golf Association Green Section agronomist; horticultural agent John Pair; and Dick Crawl, Leisure Lawn, St. Joseph, Missouri.

Main points brought out by the panel were:

- There is a lack of information and uniformity on zoysia lawn maintenance, not all of the experts agree.
- There is a strong correlation between higher mowing heights and thatch build-up.
- Zoysia was originally sold as a cure-all in the Midwest transition zone; sound preventative maintenance programs have been neglected in the past.
- "You can't power rake too often," one of the panel members said.
- Heavy-duty renovation equipment and reel mowers are suggested for zoysia lawns.

"Full-page ads for zoysia plugs are very much a merchandising scheme," Leuthold told the audience. "You send away, and they send you 100 dead zoysia plugs. When you send them back, they usually send you more dead plugs."

Experts puzzled

Leuthold said his department gets many requests about zoysia problems, and that there is a lack of uniform information on zoysia maintenance, and a lack of information on why some zoysia lawns look good and some bad. He said that when zoysia is mowed tall, it looks like Kentucky bluegrass. But he said the experts are not sure which is the best mowing height.

"We do know that there is a correlation, a strong one, between higher mowing heights and thatch build-up," he said.

Crowe said that he is concerned with disease reports on zoysia, but most are not sure what the problem is. He said that most of the problems are not infectious disease problems, although brown patch and rust is common. He said that most problems are stress or management problems. Also, because zoysia is a slow-growing grass, it is often hard for it to keep up with chinch bug problems.

Pair said: "We all thought that zoysia was the answer to our

problems, but we neglected to sell preventative maintenance. You ought to figure on cultivating the lawn every 10 years." He also said that he has seen zoysia doing better in shade where the thatch is not so deep, and says: "Perhaps we oversold zoysia as heat and drought tolerant."

Leisure Lawn's Crawl said that most problems his company experiences in zoysia lawns are related to thatch.

"We always power rake when we have problems," he told the lawn care audience. "And we almost always have to use a vacuum, because the debris is so fine.

We power rake every two or three years as a rule." He said he does not renovate before May 1, because he does not want to touch the lawn before it starts growing. He then comes in with a pre-emergence herbicide application right after the mechanical work to get the summer grassy weeds. He also

no later than August. For renovation he recommends an E-Z Rake, Ryan Ren-O-Thin, Thin-O-Thatch, or F. D. Kees equipment.

Hawes said that he sees in the Washington, D.C. area some of the oldest zoysia lawns in the country, some planted in the 1940's and 1950's. "If you control the thatch,

"We are still scratching our heads about all the problems we have had with zoysia. This attitude towards zoysia when it came out was that it was a cure-all, but management problems are opposite now."

recommends mowing before power raking, so there is no "wrapping" of the grass around the equipment.

As for fertilization, "We treat our lawn with our bluegrass fertilization program in spring, but not in fall," he said. He fertilizes

you control your lawn problems," he told the audience. He recommends mowing with a heavy reel mower.

Stouse said: "We are still scratching our heads about all of the problems we have had with zoysia. The attitude towards

to page 33

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MOWING/MAINTENANCE MARKETPLACE

Los Angeles: Where the future is now

Los Angeles is the crisis center of the nation's maintenance industry. It has to do with neither construction slowdowns nor consumer thrift. Nor labor unrest. Not the current Sunbelt safari for jobs and a better life. And as far as turfgrass goes, it is the best of all possible worlds.

No, L.A. is beset with a crisis of abundance. From the climate that allows all turfgrass varieties to coexist, to the surfeit of labor which is bringing on the labor unions, Los Angeles mowing/maintenance lawn care businessmen have learned that to survive in their market they must cast out all waste, adapt quickly to consumer trends, and work closely with their manufacturers.

"There's more in Orange County alone than we can possibly handle," said Bill Vandergeist with a smile. "There's a tremendous potential out here." Vandergeist is president of Vandergeist Landscape Care, a maintenance concern that sends 20 laborers, five crew chiefs, three

It has also produced, however, new problems with regard to turf management. Many maintenance businessmen feel that the developments simply were not designed with total ground care in mind. "The architects had no idea what a mowing and maintenance guy goes through," said Vandergeist. "Many times you'll see the lawn area tied into the shrub area, with the sprinkler heads all but against the shrubs. This is plainly the architect's fault."

Design vs. maintenance

Since municipal regulations hold that a certain amount of lawn area in each development must be maintained professionally, maintenance businessmen feel that they should be more thoroughly consulted during the design stage. "The industry has just begun to feel the effects of environmental consciousness," said Vandergeist.

Condominium and homeowner association work has also created

placed on them. Engine design is a case in point. Any company of VLC's size uses thousands of gas-powered machines that need clean air for combustion. "We end up cleaning our air filters once a week," said Vandergeist. "And that's no way to handle it."

Nothing will kill an engine faster than a bad air cleaner, said Vandergeist. He feels that the air cleaner research and development should be a top priority for manufacturers of two-stroke engines. "We're looking for anything that might be new and innovative," he said. "Maybe we could even send out a questionnaire to various professionals for suggestions."

Martin Rippens of Hydro-Dig, Inc., in the San Fernando Valley thinks that the market for maintenance accessories has been neglected by manufacturers. "A lot of it has to do with landscape design in the first place," he said. "Take tree guards for example. Everybody in the world uses weed whips, but it's the worst thing in the world for a tree. We should all be using tree guards."

Some manufacturing designs have been of great benefit to the industry, especially for the maintenance field. Whether the market has grown to fit the product, or vice-versa, Vandergeist feels that the intermediate self-propelled walk-behind mowers have been a great boon to the industry. "The Bobcat 5+6 36-inch walk behind is the best thing they came out with," he said. "You can put a sulky behind it and ride it and it's also easily transported."

The amount a company invests in the bigger walk-behind mowers presents an interesting measure of that company's rate of development. Although the larger 36-inch mowers can cut labor time significantly, each unit is priced in or around the \$2,000 range. The question many maintenance businessmen face is whether to amortize their equipment costs over the long run with smaller mowers or whether to place an immediate cash investment into the larger, less labor-intensive intermediates.

"It's a question of capitalization," said Alan Shariton, president of Tierra Verde Landscaping, who, like Vandergeist, is heavily involved in homeowner associa-

tion maintenance. "With interest rates as high as they are it becomes a very difficult decision."

Like most maintenance businessmen, Shariton spends a lot of time figuring out how best to cut his labor costs. Labor costs, he estimates, soak up about 90 percent of his operating budget. And because of that he feels that he has to stabilize his equipment costs.

"There's a big gap in the marketplace," he said. "We've got one Toro frontrunner, the king of kings, but we mow 52 weeks a year out here and you just can't run that long with these garden tractors. It's ironic that the intermediate self-propelled models are just beginning to see the light of day."

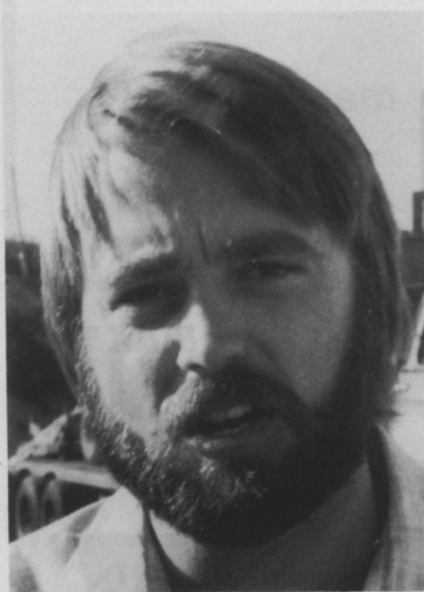
But Shariton's biggest concern is obviously labor efficiency. In order to cut down on his labor costs he is trying to use more growth retardants in and around sidewalks. Small turf areas devour maintenance time. "We're also trying not to over-fertilize," he said. "We don't want to load up the turf with a lot of nitrogen."

But as all lawn care businessmen know, when you introduce innovations into your turf management program the customer may be the biggest obstacle to cost efficiency. Shariton believes that consumer education is of utmost importance in his business, especially in dealing with the homeowner associations.

Professional awareness

When he uses growth retardants instead of mowing, the customers want to know why his crews didn't mow in those areas. They have a hard time believing that the answer had nothing to do with employee delinquency. "So many times the consumer is just looking at the dollar sign," he said. "I'd like to see the industry become more professionally aware of consumer education. Their attitude so often is 'Here's a penny, now give me a dollar's worth of work.'"

Like others involved in association maintenance, Shariton has special public relations problems that many lawn care businessmen don't often face. Because a majority of an association's budget is appropriated for mowing and maintenance, the contract is subject to approval by committee, a



Bill Arman: "Whenever we can mow at 36" we'll put the Bobcats out. It'll pay four and a half times the savings."

superintendents, and two full time mechanics into the field each day.

Among the wider national trends that he has capitalized on is the surge in the cooperative home association market. Orange County abounds in these developments, made popular by the dwindling availability of traditional single family dwellings. And in Los Angeles in particular, it has caused a shift in the marketing emphasis of the major maintenance contractors.

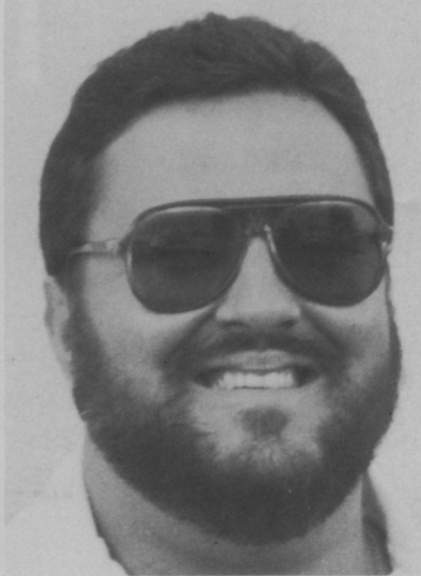
certain voids in the industrial machinery market, submits Vandergeist. Because the homeowner association developments often have large common areas or sloped greenbelts, he feels a more durable weed eater is needed. "Both the weedeater and the blower are greatly underdeveloped," he said.

