

LAWN CARE INDUSTRY

Serving the needs of the professional lawn care operator

VOLUME 14 NUMBER 3

AN **ENR** PUBLICATION

MARCH 1990

LCOs: 90 should be better

The coming growing season should be a good one for the professional lawn care market.

That's what many LCOs said in a *Lawn Care Industry* telephone survey. Some promise more aggressive marketing of their services. Others point to strong local economies and continued growth (there were some exceptions) of upscale residential housing for their optimism.

There seems to be agreement—at least among the independent contractors we contacted—that a double-digit expansion in sales remains within the reach of the LCO who stresses quality ser-

vice at a fair price.

Roger Heider, Quality Lawns Inc., Omaha, NB, is starting his 18th year in the industry (the last eight as a business owner) and he predicts continued growth for his four-person operation because he knows his customers' needs extremely well.

"I know every yard and when somebody calls we can discuss their particular yard because I've been on it as many as 20 or 30 times depending on how long they've been with us," he says.

In fact, that's how Heider began his company: he got on the telephone and called every person he knew...and landed

200 customers his first season. Over the years, he's added aeration, seeding and snow removal to his company's services.

"Our phone is ringing off the hook already," reports Cathy C. Willcock, Lawn-A-Mat, Silver Spring, MD. Even so, she says she'll increase her telemarketing and direct mail campaigns. She reports she also receives good customer feedback from a newsletter ("I try to do it monthly.") that stresses the importance of good lawn grass cultural practices such as keeping a sharp mower blade and correct watering.

See **LCOs** page 30



David Ransome will use direct mail, handouts. "There's still lots of new business out there." He wants 20 percent growth.



Tidewater Marketplace: The Chesapeake Bay region of Virginia has a micro-climate that invites fungus. The crew from Cooper's Lawn Aeration Service reports growing success in selling fungus control. Our coverage begins on Page 31.

Evidence mounts in 2,4-D's favor

ChemLawn workers cooperate in study

The herbicide 2,4-D, one of the most widely used, extensively scrutinized pesticides ever, is to undergo yet even more study.

About 8,000 ChemLawn employees, two-thirds of whom have been pesticide applicators, are involved in the latest look at 2,4-D's safety.

This investigation is still in its initial phases and explores exposures prior to 1980, says an "executive summary" compiled by Industry Task Force II 2,4-D Research Data, a group of six companies funding ongoing research on the safety of 2,4-D. Task Force members are Agro-Gor, The

BASF Corporation, The Dow Chemical Company, Nufarm USA, Rhone-Poulenc Inc., and A.H. Marks and Company Ltd.

The Task Force's summary says "The consensus of opinion...is that 2,4-D poses minimal risk to the general public and that any risks to applicators and manufacturing workers are minimized through good work habits and use of protective clothing."

"Research conducted to date provides considerable reason for confidence in 2,4-D's safety," the Task Force wrote.

Controversy surrounding the herbicide flared after publication of a Kansas farm worker study in 1986 linking increased risk of non-Hodgkin's lymphoma among herbicide users (2,4-D is the most commonly used herbicide in Kansas). These findings have not been supported by subsequent studies, said the Task Force.

"Taken collectively, these studies of exposed groups generally suggest that phenoxy herbicides do not pose a major public health problem, even among the most intensively exposed persons," said the summary.

To date, studies in laboratory animals have not shown lymphatic cancers. **LCI**

PLCAA says April first ever "Lawn Care Month"

Professional lawn care is beneficial to the environment.

LCOs are being given an excellent opportunity to re-educate their customers to these benefits in April because April 1990 will be the first ever "National Lawn Care Month".

The Professional Lawn Care Association's public relations efforts, energized by its newest staff member, PR Director Sandy Hensel, were unveiled at PLCAA's January board meeting in Atlanta, GA. Hensel—she joined PLCAA last November—said PLCAA

is taking a "proactive" approach to environmental concerns. In fact, LCOs should let the public know that they too want safe and clean living and working environments. And that they are doing something positive about it, said Hensel.