Los Angeles maintenance businessmen, and Vandergeist is a good example, are seeking manufacturing innovations that the consumer demand has in turn

sure stumbling block to fast decision making.

But Shariton is an experienced association bidder. "You have to know how to negotiate a contract with public relations in mind," he said. "For one thing you don't just key on the president of the association, because he may be gone before you know it. You have to deal with the organization as a whole."

Mickey Strauss and Jerry Bliss agree. Strauss is president and



said. "On hillsides you can't use a riding mower and the self-propelled models I've seen just don't cut it. The best built are the Sensation and the Bobcat, but because they're so heavy, most guys are reluctant to use them."

Bliss thinks that if the manufacturers could develop a high horsepower self-propelled 30-inch mower they would fill a great void in the marketplace. "The three horsepower mowers are just useless," he said. "They're not going

Alan Shariton: "There's a big gap in the marketplace. We mow 52 weeks a year. You can't do it with just garden tractors."

Bliss maintenance manager of American Landscape Maintenance, a large total ground care company north of Los Angeles. "The best homeowner association to bid is a third year group," said Strauss. "The first year you're still working with the developer. The second year you may be working against the first year board. But by the third year the board has settled down somewhat and communications can improve."

American Landscape Maintenance also contracts a good amount of work with the city's public agencies, but has found that municipal specifications are a great snafu to reasonable contract negotiations. "The private contractor is a threat to the municipal work force," said Strauss. "The city's specifications are generally over-inflated and if you bid a job accordingly, you'll never get the contract."

Strauss finds that industrial maintenance contracts are on the whole much simpler to negotiate. In that instance, the contractor is dealing with just one facility manager and he generally wants things to settle down as fast as possible.

As far as equipment improvements are concerned, Bliss feels that the push type mowers need to be developed more fully. "We do in two weeks what the normal homeowner does in one year," he

to stand up to daily wear and tear."

Many of the design changes mowing and maintenance businessmen seek are not major innovations, but simple improvements that can add life and versatility to equipment over the years. A simple example is the handles on Snapper, Sensation, and Bobcats that break down into two or three pieces for packaging purposes. Unit construction and different packaging methods would serve the professional market effectively, according to Strauss and Bliss.

Los Angeles maintenance companies have a wide variety of grasses to maintain, Strauss points out. For this reason, the manager must determine which grasses he can culturally maintain. He must also decide which mowers will cut the grass best for lasting results.

Strauss says, for instance, that he has to cut his bermudagrass with a reel-type mower because it has to be cut close. Bluegrass, on the other hand, must be cut with a rotary because it requires a higher cut. "You have to determine if you want to manage it in the first place," he said.

It's not an easy decision to make in many cases. The maintenance businessman must take into account the type of accounts he wants to service, the profitability of one maintenance emphasis over

another, and the evolution of turfgrass variety.

If water scarcity continues to rise, says Strauss, "you'll probably see the end of bluegrass in southern California." The change may again require major and costly shifts in Los Angeles maintenance strategy.

The industry has definitely come of age, says Strauss. "We used to be called gardeners and now are referred to as maintenance professionals. The industry has advanced way beyond the cut and trim stage into total grounds management."

As developers go into second class lands to build, the industry will become even more indispensable, Strauss believes. "Architects can't tell you about plants, pre-emergents, or hydro-seeding," said Bliss. "The industry has become almost a cultural necessity."

One of the largest maintenance companies in Los Angeles is Environmental Care, Inc. in Orange County, a kind of lawn maintenance trend setter in the area. Bill Arman, a branch manager in charge of maintenance, is in agreement that mowing and maintenance companies must study the future very closely. The biggest concern, he believes, is water scarcity and energy management. "Water is starting to

Bill Vandergeist: "The landscape architects have no idea what a mowing/maintenance guy goes through."

the office."

They are also investigating the possibility of using diesel, propane, and even electric-powered cars in their business and are curious about the development of three-wheeled motorcycles for on-site transportation. "If we can save one mile per gallon, we're ahead," said Arman.

Aside from just fuel savings considerations for their fleet, Arman must study the gas consumption rate of their sizeable mowing inventory. The largest mower they use is a 15 foot three-gang Howard Rotary which is all hydraulic. "It's overall performance is unbelievable," says Arman. They also use two Toro Parkmasters, six Toro Groundsmaster (72 inch), about 20 Bobcat 36" intermediate sized mowers, 50 or 60 Bobcat 21 inch self-propelled mowers, a six-foot Longines back trencher, and an Excel Hustler thatcher.

"Whenever we can mow at 36 inches we'll put the Bobcats out there," said Arman. "It will pay four and a half times the savings of a 21 inch," said Arman. "It costs a lot to keep all those 21 inch mowers running."

Arman believes there's a tremendous market for the intermediate sized mowers in the Los



become extremely precious out here," he said.

Arman believes that the maintenance industry has become sophisticated enough in Los Angeles to require employees with a horticulture background. "We have to look five years down the road," he said. "We have to beef up our energy management expertise as a company and ask ourselves 'Where are we headed?'"

In order to facilitate his company's search for cost effective alternatives, each manager has been given an area of responsibility or expertise. It's his job to study one of several areas of field management and be able to report on current developments to the company team. "We have to be able to adapt readily to the needs of the consumer," said Arman.

An area that they have developed successfully is gas efficiency for their fleet. Although gas prices have generally risen at an astonishing rate across the country, Environmental Care's percentage of gas use has systematically dropped. Some simple reasons for the turnaround: "We switched our supervisory personnel over to fuel efficient Toyotas instead of pickups," said Arman. "And everybody reports to the job site and not

Angeles area that manufacturers should take advantage of. "If they got the bugs out of the bigger mowers," he said, "the market would really take off."

In order to move all this equipment Arman says that Environmental Care's sales teams are trying to develop clusters of maintenance areas so that transportation costs can be minimized. "You really have to schedule efficiency," he said. "It won't come through just because you have the right piece of equipment. It has to be put to efficient use as well."

Putting efficient machinery to efficient use is the theme that all the maintenance businessmen interviewed voiced in one way or another. Although the Los Angeles market seems open-ended, serious environmental issues threaten to change market conditions yearly. It's what most businessmen fear the most — unforeseen changes.

Many of the design changes and business innovations maintenance companies will begin to see a few years down the road probably got their start in California. The maintenance industry there is huge. It is also being guided by sophisticated businessmen who so far have met the challenge of market abundance.



The self-propelled 36 inch walk behind mower: Most L.A. maintenance businessmen feel that it's a key to labor efficiency.

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TOOLS, TIPS, TECHNIQUES

Calendar for rush orders

It's that time of year when the lawn care businessman and his industrial suppliers begin the ritual sun dance known as pre-season purchasing. Every order is a rush, every day lost is a setback. The root of the problem, according to Lebanon Chemical Company, Lebanon, Pennsylvania, lies in the standard Roman calendar: Only four or five Fridays each month, too many non-productive weekends, and, bane of the business world, the sacrificial First.

In order to provide a more reasonable purchasing schedule for the lawn care businessman, Lebanon has devised a new rush-order calendar for the spring purchasing crush. As you can see, with it an order placed on the seventh of the month will be filled by the third. Since all of you want orders by Friday, there are two of them in every week! Some additional highlights: Seven days at the end of the month for procrastination. There is no first and the 10th and the 15th have been omitted in case you are asked to pay on those days. Finally, a new day each week called Negotiation Day has been added.

Just get on the phone and get your order yesterday!

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31	30	29	28	27	26	24
38	37	36	35	34	33	32

HERBICIDES LEAD

Pesticide production to increase 1.4% annually thru 1985

Domestic production of pesticides is forecast to increase 1.4 percent annually from some 1.4 billion pounds in 1980 to about 1.5 billion pounds by 1985, reports Frost & Sullivan, Inc.

Concurrently, market value will grow 8.4 percent from about \$3.9 billion to \$5.8 billion.

Production of herbicides, the largest pesticide class, is seen building at a 1.9 percent annual clip, climbing from 600 million pounds in 1980 to nearly 700 million pounds by 1985, the marketing research firm says in a new study, *Pesticides Market*. Dollar value is projected to rise 8.6 percent annually from about \$2.3 billion to almost \$3.5 billion.

Insecticide production is forecast to grow 0.9 percent annually from 585 million pounds to 611 million pounds over the period. Value is estimated to climb 7.8 percent per year from more than \$1.3 billion to just under \$2 billion.

Fungicides, the smallest of the major pesticide classes, will show a 1.4 percent increase in annual production, from 165 million pounds in 1980 to some 173 million pounds by 1985. Value is seen escalating 8.1 percent annually from about \$270 million to \$415 million.

When segmented by chemical

class, the pesticide market is currently dominated by five active ingredients. Organophosphates account for 19 percent of total value; carbanates, amides and heterocyclic nitrogens each have 18 percent shares; and, dinitroanilines control 12 percent. These ratios are expected to remain intact through 1985.

Government actions are seen as influencing pricing. "It is clear that many more pesticides will become restricted and removed from the market," Frost & Sullivan said. "This will reduce selection of pesticides, and the fewer products available, the higher the prices."

Beyond the trend to higher prices, the 366-page study also looks for a continuation of the decline in research and development activity, spurred by rapidly rising costs. "The increased R & D costs will stifle competition in that only major chemical companies will choose to remain and build up their pesticide capabilities," Frost & Sullivan said. "Mergers will increase and many smaller firms will be absorbed into larger organizations."