Here's a rundown of PLCAA's efforts to showcase the benefits of professional lawn care:

■ A series of cartoon strips being developed concerning lawn care. When they're completed they'll be sent to all daily and weekly newspapers

in the United States and appropriate Canadian publications. The cartoons illustrate the environmental importance of lawn grasses.

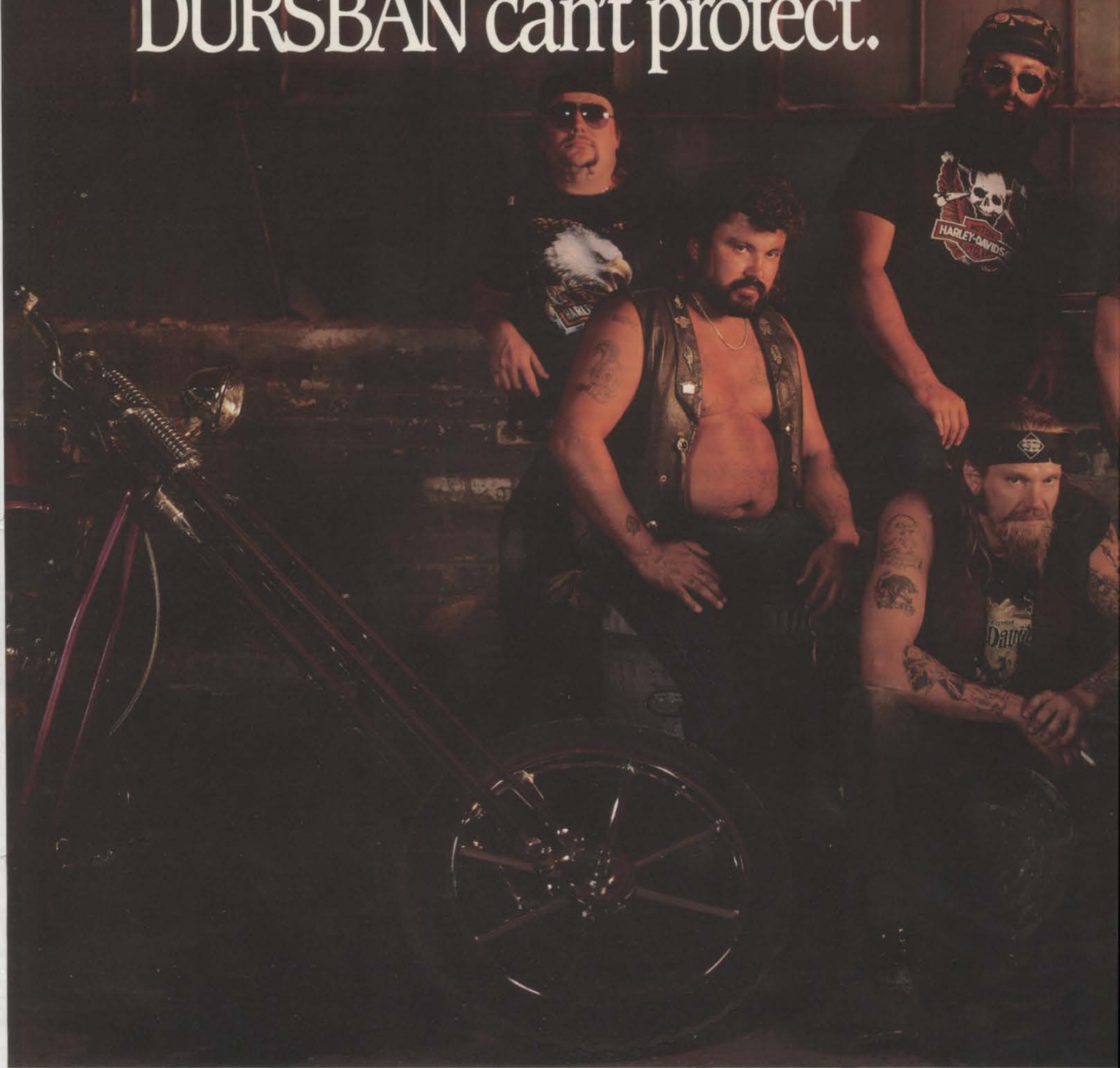
■ Proclamation of the month of April as "National Lawn Care Month". Besides being the beginning of the growing season in much of the United States, April 22 is "Earth Day" and April 27 "Arbor Day". LCOs can justifiably align themselves with these special observances.