All told, 14 major companies currently have shares ranging from one percent to 20 percent of the overall domestic market, the report says. Monsanto, St. Louis, leads the pack with a 20 percent slice, followed by Ciba-Geigy Corp., Greensboro, N.C. at 13 percent, Stauffer Chemical Co., Westport, Conn. at 12 percent, Eli Lilly — which includes Elanco Products Co., Indianapolis, Ind. — at 10 percent, and Du Pont Co., Wilmington, Del. and American Cyanamid Co., Wayne, N.J. at eight.

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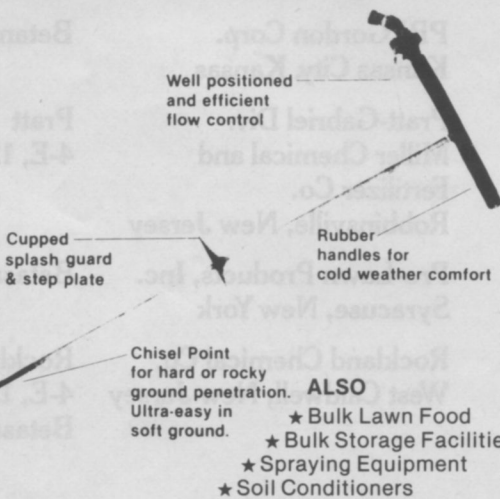
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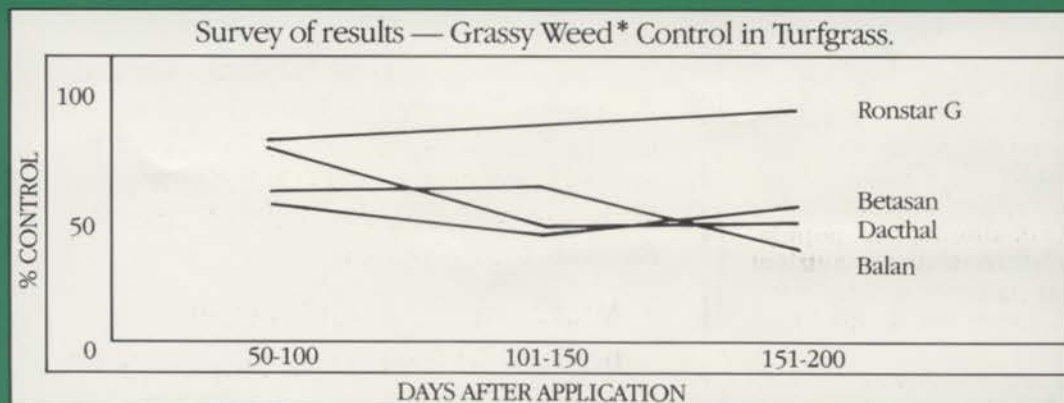
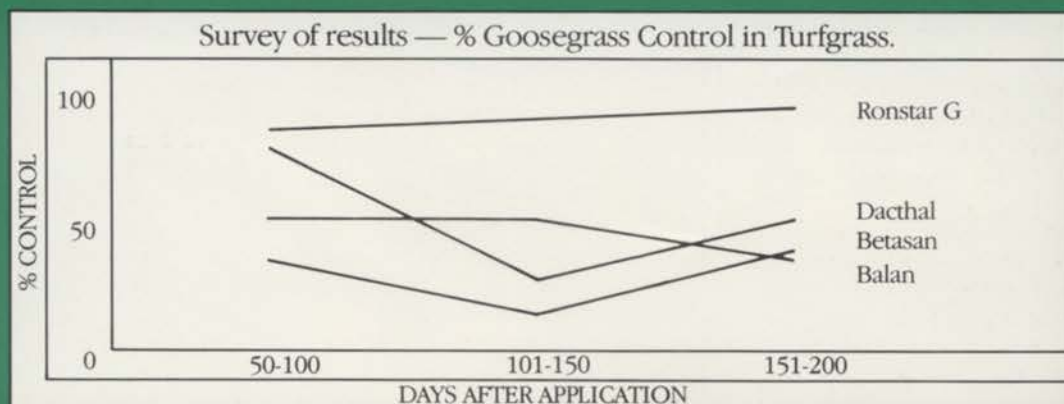
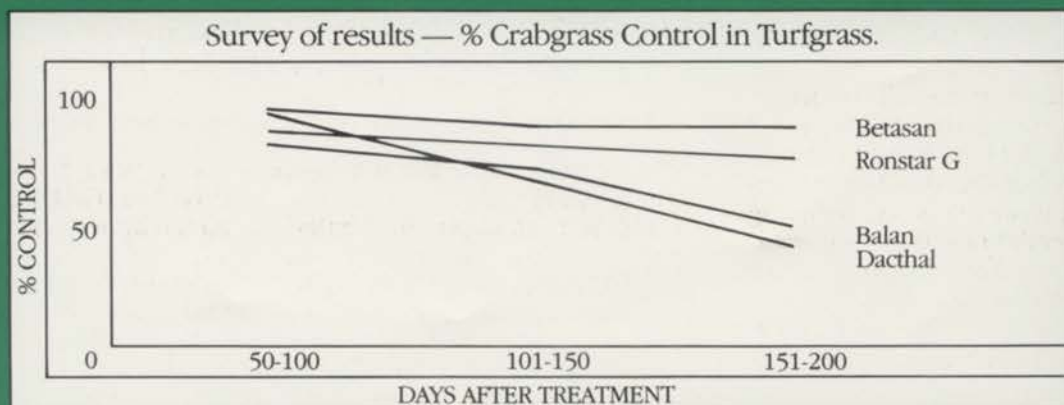
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quality after being on the program three to five years," Dr. Hall said. "After this time period, they seem to be declining in quality. One of the reasons for this decline in lawn quality is the excess buildup of thatch caused by annual maintenance programs which include three to five pounds of nitrogen per 1,000 square feet plus insecticides, herbicides and limited amounts of fungicides."

Thatch is the tightly woven layer of living and dead stems, rhizomes, stolons and roots that accumulates on the soil surface. In the early stages when this layer is a half-inch thick or less, it actually has the beneficial effect of increasing wear tolerance, reducing weed populations, reducing water evaporation from the soil surface and insulating the crown tissue, modifying temperature fluctuations, Dr. Hall said.

Low nitrogen level

Where turf is maintained with moderately low levels of nitrogen, limited applications of pesticides and cultivated infrequently, thatch buildup is seldom a problem. When turf receives three to five pounds of nitrogen per 1,000 square feet annually, repeated applications of pesticides and no cultivation — thatch is eventually going to be a problem.

"Today's lawn care industry is faced with the problem of how to deal with excessive thatch buildup," Dr. Hall said.

In transition zone climatic areas where turfgrasses are often pushed to their survival limits by limited moisture and extremes of temperature and disease, excessive thatch can be deadly. This lignified layer of undecomposed organic matter is capable of altering pest populations, moisture relations, nutrient utilization patterns, soil temperatures and other climatic and biotic factors.

Pathogenic organisms causing *Helminthosporium* leaf spot, stripe smut, dollar spot, brown patch, *Fusarium* and *Pythium* are harbored by the thatch layer. The moist micro-climate created by the thatch layer favors fungal invasion and allows pathogenic microorganisms to live and sporulate on thatch. The probability of insect pathogens surviving the winter is increased by the insulating effect of thatch.

Thatch penetration

Soil-borne fungus and insect pathogens often escape control methods due to the inability of applied pesticides to penetrate the thatch layer. The hydrophobic thatch layer prevents adequate water infiltration, causing reduced root growth and increased potential for wilt damage. When thatch layers are kept moist, roots tend to develop in this zone and crown regions of the individual turfgrass plants tend to be elevated in the thatch.

This elevation of the crown region away from the soil leads to increased exposure to cold and hot temperature extremes and greater probability of stress damage. Interception of lime and fertilizers applications by thatch layers produce erratic fertilizer response. In some cases the microorganisms tie up the applied nitrogen indefinitely,

delaying the use of the nitrogen by the turfgrass plant.

There is no simple method of controlling thatch, Dr. Hall said. Most golf course superintendents solve the problem on golf greens by topdressing with sand-soil-peat mixtures a minimum of twice a year. This solution is economi-

cally unreasonable for the lawn care industry.

"Cultivation machinery that grooves, slices, forks or spikes is not going to be adequate," Dr. Hall said. "Although not the final solution, the drum aerifier is the most likely to fill the bill today."

cally unreasonable for the lawn care industry.

In-depth attempts to "spike" thatch layers with microorganisms that facilitate thatch decomposition have thus far met with very limited success. At this point in time, although the theory is promising, the technique is not reliable

could have been done to avoid this?" Dr. Hall said. And, he feels, so the homeowner will eventually ask, "What could have been done to avoid the necessity of dethatching my lawn?"

Dethatching lawns is labor-intensive, extremely disruptive and expensive. It is a management

tool that is only used by the lawn care industry in terminal situations, Dr. Hall said. Most homeowners are not willing to pay the price of dethatching their lawn every two to four years, especially when the question of who created the thatch to begin with is a valid one.

What then are the alternatives for today's lawn care industry?

"Someone in the industry must take the lead and build thatch-reducing cultivation techniques into their program," Dr. Hall said. There are no reliable thatch-decomposing materials available and the public wants dense, green lawns that are free of weeds and damaging insects and diseases. Economic survival in the industry therefore demands the use of nitrogen and pesticides in amounts that can create excessive thatch. Given this problem, one solution for today is aerification that removes cores of soil and reinoculates the thatch layer. This will

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- 15 Cleveland, OH
- 15 Montgomery, AL
- 20 Albany, NY
- 25 Parsippany, NJ
- 26 New York City, NY
- 29 Stratford, CT
- 29 Minneapolis, MN
- 31 Oshkosh, WI

February

- 1 Portsmouth, NH
- 4 Boston, MA
- 5 Worcester, MA
- 8 Woodbury, L.I., NY
- 9 Los Angeles, CA
- 9 Springfield, MA
- 10 Boston, MA
- 19 Maui, HI

March

- 1 State College, PA
- 3 Hershey, PA
- 3 North Myrtle Beach, SC
- 4 Durham, NC
- 4 King of Prussia, PA
- 5 Asheville, NC
- 5 Cherry Hill, NJ
- 6 Hauppauge, L.I., NY
- 8 Atlanta, GA
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ing as industry liaison is Bob Earley, editor/publisher of LAWN CARE INDUSTRY.

The conference was highlighted by a series of presentations and workshops given by various industry experts, including a keynote address by Ralph L. Lewis, Jr., vice president and coordinator of communications for the Gulf Oil Corporation. Lewis gave a rousing speech on the interdependence of geography, history, politics, and energy in the world today.

The heavily attended sessions tended to emphasize company management rather than turf science, keying on subjects as varied as "Operating Lawn Care Equipment for Maximum Efficiency," "Safety Engineering and Loss Control," "Planning: The Key to Success in Office Management," "How to Analyze Financial Statements," "Accounting Practices for

the Lawn Care Industry," and "Lawn Care Employer Hot Spots: Wrongful Discharge and Proper Compensation of Employees."

Turf topics were not neglected, however. Evening workshops were devoted to discussion of toxic waste and herbicide, insecticide, and pathology updates. Represented were Dr. A. J. Powell, Jr., Department of Agronomy, University of Kentucky, Lexington, Ky., Dr. Harry Niemczyk, professor of turfgrass entomology, Ohio Agricultural Research & Development Center, Wooster, OH, and Dr. Noel Jackson, Department of Entomology, University of Rhode Island in Kingston.

One of the more popular talks was delivered by Richard I. Lehr, an attorney from Birmingham, AL, who specializes in the field of labor relations. Lehr stressed the need for lawn care businessmen to be very careful of the manner in

which employees are discharged and compensated. Very often a businessman can be liable for damages resulting from negligence or ignorance of labor laws, said Lehr.

Above all, the presentations stressed the need for energy conservation and the elimination of waste. Jim Hughes, fleet manager for the ChemLawn Corporation, Columbus, Ohio, held a workshop that was heavily attended by lawn care businessmen seeking the answers to questions on the desirability of propane and diesel as alternative fuel sources.

Exhibitors included: Agro-K Corp.; Agrotec, Inc.; Allied Corp.; American Lawn Applicator; American Pelletizing Corp.; The Andersons; BASF Wyandotte Corp.; BFC Chemicals, Inc.; B & G Co.; Balcom Chemicals, Inc.; Brinly-Hardy Co.; The Bunton Co.; E. F. Burlingham & Sons; CLC Labs; C. P. Chemical Co.; W. A.

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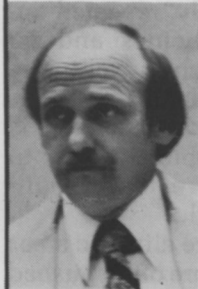
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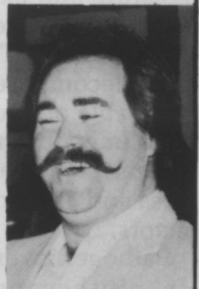
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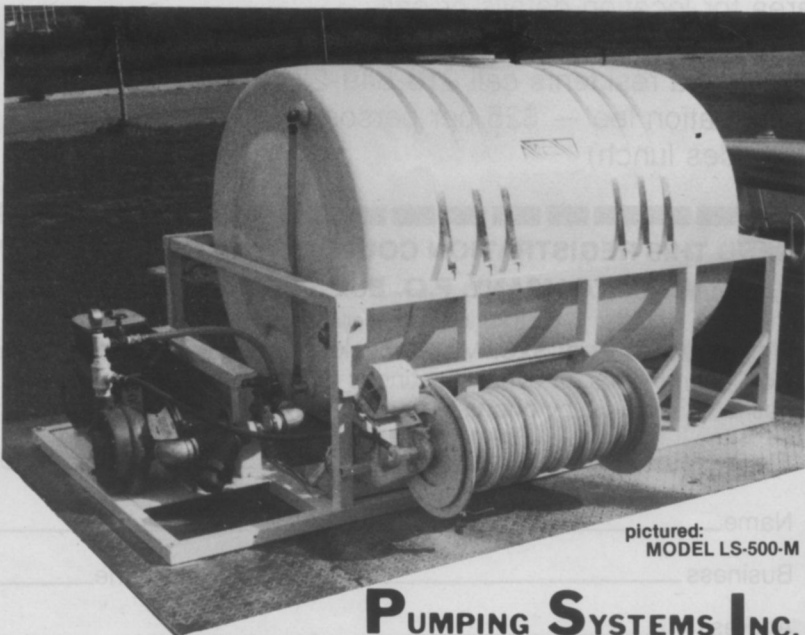
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use of several fungicides, such as thiram, maneb, benomyl, iprodione, Cadminate, Bromosan and Duosan has resulted in thatch accumulation, probably due to a lowering of soil pH and thus reduced microbial activity.

By understanding these primary causes of thatch accumulation, much can be done to minimize the thatching potential of the turf.

Thatch is similar to many factors involved in turf production — you can get too much of a good thing. Small amounts of thatch — in the range of 1/4 to 1/2 inch — can actually result in an improved turfgrass stand, Dr. Turner said. However, as the thatch layer develops beyond this thickness, and particularly beyond a thickness of one inch, problems which are often severe begin to arise.

Thatch benefits

Although the list of beneficial effects of thatch is not long, each of the following characteristics imparted by thatch to the turfgrass stand is important.

Surface resiliency is one. The ability of turf to "give" or act as a cushion is enhanced by a thatch layer of 1/4 to 1/2 inch and is an important characteristic of many turf uses. This resiliency can reduce the chance of injury of children playing on home lawns or parks.

Wear tolerance is another. Several studies have related the ability of turfgrass stands to withstand wear damage from foot traffic and equipment traffic to the presence of a moderate thatch layer.

Environmental stress tolerance is a third beneficial effect, Dr. Turner said. A moderate thatch layer can act as a buffer between air and soil temperatures, thus somewhat reducing the potential impact on the turfgrass stand of very high or very low temperatures or rapid changes in temperatures. Also, improved water infiltration can result when a thin layer of thatch develops, which can be a benefit under restricted moisture conditions.

The number of potential detri-

mental effects of thatch is great, and includes increased insect and disease problems, reduced effectiveness of some pesticides, reduced selectivity of some pesticides, inefficient use of water, poorer mowing quality and reduced effectiveness of overseeding.

The thatch environment is an excellent medium for survival of many insects and diseases. For example, many of the organisms causing disease survive as resting structures or as saprophytes (organisms living on dead organic matter) in the thatch material. Diseases particularly enhanced by excessive thatch are *Fusarium* blight, stripe smut, and *Helminthosporium* leaf spot. Thus, one biological approach to reducing pest problems is to reduce thatch.

Several insecticides and herbicides show reduced effectiveness when excessive thatch is present. Insecticides such as diazinon and particularly Dursban

are tied up by thatch. Thus, control of white grubs where excessive thatch exists will be reduced when these insecticides are used for their control.

Maryland damage

Numerous home lawns in the Maryland area suffered this problem during the 1980 lawn care season. Research has also shown that the degradation rates of two pre-emergent herbicides tested — benefin and DCPA — were faster in thatch than in soil. Thus, pre-emergent herbicides applied to thatchy turf may have to be applied at higher rates or more frequently to obtain season-long control of crabgrass or other annual grassy weeds.

Research at the University of Illinois has just shown that the selective nature of some pesticides (the ability of the pesticide to injure or kill the target pest without damaging the turf) can be

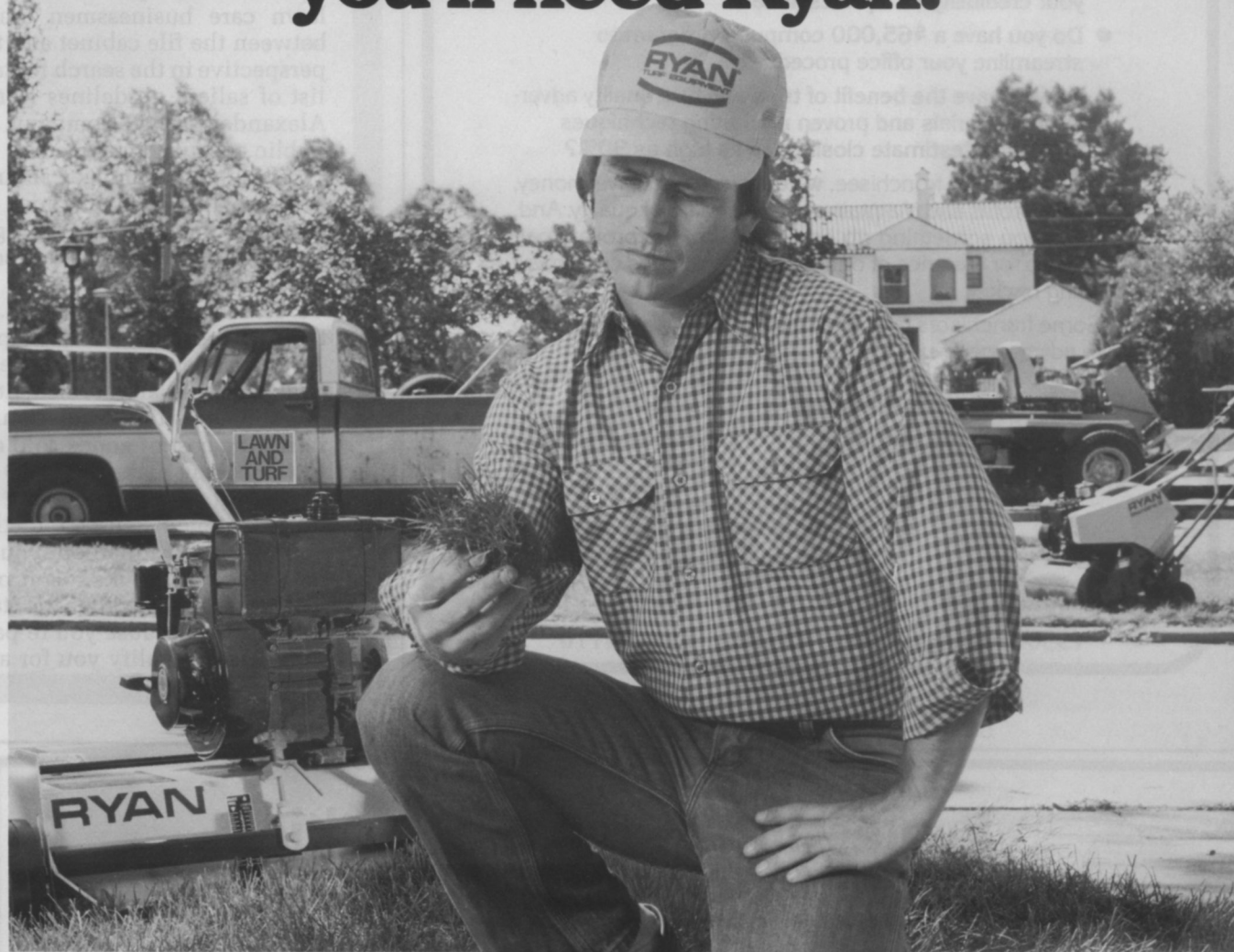
reduced on thatchy turf. For example, turf injury by some pre-emergence herbicides has been shown to be severe on thatchy turf areas whereas no damage occurred on thatch-free turf.