Hensel said "Lawn Care

See **PLCAA** page 12

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MEMOS

The dollar value of pesticide shipments, which doubled between 1977 and 1988 climbing to \$6.6 billion, are projected to grow 9 percent annually to reach nearly \$19 billion by the year 2000, says a study released by Leading Edge Reports, Cleveland. Meanwhile the volume by weight of pesticide shipments declined from 1.4 billion pounds for 1977 to 1 billion pounds in 1988. Leading Edge Reports points to continued development of more effective pesticides and increased regulatory restraint on pesticide.

Safer Inc. sold its commercial pesticide division to Mycogen

Corporation. Safer will concentrate on the retail market.

Exmark Manufacturing Company, Inc., added P&D Distributing, Inc., Dadeville, AL, and Greatwinz Equipment Distributor, Inc., Utica, MI, as distributors.

Jerome J. Peterson, president and CEO of Peterson Seed Company, Savage, MN, was named the Atlantic Seedsmen's Association Man of the Year.

Seven graduate students at Rutgers University received Peter Selmer Loft Memorial

Scholarship fund awards, each for \$5,000. The recipients are Jane Brean, Leslie Reckert Campbell, Melody Kemp, Kathy Hofman Knight, Karen Plumbley, Suichang Son and Margarette Waters. The program is funded by royalties from the sales of Tribute, Lofts' proprietary tall fescue variety named in memory of Peter S. Loft.

Pesticide expert Dr. Wendell Mollison is manning the "hot line" for questions about products containing 2,4-D. For specific information on 2,4-D call (800) 354-1509, in Canada (517) 853-0219. **LCI**



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LAWN CARE INDUSTRY (ISSN 0160-6042) is published monthly by Edgell Communications, Inc. Corporate and Editorial offices: 7500 Old Oak Boulevard, Cleveland, Ohio 44130. Advertising Offices: 7500 Old Oak Boulevard, Cleveland, Ohio 44130, 111 East Wacker Drive, Chicago, Illinois 60601 and 3475 Lenox Road, N.E. Suite 665 Atlanta, Georgia 30326. Accounting, Advertising Production and Circulation offices: 1 East First Street, Duluth, Minnesota 55802. Subscription rates: \$25 per year in the United States; \$50 per year in Canada. All other countries: \$100 per year. Current issue single copies (pre-paid only): \$2.50 in the U.S.; \$5.00 in Canada; elsewhere \$10.; add \$3.50 for shipping and handling per order. Back issues, if available \$10, add \$3.50 per order for shipping and handling (pre-paid orders only). Office of publication: Edgell Communications, Inc., 1 East First Street, Duluth, Minnesota 55802. Second class postage paid at Duluth, Minnesota 55806. Copyright © 1990 by Edgell Communications, Inc. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopying, 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.

NBP VBA

TOP OF THE NEWS

LCOs readying trip to D.C. to discuss importance of lawn care with officials

WASHINGTON, D.C.—LCOs will seek the ear of top-level government officials March 28-29 in Washington D.C.

They'll be a part of PLCAA's Congressional "Day on the Hill" program, cosponsored by Monsanto. The LCOs' purpose will be twofold: to learn the proper protocol for dealing with senators and representatives, and to meet privately with these elected officials and inform them of the importance of professional lawn care.

This inaugural "Day on the Hill" may be especially significant: lawn care chemicals are to be the subject of legislative committee hearings sometime this spring. (The date was un-

clear as of this writing.)