Although a small amount of thatch may increase water infiltration, excessive thatch can cause several water-related problems. First, thatch tends to become hydrophobic (water-repelling) with time and thus more irrigation water and rainfall is lost by run-off. As the thatch becomes increasingly hydrophobic, localized dry spots form which are difficult to wet and wilt rapidly. Second, as roots and rhizomes tend to grow in the thatch layer rather than penetrate into the soil, soil under excessive thatch often remains compacted, which reduces the amount of water which will move into the soil.

Third, Dr. Turner said, since most of the pore space in thatch is large, thatch has lower moisture

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ALCA from page 5

In his presentation Christian broke down the actual costs of an actual piece of maintenance machinery. As an example, he used the hand-mower, common to all maintenance professionals.

He began by determining the average hourly use of a mower during the course of the year. By dividing that figure by the purchase price, he arrived at the cost of owning the mower per hour. The detailed analysis of the mower emphasized the need for the lawn care maintenance businessman to be very specific in determining the long-term cost of his equipment.

For instance, if the mower cost \$300, a return on investment of that amount at 25 percent would equal \$468.75. "In other words," said Christian, "we need a \$168.75 return on investment on that machine to make it cost effective."

The symposium was rounded out by keynote speaker Dr. Robert Miller, ChemLawn Corp., who gave a talk on the effects of pesticides in our world.

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Past into present: Marty Erbaugh accepts gavel from outgoing president Jerry Faulring. Faulring will stay on the board as past president.

COST CUTTINGS

Hunting for tax advantages

What with the April 15 deadline for income tax returns looming, lawn care businessmen are now probably in mad dashes between the file cabinet and the calculator. In order to provide perspective in the search for tax advantages this spring, here is a list of salient guidelines from Selwin E. Price, partner in the Alexander Grant & Company, a Chicago-based national certified public accounting firm.

Using tax advantages should be part of a cash management program that also includes controlling accounts receivable, reducing inventory, curbing overhead, and deferring cash payments, he said. Here are seven tax advantages that Price has explored:

- Accelerated depreciation. This gives you a faster write-off in the early years and thus helps save tax dollars.
- Investment credit. Be sure you get every credit for which you qualify. These are permanent savings.
- LIFO inventory valuation. LIFO means last in first out. This raises the cost of goods sold and thus lowers profits and taxes. But once you make the LIFO switch for tax purposes you must also use it for your financial statements.
- Completed contract method. For long term contracts, if you're on this method you don't pay tax until the job is completed rather than as it progresses.
- Leasing. Consider the tax advantages, which are often substantial, because you're paying more money up front. Also, some leases qualify you for an investment tax credit.

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This year's PLCAA Conference and Trade Show is set for Tuesday through Thursday, Dec. 16-18 at the Indianapolis Convention Center. Headquarters hotel is the Indianapolis Hyatt Regency Hotel. For further information, contact: Jane Stecker, PLCAA, Suite 1717, 435 N. Michigan Ave., Chicago, IL.

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retention under low water potentials than most soils. This factor, coupled with the shallow rooting of turf in thatch results in increasing the susceptibility of turf to moisture stress.

Finally, due to the major differences in pore size distribution between the thatch layer and the underlying soil, unsaturated water flow from the soil to roots in the thatch is made more difficult, once again increasing the risk of drought injury. As a result of these effects, turf with excessive thatch needs to be irrigated more frequently, which can lead to more serious pest problems, particularly diseases.

Mowing risks

Due to the spongy nature of turf having excessive thatch, uneven mowing and an increased risk of scalping occurs on thatchy turf. A very non-uniform, patchy turf can result.

A major problem in home lawn renovation is the failure of new overseedings to survive in a thatchy site. Although survival of perennial ryegrass overseeded into thatchy areas may be better than Kentucky bluegrass, thatch reduction measures should be taken before any renovation or overseeding measures are taken. This same thing is true of winter overseeding of warm-season grasses. Survival of the overseeding may be only 50 percent on a thatchy site versus a thatch-free site.

Numerous other problems can also be caused by excessive thatch, such as less predictable response to fertilizer. Unfortunately, many lawn care businessmen fail to link many of the turf problems they face with excessive thatch. A particularly vicious cycle among thatch, diseases and pesticides can be set up, Dr. Turner said. As the thatch layer builds up, disease can be encouraged by this organic matter plus the necessity for more frequent irrigation on thatchy turf.

The lawn care businessman will then use fungicides to control these diseases. However, many common fungicides are themselves thatch-inducing. The problem can thus get worse and worse. The only answer is to limit or reduce thatch.

Cure and prevention

Thatch is certainly not a new problem, and unfortunately, there are no new solutions to its control. Control of thatch, like many problems, can be put into two groups, preventative and curative. Preventative control measures primarily include changes in or modifications of normal management practices. Curative control primarily includes physical removal of thatch by mechanical means.

Preventative control of thatch requires attention to factors which contribute to thatch. Of critical importance are nitrogen nutrition, watering practices and soil conditions.

As nitrogen rates increase, so does the potential for thatch buildup. No more nitrogen should be applied than absolutely necessary to maintain the level of turfgrass quality that is desired or required.

Thus, optimum nitrogen rates could range from one to 4½ pounds per 1,000 square feet. Care should be taken to apply nitrogen at the proper times during the season for the species being grown, Dr. Turner said.

Frequent light watering or excessive irrigation which keeps the soil nearly saturated will contribute to more rapid thatch buildup. Under these conditions, roots will proliferate near the surface rather than growing to greater depths, which will eventually accentuate a problem of thatch.

Excessively wet conditions are unfavorable for the microorganisms involved in organic matter decomposition and thus will result in faster thatch buildup. Water only when absolutely necessary, then water thoroughly to a depth of four to six inches (light syringing of the turf is certainly desirable during stress periods, wetting only leaves and crowns but not soil).

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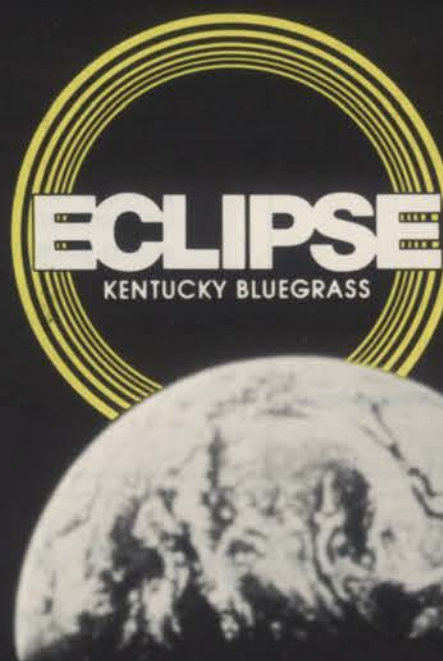
MARKETING IDEA FILE

Marketing through education

The lawn care industry can use local community adult education programs as a marketing tool, said Ray Gustin, president of Gustin Gardens, Inc. in Gaithersburg, Maryland. "It's a cheap date," Gustin told a crowd of lawn care businessmen at the recent ALCA Maintenance Symposium in Cherry Hill, New Jersey. "Adult Education is an untapped marketing tool."

Gustin said that his company offers a seminar program, run by his staff horticulturist, and charges \$60.00 per person for four weeks. If the person completes the course, the fee can be rebated back to them as a gift certificate on company services. "It's a low-key public seminar," said Gustin, "and a great marketing tool." Gustin said they advertise the classes in the local newspapers and that the response rate has been excellent. As a marketing and public relations method, it's a relatively soft sell with big results.

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Golf course defector has diversity thru lawn care

Tom Gravitte is something of a maverick in many golf course superintendent circles. In the golf course business for 20 years and ultimately director of a 36-hole course at Lake Hickory Country Club in North Carolina, he probably had another 20 years of the country club life assured to him. Instead, he chose to strike out into the sometimes precarious world of professional lawn care.

Gravitte is president of Greneleves, Inc. of Hickory, North Carolina, a lawn care company that offers total vegetation control for municipal roads, irrigation installation, seeding, aerification,

athletic field care, and lawn care. If that seems like a lot for a low-overhead operation, there's a reason. "I can't make it on just lawn spraying in a town this size," he told LAWN CARE INDUSTRY. "You have to go after the moneymakers."

Greneleves, Inc. is a company whose market orientation is similar to thousands of medium-sized lawn care companies who supply the bulk of the nation's lawn care demand. Without a major metropolitan market to cast about in, these companies have to target their buyers with precision. Not an easy task when supplying services to four distinct markets.



Tom Gravitte of Greneleves, Inc., Hickory, N.C. Lawn care represented about 50 percent of his company's gross receipts last year. The result was built through diversity.

But Gravitte's first priority is lawn spraying. It made up about 50 percent of his company's \$118,000 in gross receipts just last year. It also gives him about three-fourths

of his decision-making headaches. Because Hickory is surrounded by North Carolina's vast turf transition zone, Gravitte has been forced to treat his accounts as if they were separate turf laboratories.

Hickory's deep shade areas require two different overseeding mixtures: In sunny areas about 80 percent K-31 tall fescue and 20 percent Pennfine perennial ryegrass. And because shade requires a high quality seed, fescues K-31, Pennlawn, and Jamestown in those areas. "We have problems with bermuda infestation," said Gravitte. "So in September, we mow it down and overseed with the cool-season grasses."

His spray season begins on February 20 with four five-week cycles. Each cycle requires a broad-leaf weed control of 2,4-D and MCPP. And because of the phosphorus-deficient soils in eastern Carolina, he uses a lot of 10-10-10 fertilizer. "We will also contract out on grading and drainage control on a 10 percent basis," said Gravitte. "But that's it. We've gotten stung in the past with landscape maintenance."

Athletic field maintenance

Gravitte's second priority is athletic field maintenance. It's a business sideline he entered partly because of its similarity to lawn maintenance, and partly because of his interest in civic affairs. He now maintains two fields for the local college and one for the high school his two daughters attend. Included in the job is sprinkler and irrigation maintenance, overseeding, aerification, and sprigging. "During the overseeding season, I can get help from the local Catawba Valley Technical College," he said.

The fields are mainly bermuda and aerified eight times during the course of the year. It breaks down to four double aerifications in May, June, July and August. "We've been able to double our coring speed," said Gravitte, "and now can hit all three fields in one day."

Greneleves's third business facet is what is called total vegetation control for area highways, boulevards, fence rows, parking lots, and tennis courts. It represents about 15 percent of the company's gross income and reflects Gravitte's emphasis on company diversity. "We have to concentrate on the moneymakers," he said. "We can't just spread good will in one market and hope to profit by that."

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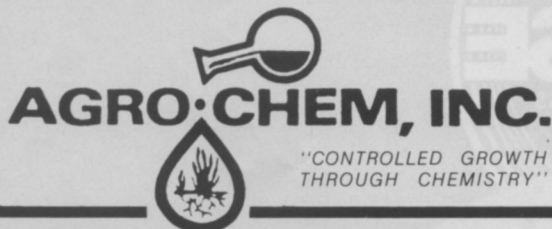
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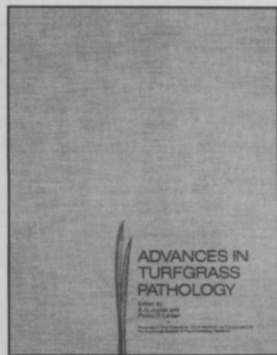


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Ford introduces new Series 10 tractor with major improvements

The lawn care industry may benefit from the introduction of Ford Tractor Operation's industrial lineup for 1982, according to J. A. Davies, manager of industrial products, Ford Tractor and Implement Operations — North America.

At a recent news conference in Reno, Nevada, dealers were told that LCG (low center of gravity) model industrial tractors, used in the lawn care industry for mowing, maintenance, and aerator hauling, would benefit from the massive research and development effort that went into Ford's new Series 10 Tractor line.

Among the LCG model refinements are major diesel-engine improvements, a new synchromesh

transmission, and other improvements that permit on-the-move shifts.

The displacement of the three-cylinder diesel engine for the 230A model is increased 10.7 percent, from 158 to 175 cubic inches, for improved lugging ability, pulling power and fuel efficiency. The net engine horsepower has been increased from 34 to 40, a 17.6 percent increase, while fuel economy at rated horsepower has been boosted about 11 percent.

The new model 530A industrial tractor has a 201-cubic inch, three cylinder diesel engine — the first production tractor engine from Ford equipped with headland pistons. Net engine horsepower

has been increased from 55 to 59.

Ford's headland piston has an L-shaped ring with its top surface at the top of the piston, rather than a short distance below as on other piston designs. The headland design offers better sealing and eliminates the narrow "dead" area between the upper side of the piston and the cylinder wall to improve combustion efficiency.

Major diesel improvements — headland pistons

All diesel engines in the industrial tractor line-up have been fitted with new controlled-flow injector nozzles for more precise fuel metering. The new injector nozzles are manufactured to closer tolerances for uniform atomization which improves engine performance and fuel economy. More efficient fuel usage also minimizes carbon de-

posits on engine components for longer service.

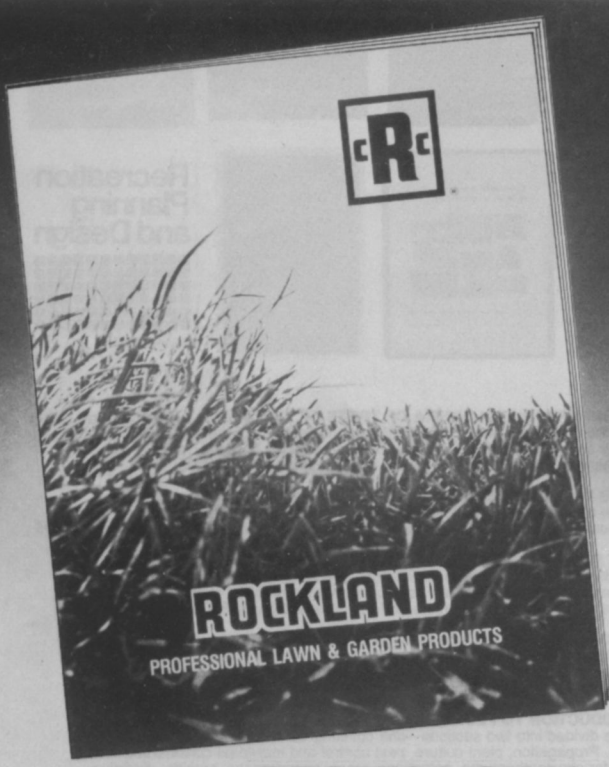
The three-cylinder 175 and 201 cubic inch diesel engines used in 230A and 530A models have new three inch longer dual-element air cleaners. The larger cleaners increase air-cleaner service intervals up to 20 percent.

The new optional synchromesh transmission available on 230A and 530A LCG models has eight forward and four reverse speeds that provide evenly spaced ground speed increases. There also are a large number of gears in the working range, to better match job requirements and improve productivity.

The transmission's synchromesh gears permit clash-free "on-the-go" shifting, except with heavy loads, to facilitate a variety of tasks.

Steering-column-mounted gearshift levers with synchromesh transmission provide clear floor space for added driver comfort. A foot throttle aids shifting.

Engineers have improved the power-steering system offered on 230A and 530A tractors. Mechanical and pump changes give easier steering effort, while a larger steering pump increases pump flow by up to 42 percent.



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GRAVITTE from page 28

Irrigation installation and maintenance is another important industry trend that rounds out the company. Handling any job under 20,000 square feet, Gravitte stresses that irrigation control is much more than laying pipe. Operating between spray cycles or in winter, Gravitte's team hooks the irrigation system up to the local river water supply. "It's 50 percent cheaper than water piped into your house," he said. "And, there's no sewage charge."

In order to coordinate all his various services, Greneleve's employs an accountant, whom, Gravitte says, "is invaluable." "Who's more important," he asks, "a CPA or a lawyer? We don't do anything without calling our accountant."

They also take an expedient attitude when it comes to sales technique, which Gravitte insists, is often too detailed. "A lot of people are high-strung," he said. "They only want to know when you are coming and how much it's going to cost. They don't need to be sold, they need to be signed, in other words."

Troubled by the state of the economy, Gravitte says that franchise affiliation would be too costly to him at this point. However, he does admit that he could have used franchise backing for his sales and advertising promotions.

On the other hand, he feels that he wouldn't want to be restricted by an exclusive lawn care program. "After being around country clubs a few years, you're supposed to have learned to pull a few tricks," he said. And it has obviously paid off. Because he enjoys speaking to local garden clubs in addition to his responsibilities as director of the Turfgrass Council of North Carolina, he generates not a few sales leads. "I don't want to get complacent," he said, explaining his involvement. "That's the main thing."

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NEWSMAKERS

Pacific Green Corporation has announced two management changes as part of its continuing expansion into the landscape and ornamental horticulture industries.

John Culbertson, 42, general sales manager for Pacific Green Sod for the past two years, has been promoted to the newly established position of director of marketing for Pacific Green Corporation.

Neal Beeson, 35, former operations manager for Anaheim Stadium and the city's two municipal golf courses, has joined Pacific Green Sod as the new general sales manager, filling the position vacated by Culbertson.

As sales manager, Culbertson will handle all marketing responsibilities for Pacific Green, including new acquisitions, market development, sales coordination, public relations, advertising, product promotion, and trade association liaison.

As general sales manager, Beeson will supervise the Pacific Green Sod sales staff, and be totally responsible for sales and service from San Luis Obispo to the Mexican border.

James M. Bailey is president of **Super Lawns of Gaithersburg, Inc.**, Gaithersburg, Md. The company offers granular chemical lawn care, and also aeration and seeding.

Joe Motz is owner of **Motz Maintenance**, Cincinnati, Ohio. Mike Arbogast is lawn technician

and Dick Oboetz is lawn technician. The company offers liquid chemical lawn care and also mowing/maintenance services.