"This first year we're not counting on large numbers of LCOs in Washington D.C.," Jim Altemus tells LAWN CARE INDUSTRY. "The elected officials are going to have very small amounts of time and we're going to have to make the most of the 10 to 15-minute meetings." Altemus, with Monsanto, has been helping PLCAA staff plan the two-day affair. The "Day on the Hill" hopefully will grow and de-

velop into an annual demonstration of the lawn care industry's importance to lawmakers, says Altemus.

PLCAA President Rick Steinau sent letters to association members in February, urging their participation.

Wrote Steinau to PLCAA members: "You'll get a first hand view of the workings of Washington and be taught the proper protocol for dealing with senators and representatives." LCI



Support effort Bob Andrews, The Greenskeeper Inc., Indianapolis, and Pat Nibler, Pro-Grass Inc., OR, learned of "Day on the Hill" at PLCAA board meeting.

Tru Green now under new corp.

ATLANTA, GA—Waste Management, the huge Chicago-based refuse-hauling firm, merged its lawn care and pest control companies into a new corporation called WMI Urban Services.

"We have merged the management strengths of both Tru Green and pest control," Joe Winland, a vice president of WMI Urban Services, told LAWN CARE INDUSTRY. "It's an opportunity to share computer and accounting resources and to make the overall administration of the two units more efficient."

WMI Urban Services is to have northern and southern regions, each containing three districts. "Many of the managers that were either lawn care or pest control are now managers of both lawn care and pest control operations in a given geography," said Winland. Heading WMI Urban Services is John Slocum who has been with Waste Management for 17 years.

Waste Management purchased Tru Green in August 1987. Tru Green is the second largest lawn care company in the United States with sales exceeding \$100 million this past year. It was in 1987 that Waste Management also began acquiring pest control companies. Although many of these companies retain their original names, taken as a whole Waste Management is the third largest pest control company in the country. LCI

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This excellent Kentucky bluegrass was discovered by Dr. C. Reed Funk of Rutgers University. It was found persisting in Huntsville, Alabama and has clearly demonstrated why it survived so well. It also scored high ratings in tests under high heat and humidity in the transition zone.

Medium green in color, Huntsville blends beautifully with Arid and the newer turf-type tall fescues because of its similar color and leaf texture.

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COMMERCIAL SERVICES

Succeed with segmentation in commercial market

BY PHILIP D. CHRISTIAN III

The commercial market is large and any contractor, including LCOs, wanting to enter it must divide it into serviceable segments.

"If you are not thinking segment, you're not thinking," wrote Theodore Levitt in his book "The Marketing Imagination". He added: "To think segments means you have to think about what drives cus-

tomers, customer groups and the choices that are or might be available to them. To think segments means to think beyond what's obviously out there to see."

Many contractors, including LCOs, profitably serve the homeowner market but shy away from the largely unknown commercial market. They've heard about negative experiences at the hands of the commercial purchaser and sometimes blame the market rather than the unprepared contractor who attempts to

enter commercial territory.

They're suspicious of the "bidding process". It appears to be a scheme to attract a low-ball price of a dirt-ball contractor.

That's too bad; the competitive bid process can work in the LCOs favor if he/she knows how to work within the existing system. And a first step in this direction is by not over-emphasizing the importance of price. The commercial purchaser is not shopping for price over all else, and will not give up service, quality,

and professional integrity to get the right number. Sure, price is important, but it's seldom the primary reason behind a purchase.

To be sure, the system isn't going to change to suit the contractor. It's up to the contractor to profitably fit his/her company into the existing purchasing loop. Many of the industry's fastest growing and most profitable landscape service contractors work primarily in the commercial sector and prosper with the commercial client and com-

petitive bid process.

Also, the landscape service contractor must be aware that the wants and needs of the commercial customer are being driven by the following trends:

- A larger percentage of professionally managed commercial properties. The appearance of the landscape is vital to property managers, especially when they market their services to new properties.

- Significant increase in demand for improved quality.

- Increased landscape maintenance by in-house crews. Property management companies want increased quality, more control of day-to-day activities, and more accountability for landscape management.