Paul Montaperto is president and James Maloney is vice president of **Lawn 'N Turf, Inc.**, Dix Hills, N.Y. The company offers granular chemical lawn care services.

Wendell Crockett is owner of **Crockett's Green Lawn Service**, Northboro, Mass. The company offers chemical lawn care and lawn installation services.

Margaret A. (Peggy) Young will join the staff of the **Fertilizer Institute** as director, environmental programs, effective June 22, 1981, according to the industry association's president, Edwin M. Wheeler.

MEETING DATES

20th Annual North Carolina Turfgrass Conference, Jan. 12-14, Eoyal Villa Inn, Raleigh, N.C. Contact: Dr. L. T. Lucas, program chairman, Plant Pathology Dept., North Carolina State University, Raleigh, N.C. 27650.

Nebraska Turfgrass Foundation Conference & Trade Show, Holiday Inn Convention Center, Omaha, January 19-21. Contact: Paul Bergman, 2428 W. 11th St., Hastings, NE 68901, (402) 463-5055.

Virginia Turfgrass Conference, John Marshall Hotel, Richmond, Jan. 19-21. Contact: Dr. J. R. Hall III, Extension Agronomist, Turf, Virginia Tech, 421 Smyth Hall, Blacksburg, VA 24061, 703-961-5797.

Associated Landscape Contractors of America Annual Meeting and Trade Exhibit, Hilton Riviera Hotel, Palm Springs, Calif., Jan. 24-29. Contact: ALCA, 1750 Old Meadow Rd., McLean, VA 22102, 703-821-8611.

The New York Turf and Landscape Association Annual Turf and Landscape Conference, Jan. 27, 1982, Tappan Zee Inn, New York Thruway, Exit 11. Contact: Frank Claps, 136 Laurel Avenue, Larchmont, N.Y.

Golf Course Superintendent's Association of America International Turfgrass Conference & Show, Rivergate Exhibition Center, New Orleans, La. Jan. 31-Feb. 5. Contact: GCSAA, 1617 St. Andrews Dr., Lawrence, Ks. 66044, (913) 841-2240.

18th Annual Northern California Turf and Landscape Exposition, Sacramento Convention Center, Sacramento, Feb. 17-18. Contact: NCTC, P.O. Box 268, Lafayette, CA 94549.

Bergen County Landscape '82 Conference and Trade Show, sponsored by Bergen County Landscape Contractors Association, Ramada Inn, Montvale, NJ, Feb. 24. Contact: Michael Locatelli, 16 Donnybrook Road, Montvale, NJ 07645, 201-391-1442.

51st Massachusetts Turfgrass Conference and 6th Industrial Show, Civic Center, Springfield, MA, March 2-4. Contact: Dr. Joseph Troll, Professor — Turf Management, Stockbridge Hall Room 10, University of Massachusetts, Amherst, MA 01003, 413-545-2353.

The pros chose SHADOW

"As professional lawn care specialists, we want our customers' lawns to advertise for us. One of the major problems we find in many of our customers' lawns is stressed areas under and around shade trees. We formulated our Prograss lawn overseeding

mix to remedy these difficulties. For our shade mix we chose 90 percent Shadow Chewings Fescue and 10 percent A-34 bluegrass. We see exceptional results when proper overseeding procedures are followed. Shadow makes us look good, too."



Mike Erb
Prograss Lawn Service
Field Representative and
licensed applicator.

ZOYSIA from page 11

zoysia when it came out was that it was a cure-all, but management practices are opposite what we are used to with Kentucky bluegrass for mowing and timing of fertilizer applications."

Stouse also said that he does not feel that the aeration equipment on the rental market used by homeowners is generally heavy-duty enough to do the necessary job.

Gray is dealing with zoysia on a golf course, which is quite a bit different from a home lawn situation. He is on the course every day, and can handle the routine maintenance necessary to keep the turf looking good. He said he favors a 50/50 zoysia and bluegrass mixture because he gets nice bluegrass green-up in the spring, and maintains the color through the summer with zoysia. He core-aerates twice a year, and slices three times a year, and has had no thatch problems on his 12-year-old zoysia. But he admits it would be difficult to get most homeowners to carry out this rigid mechanical maintenance schedule.

Lawn care businessmen in the audience said they felt zoysia was best kept at a 3-inch cut, because the lawns tend to stay greener and have less insect problems. One lawn care businessman said he tries to get his customers on his 120 zoysia lawns to cultivate every three years, and he has had good results with 3 to 3½ pounds of nitrogen per 1,000 square feet a year. Many in the audience and on the panel felt that this was too much nitrogen.

Shadow is a new variety of Chewings type fine fescue developed for improved shade tolerance and resistance to powdery mildew. Breeding for these attributes was a long and tedious job, but the results were better, stronger turf than the old line fescues. Insist on the seed the pros choose for your shade mix.

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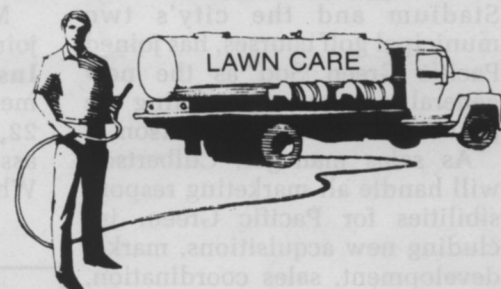
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Turf Distributor. Together this trio can
help you make more money. Read on:**

Obviously, you enjoy being in the lawn service business. And why not? You're beautifying America, and you have almost unlimited growth potential.

Of course, the bottom line is to make a profit that is in keeping with the energy you put into your business, and frankly that can be a problem.

But we can help you.

On Improving Your Profit

As you know, profitable growth in the lawn service business boils down to being able to hold a substantial part of your present customers year after year; being able to secure enough new customers to more than offset the customers you lose through natural attrition; and making adequate profit on every job.

The secret is to do the job right the *first time*.

When you do the job *right*, your customer enjoys an immaculate lawn that is nothing short of pristine. No weeds. No crabgrass. It causes your customer to stick with you year after year in spite of all the new business efforts of your contemporaries; and it also prompts him to tell his friends about you.

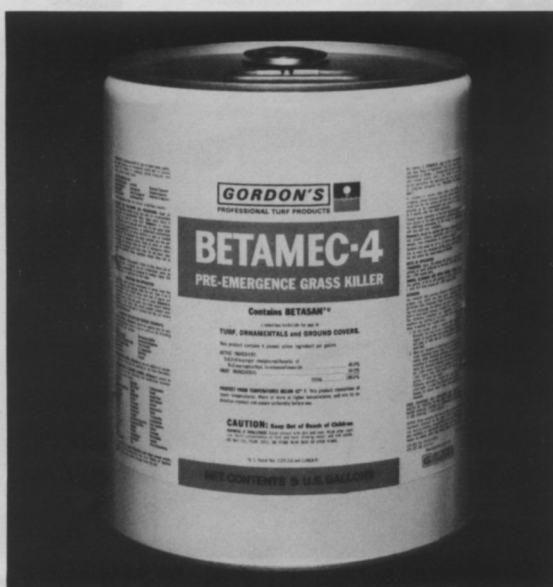
And when you do it right the *first time*, you do wonders for your profit because you eliminate those gut-wrenching, expensive retreatments.

The trio of Betamec-4; Trimec; and your Gordon Professional Turf Distributor can help you do it right the first time.

The Role of Products

Betamec-4 is unparalleled in the field of selective pre-emergence herbicides, and is preferred by lawn care specialists who want dependable results. Consider just a few of its unique advantages.

...It has an extended life, which means you can apply it on *your* time table rather than nature's germination schedule. Apply it early in the year and, even if it freezes before crabgrass germinates, Betamec-4 will still be there with its control.



BETAMEC-4: The premier crabgrass herbicide for established turf.

- Controls other grassy weeds and certain broadleaf weeds before they emerge.
- Has been used by homeowners, lawn care specialists and golf course superintendents with complete satisfaction for over 10 years.
- Controls Poa annua.
- Gives excellent crabgrass control without turfgrass injury.
- Controls unwanted plant growth before it becomes visible.
- Apply in fall or early spring for all-season control.
- Can also be used on Dichondra, ornamentals, ground covers, flowers and bulbs.

Betamec-4 (Betasan — registered trademark of Stauffer Chemical Co.)

... Because it's a liquid, it stays in place, and thus is effective over an entire terraced lawn.

... And it is so gentle to established turf and around herbaceous ornamentals. It has been applied at twice the recommended rate without causing damage.

Trimec is unparalleled in the field of selective post-emergence herbicides. It is a patented herbicide No. 3,284,186 manufactured by PBI/GORDON Corporation. Three chemicals: 2,4-Dichlorophenoxy acetic acid, 2-methyl-4-Chlorophenoxy propionic acid; and 3,6-dichloro-o-anisic acid are all reacted as acids to form the dimethylamine salt of Trimec. The resulting Trimec product has unparalleled strength caused by the synergism that occurs from reacting the three acids.

And yet, the cost per acre is low because the synergistic action of



TRIMEC® Turf Herbicide: Only Trimec gives you all these benefits.

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- Gets hard-to-kill species with one treatment.
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- Minimum hazard from root absorption. No vapor action after application.
- Effective weed control in a wide temperature range. Overcomes water hardness problems.
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- Non-flammable and non-corrosive in use. Stable several years above 30° F.
- Biodegradable; friendly to the environment.
- Bentgrass formula is also available.

TRIMEC® is a registered trademark of PBI/GORDON Corporation. Product covered by U.S. Patent No. 3,284,186.

Trimec is fully effective with a small amount of chemical which translocates to the root system, resulting in a high degree of kill.

We make the flat statement that dollar for dollar and acre for acre of immaculate, weed-free turf, Trimec is the most effective and efficient broadleaf herbicide in the world.