- Increased use by customers, employees, and tenants of landscaped areas—running and walking trails, picnic areas and outside activity areas.

These trends point in the same direction, increased demand for more skilled landscape management. Today's LCOs are well prepared and positioned to fill this need.

It's time to divide the commercial market. The following examples are admittedly over simplified, but they provide a start to understanding serviceable segments even though there are additional smaller segments and sub-segments for each primary segment. And sometimes an owner/manager of a mixed-use building can be included in more than a single segment.

Multi-Family: The multi-family segment includes apartments, condos, cluster homes, co-ops, and common areas in communities and single-family detached homes.

These purchasers of your services will probably be property owners or managers, and may be at the site or elsewhere. Someone at the facility can



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give you the name, address, and telephone number of these individuals. Sometimes the purchasers for this segment are property management companies and belong to an association like the Apartment Owners and Managers Association (AOMA). There's an active chapter in every large city in the United States.

Condos, clusters and co-ops also have management associations with regular meetings and printed membership lists. Often they're listed in alphabetical order in the Yellow Pages and are available through any provider of mailing lists.

This multi-family segment has an almost constant need to upgrade the lawn grass and landscape because of growing competition for tenants, and the desire to show the services of the management company in their best light.

Sales and Service: This segment is mixed and lends itself to detailed sub-segmentation. It includes retail, wholesale and specialty shopping areas; food service, personal service, professional service, and automotive service establishments including hotel/motel sub-segments.

Purchasers are often owners or managers of the buildings. It's usually not hard to get the name and telephone number of these individuals. Just ask someone at the facility.

This sales and service segment needs to make a good impression with customers and tenants even though it receives heavy abuse or wear and is open long hours (sometimes seven days a week) and has multiple locations. This segment definitely has a need for the LCO to become a part of its management team. It must look presentable to the public.

PLCAA offers group deal on LCOs' forms

MARIETTA, GA—The Professional Lawn Care Association of America has started a group purchasing program for LCOs' business forms—invoices, statements, survey forms, etc.

Forms used by the four following computer companies can be ordered: Practical Solutions, Inc., Distribution Management Systems, Rainbow Computer Sales and Contel Business Systems.

LCOs can send form samples to PLCAA. The quantities will be returned a month after the forms are received.

The program represents the first group purchasing plan sponsored by PLCAA, says Doug Moody, assistant executive director. LCI

Office and Industrial: This segment is also mixed and includes office, industrial, manufacturing, warehousing and distribution. The purchaser may be an owner/manager of the real estate. In the case of the sub-segments of office parks and high-rise office buildings the owner/managers may be found in the Building Owners and Managers Association (BOMA).

There can be a fascinating variance in the quality of landscape in this segment with a top-quality landscape around a high-rise office building and a small manufacturing or distribution plant having no landscape to speak of. Usually

the purchasers arising from this segment have little time to spend in managing the landscape. They welcome professional assistance.

Institutions: This segment includes all real estate used for educational and medical purposes, child care centers and retirement homes or villages. The purchasers are most often found on-site and may belong to associations for hospital administrators, child care centers, etc.

This segment has a need for safety, security, reasonably high quality and a friendly and cooperative relationship between owner/manager and contractor. Every sub-seg-

ment of this segment such as hospitals or day care centers is a specialty niche. Once the LCO learns how to work within this niche he/she should get most of them within their market area.

Government: This segment includes all government owner or operated real estate and real estate owned and operated by regulated utilities such as power and water companies. Purchasers for this segment are listed in government booklets or publications available to the public. The same is true of the regulated utilities. Both sub-segments usually have easily identified purchasing departments which usually are

are usually required to take competitive bids. Detailed proposal forms are usually prepared so everyone is bidding on the same program.

Which of these segments fits your company best?

Which offers you the opportunity for a competitive advantage?

One of the benefits of segmentation is that it forces us to focus on the wants and needs of the customer and put aside, at least temporarily, the immediate wants and needs of our company. Segmenting your commercial market should be the first step you take to expand into commercial services. LCI

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Spill urea in swimming pool? Here's a good remedy

Occasionally a little dry or liquid urea is accidentally deposited into a swimming pool during a lawn care application.

Subsequently, the owners complain about low chlorine levels in their pool and blame the LCO.

Urea fertilizer can reduce the free chlorine level in swimming pool water. However, the remedy is simple: The pool should be superchlorinated ("shocked").

Common treatment

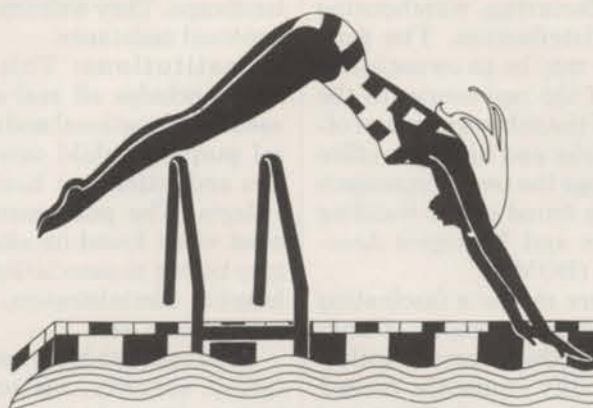
Superchlorination is a routine treatment that is usually

done once a week on any moderately used swimming pool.

It involves adding excess chlorine to oxidize all nitrogen-containing compounds (urine, perspiration, urea fertilizer, etc.) to nitrogen gas.

Greater amounts of urea, however, require significantly greater amounts of chlorine for superchlorination than most pool owners are used to, and this can cause confusion.

Most swimming pools contain 0.5 to 2 ppm free available chlorine, although they can contain up to 5 ppm. Chlorine is usually added as calcium hypochlorite.



Stabilize pool

Swimming pool water must be "stabilized" to reduce the

rate of chlorine loss. Without a stabilizer, all chlorine will rapidly volatilize (as chlorine

gas) from a pool. On a bright sunny day this can happen in four hours or less.

If a little urea fertilizer accidentally gets into a swimming pool, the free available chlorine concentration will rapidly drop, the combined chlorine concentration will increase, and total chlorine concentration will stay the same.

A very small amount of urea can cause this to occur. The same process occurs when chlorine reacts with perspiration and urine.

Superchlorination

When the combined chlorine (chloramine) level in the swimming pool gets too high (greater than 0.2 to 0.4 ppm), one must superchlorinate the pool.

To superchlorinate, simply add calcium hypochlorite until the chlorine level reaches the "break point" (8 to 12 ppm chlorine). The normal superchlorination rate is 1 pound calcium hypochlorite per 10,000 gallons of water. At this point all of the chloramines will oxidize to nitrogen gas.

The superchlorination process occurs in a very short period of time. Subsequently, the excess chlorine (about 8 ppm) will, within a few hours, volatilize out of the pool and the total chlorine level will return to normal.

If a lot of urea is added to a pool, a chlorine demand is created. This means that all of the chlorine in the pool has reacted with the urea (to form chloramines) and there is still nonreacted urea left.

Use test kit

During superchlorination, this urea must first react with the newly added chlorine (the demand must be satisfied) before superchlorination can occur. This means that significantly greater than normal amounts of calcium hypochlorite may be required to superchlorinate a urea contaminated pool.

Total chlorine, free available chlorine and combined chlorine can be determined at home with a simple colorimetric (DPD) test kit. With this test kit a first reagent (often a tablet) is added to a sample of water to determine by color the amount of free available chlorine.

A second reagent (tablet) is added which provides a measurement of total chlorine. Combined chlorine is determined by subtracting the free from the total readings. All readings with the DPD test kit are approximate since the test is only sensitive to the nearest 0.5 ppm. Sending a sample to a lab to determine free or combined chlorine is of limited value because the chlorine usually volatilizes before the

See **POOL** Page 24



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Test helps families appreciate lawn care business

By RONALD H. DRUCKER

A family lawn care business can offer work opportunities, prestige in the community and personal fulfillment—as well as financial security—to family members.