Unstinting Professional Service

The third member of the team is your Gordon Professional Turf Distributor. He will not only provide you with Betamec-4, Trimec, and a complete line of turf chemicals at a price that will leave you plenty of room for profit. He will back you up with technical knowledge to help you solve — or avoid — the problems that plague the lawn care business. He will also provide you with door hangers to help your customers better appreciate your service.

Thousands of lawn care operators have found that the team of Betamec-4; Trimec; and The Gordon Distributor can help them make more money. We



"I want to supply you with Trimec and Betamec-4."

are confident that you will have the same experience, and we urge you to prove it to yourself. To help persuade you, we'll give you \$10.00.

Go to any of the Gordon Distributors listed on this page and order five gallons of Betamec-4 and five gallons of Trimec. Get an invoice proving purchase. Send it with coupon. We'll send you a check for \$10.

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Now, when you get your \$10.00 from us, we hope you spend it on something that will bring a little excitement into your life. But whatever excitement it brings, it will be nothing compared to the excitement of your customers when they experience the better work you are able to do with the help of this trio.



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Madison • Pennington Seed, Inc.
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• Potter & Manthei Enterprises
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As thatch buildup is in part caused by the failure of soil microorganisms to decompose organic matter as quickly as it is produced, soil conditions should be made as favorable as possible for the activity of these microorganisms. Of most importance are aeration,

drainage and soil reaction. Well-aerated soils will exhibit a faster rate of thatch decomposition. Therefore, minimizing compaction (through soil modification, changing traffic patterns) or relieving compaction by mechanical means (coring, aeration) will aid in reducing thatch.

Related to aeration is drainage,

Dr. Turner said. By improving drainage through soil modification or installation of artificial drainage systems, thatching potential can be reduced. Soil reaction can have a marked effect on thatch. Maintaining a pH above 6.0 will result in less thatch than turf grown below this value, especially compared to soil pH of less than 5.6.

Bi-annual applications of 10 to 15 pounds of limestone per 1,000 square feet may aid in reducing thatch, although Dr. Turner does not recommend such applications unless the soil pH is below 6.3.

Where thatch has been a problem, removal by some means may become necessary, Dr. Turner said. Unfortunately, no really new and effective curative means have become available. Although several

biological products are available which reputedly will accelerate thatch decomposition, they generally have not been very effective in research situations.

Mechanical removal of thatch through hand-raking (using a thatch rake), vertical mowing, or aerification have been used successfully. Where turf is intensively maintained, the incorporation of vertical mowing and/or aerification into the regular management program as a preventative means of thatch control should be considered.

Bi-annual (spring and fall) aerification is particularly effective. Addition of topdressing material will help incorporate soil with thatch material and thus accelerate thatch decomposition.

\$50 COMBINE CONVERSION DEVICE* \$50

CONVERT YOUR BROADCAST SPREADER TO A COMBINE CAPABLE OF APPLYING 3 DIFFERENT GRANULAR MATERIALS AT ONE TIME.

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Norman Lynd, owner of Green Thumb, located in Willow Grove, PA., has invented and is now manufacturing this conversion device* that will change a broadcast spreader into a combine, without spending thousands of dollars.

A. Installation takes approximately one hour and you don't have to be a mechanic.

B. Once installed, it can be removed in less than one minute for cleaning and put back together in one minute.

C. Installation instructions and directions are included.

D. The unit is made with rugged stainless steel and aluminum. (No rusting)

E. All nuts and bolts for assembly are stainless steel.

F. Because of the simplicity and ruggedness of this unit, it should never need replacement.

G. Three adjustable metering slides for calibration are the only moving parts.

H. A common ruler is used for calibration settings.

I. Orders shipped within 48 hrs. of receipt.

J. Insert devices are available for cyclone brand spreaders model #99-100-100B only.

K. These units are not available from any other source at this time.

*PATENT PENDING



L. Payment in full must accompany all orders before shipment is made.

M. We will ship all orders via PP.

N. Total price \$50.00 per unit plus \$5.00 per unit for shipping and handling.

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MONEYWISE

How much vacation do you offer?

Although many lawn care businesses are small, they are also prosperous enough to give their employees satisfactory benefits. Vacation time being one of the company's principal benefits, compare your system with the following schedule for average U.S. companies from *Administrative Management Magazine*: After one year of service, most companies offer two weeks of vacation; one week after six months; three weeks after ten years and four weeks after 15 years. Of all U.S. companies, 18 percent give nine paid holidays per year, 13 give eight, and approximately 18 percent give seven or fewer holidays.

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PRODUCTS

Low profile tank for level loading

Finn Corporation's new 1981 T80 tank features a low profile tank design for ground level loading and a hydraulic powered, variable



speed paddle agitator. The T80 is operated by one person and includes many other features that have been standard on Finn Hydroseeders for over 30 years.

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Lawn vac is also a storage trailer

The PEU, from PeCo Inc., is actually two tools in one. First it is a lawn vacuum able to pick up and



mulch clippings, leaves, thatch, and common lawn debris while the tractor operator mows the lawn. The new vacuum can also be converted into a sturdy, steel util-

THATCH from page 23

create conditions which are conducive to the decomposition of thatch. In addition, other benefits of aerification will accrue, such as increased aeration of the soil and increased water infiltration.

"Cultivation machinery that grooves, slices, forks or spikes is not going to be adequate," Dr. Hall said. "Although not the final solution, the drum aerifier that extracts cores and distributes them on the turf is the most likely piece of machinery to fill the bill today."

There is a need for the development of an aerification machine that can rapidly aerify a lawn in a single pass, process cores, collect the thatch plug, and deposit enough soil to positively affect thatch decomposition. New weed control problems and aerification timing problems will arise with the inclusion of this management technique in lawn care industry programs. However, these challenges will be solved and are minor when contrasted with the alternative — excessive thatch buildup.

"As lawn care markets continue to tighten, reducing the annual customer turnover rate will become key to survival in the lawn care business," Dr. Hall said. "The companies that will thrive in this climate will be those whose programs improve the quality of lawns indefinitely, not whose programs lead to declining turf quality after three to five years."

ity trailer, complete with tail gate. The universal hitch on the PEU 3200 makes it usable on virtually any 14 hp lawn and garden tractor on the market. Other features include a totally self-latching and self-locking door, and tapered box and trailer for easy mulch removal.

Circle No. 171 on Reader Inquiry Card

Undermount mowers for Deere tractors

Woods Division of Hesston Corp. offers new undermount mowers specifically designed for John Deere 650 and 750 tractors. Woods Model L59 JD cuts a five-foot swath and will mount on either John Deere tractor, including the four-wheel-drive Model 750. Woods Model L306 JD cuts a six-foot swath and mounts on a two-wheel-drive Model

750 tractor. Both mowers offers Woods field-proven reliable performance features such as — easy-adjust cutting heights from one to six inches, heavy-duty blade spindles and positive-action, single V-belt drive.

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Blow low grade mulch

The new B250 blower from the Finn Corporation is totally redesigned with an increased capacity to blow low grade mulch material.



The B250 features a power feed with variable speed control, up to

25 ton per hour capacity and six cylinder diesel or gasoline power. Circle No. 173 on Reader Inquiry Card

Nozzle beats back turbulence

EROCON-Pacific Corporation's new Super Nozzle system uses the laminar flow principle of movement. This characteristic provides a significant improvement in the application of water, or water-based slurries, used for hydraulic seeding and fire fighting.

The super nozzle system modifies violent turbulence created in the centrifugal pump, to straight-line stream flow as it leaves the nozzle to tip. This action helps increase the application distance. Friction is further reduced by the smooth inside surfaces of the nozzle parts.

The Erocon Super Nozzle system consists of two nozzle tubes and six different nozzles.

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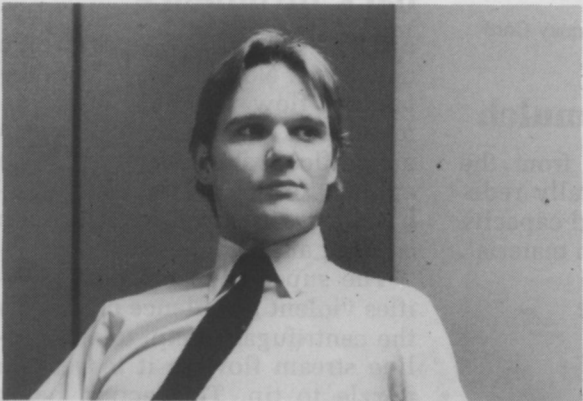


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Circle No. 103 on Reader Inquiry Card

MEMOS



Maintenance marketplaces

This issue contains the first in a series of articles devoted to a side of our industry that many of you are involved in, but for one reason or another, doesn't get the recognition it deserves. Starting with this issue, LAWN CARE INDUSTRY will present a regular feature series called

Mowing/Maintenance Marketplace. In it, we will spotlight a major metropolitan maintenance market and investigate its characteristics. What kind of machinery do maintenance businesses use? How do they integrate their chemical lawn care businesses with maintenance? What types of maintenance accounts do they seek? And why? What distinguishes their market from others half way cross the country?

For a growing number of lawn care businesses, mowing and maintenance is not just a sideline anymore, but a prospering enterprise that rounds out their businesses and tightens cash management. In Los Angeles, the subject of the first article, most maintenance companies are a part of a wider total grounds management operation. It's a condition of the market itself. In California, maintenance, lawn care, irrigation, landscaping, and tree care are often offered in bulk. The article is an attempt to discover why and how maintenance fits into their lawn care concept.

In the following months we will visit various metropolitan marketplaces to conduct interviews. Among them are Atlanta, Miami, Washington, D.C., Dallas, Kansas City, Cleveland, Milwaukee, and Portland. Instead of trying to speak with all of the maintenance businessmen in the area, we will try to speak in more depth with just a handful in order to present a better picture. We look forward to meeting with you.

Paul Shocloskey

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