But it can't do any of these if the business isn't successful. And, conversely, if the business isn't successful, family life is likely to suffer.

Getting the most out of your family means enjoying a healthy family life and running a healthy, profitable lawn care business.

That's a tough juggling act, because family values and business values sometimes conflict. Nevertheless, many family business owners successfully balance the needs of family and business.

The following quiz can help you determine if you are one of them. Consider each of the quiz items as a statement about your family and your business, and decide whether you agree or disagree.

Think about the questions, but don't linger too long over any one of them. Your first response is likely to be the most accurate.

Although the quiz is designed for the founder/owner of a firm, the responses of other family members in the company can help provide perspective.

1. Our family tries to completely separate our family issues from business issues.

Agree/Disagree

2. Family members do not understand or do not go along with company's goals.

Agree/Disagree

3. One or more family members would rather be working somewhere else.

Agree/Disagree

4. Our family is not very willing to change the way we do business.



About the Author

Ronald H. Drucker is a lawyer and CPA with Laventhol & Horwath, a national accounting and business consulting firm. The company, headquartered in Philadelphia, Pa. has just published a book entitled *Your Family Business: A Success Guide For Growth And Survival*.

Agree/Disagree

5. Family members are rarely praised for doing a good job or criticized for their mistakes.

Agree/Disagree

6. Family members do not know what will happen to the business when the founder/owner retires.

Agree/Disagree

7. One person makes all the important decisions for the business; others are rarely consulted because a business needs one boss.

Agree/Disagree

8. Our family usually attempts to resolve problems when they reach the crisis stage.

Agree/disagree

9. Certain business information is not shared with all members of the family.

Agree/Disagree

10. The family usually resolves conflicts internally; we rarely seek outside advice.

We built the business so we know it best.

If you disagreed with all 10

statements, you probably have a healthy business and a healthy related family life.

If you agreed with some of the statements, you may need to do some preventive maintenance. Here's why:

1. Complete separation of business and family issues isn't possible. Some families attempt such a separation to avoid conflict, but rarely succeed.

The interaction between family and business is what gives the enterprise its unique strength and personal satisfaction.

The family that never discusses business at home is building an unrealistic wall; the pent-up conflicts are eventually going to spill over.

Instead of constructing barriers, set ground rules or limits—for example, no business discussions at the dinner table.

2. Family members should understand why the firm exists; non-relatives should, too. Consider a company whose mission is "to provide a job for

See **FAMILY** Page 17

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Spread it your way.





PLCAA's Doug Moody and Sandy Hensel support a new public relations program highlighting benefits of lawn care.

PLCAA

from page 1

Month" might also be an excellent time for LCOs to plan special promotions and marketing activities. PLCAA can provide LCOs with news releases, 10 and 30 second radio public service announcements and a model proclamation for LCOs to use when approaching their state governor, mayors, etc.

■ Increased PLCAA cooperation and support with state lawn care associations, particularly in conjunction with the planning and promotion of "Lawn Care Month". Hensel encouraged state chapters to

participate in special storm or disaster clean-up projects and to consider sponsoring statewide contests to recognize each state's most beautiful

lawn city. This could be developed into an annual program, "Lawn City U.S.A.", she said, with state associations involved. LCI

...If the dog bites, maybe it's a good idea to scram

ChemLawn employees have had "some serious disfiguring injuries from dog bites," according to Dr. Roger Yeary.

He says that the best technique for avoiding injuries from dogs is to simply avoid the yard when the beast is on the scene. And applicators

should take note if they find a dead dog in the yard. Or they should at least leave a note for the owners, if nothing else.

One applicator found a dead dog, then proceeded to spray around it, and then left without leaving a note. Not surprisingly, the homeowner thought ChemLawn doused the dog—and ChemLawn had to pay up.

"That dog was stiff when the applicator got there," remembers Yeary, "but how do you explain that?"

It's an easy out for many veterinarians to say, "Well, if you have lawn care that must be it," says Yeary.

However, that scenario is not being played out as often nowadays, as vets become educated about lawn care by members of the industry.

"I see fewer complaints about pets than I did seven years ago, and our business is much bigger now," Yeary notes.

Applicators can help avoid some of these problems by using common sense. "You turn over birdbaths and pick up pets' toys," he says. LCI

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New Precision Seed Coaters doing business

ROLL, AZ—In order to serve the large bermudagrass seed and other grass and legume seed production industry in this area, a new company has been formed.

Valley Seed Company, a division of Arizona Grain, Inc., and Canadian Seed Coaters Limited, formed a joint seed coating corporation—Precision Seed Coaters.

Canadian Seed Coaters, based in Brampton, Ont., began commercial production in 1977. The firm, together with its parent companies, has nine wholly owned or joint venture coating plants. The parent companies are Hodder & Tolley Ltd., Palmerston North, New Zealand, and Osco, Inc., Brampton.

Valley Seed, established in 1898, markets seeds throughout the world. The company is based in Casa Grande, Ariz and conditions and sells bermudagrass seed, hybrid pearl millet and a complete line of seeds for the southwest.

Valley Seed has seed conditioning plants in Casa Grande, Roll and Yuma, AZ. LCI

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	RUGBY	.2	.4
	PARADE	.3	.6
FESCUE	SCALDIS HAR	.3	.6
	RUBY CREEP	.2	.4
	GALWAY	.2	.4
RYEGRASS PERENNIAL	PE	.2	.4
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Contracts help LCOs get the money they're owed



By EDWARD N. TIESENGA

As an attorney, the biggest, most recurring problems faced by my lawn care clients concern customer contracts and collection.

When a customer is satisfied it usually doesn't matter what contract is used—the money is usually collected on time.

In lawn care though there is a lot of room for misunderstanding and "slippage," especially due to the non-written,

multi-year nature of most lawn care "customer contracts."

Collection rates average out at about 50 percent of the cases referred to lawyers. I think this acceptable rate occurs because the customers tend to be homeowners, and they are good for the money unless a serious misunderstanding or application error is involved.

Written contracts

A written contract is not re-

quired to establish the existence of an enforceable relationship between you and your customer, unless you are working in New Jersey or New York.

A contract is defined as an agreement that the law will enforce. Although contracts need not always be in writing, if they are, a judge may find it easier to enforce on your behalf.

If you don't use written contracts in your business, you should at least define certain terms of your relationship on your invoices.

The average price of an annual residential lawn care contract seems to range from \$120 to \$180. The economic realities of litigating only a handful of these cases per year may be grossly disproportionate to the business' return on collection unless provisions are made for these enforcement costs in the initial contract with the customer.

Unless there is an applicable state statute to the contrary, the American Rule of attorney fees dictates that each side pay its own fees.

Collecting attorney fees, late charges and prejudgment interest, for example, may be impossible unless these charges are reflected on a written contract signed by the customer.

Invoices alone are usually deemed legally insufficient and can always be disputed, as can the very existence of a contract.

Another problem with oral contracts is the difficulty of holding a customer to them on a year-to-year basis.

Most lawn care companies operate under the assumption that they will continue to provide service to the customer until the customer tells them to stop. This ongoing arrangement is also easier to enforce if it is written.

Written cancellation notice

The lawn care contract should clearly specify that service will continue unless and until you receive written notice of cancellation.

You should also require that this notice must be sent or received a certain number of days before the next scheduled application. (This way, when you are trying to collect an unpaid bill, the customer will be precluded from saying, "Oh, I cancelled that.")

Without receipt of a written cancellation notice in your file, you can assert that they have failed to honor the written cancellation notice.

If you can't predict your next application date, the notice requirement can be stated in terms of pre-determined dates such as: "Customer is responsible for payment of all services, unless



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notice of cancellation is received within 30 days following the last application."

Attorney fees and costs

As previously discussed, the relatively small margin on individual residential lawn care contracts underscores the importance of including terms giving you the right to have attorney fees and court costs paid by the customer if they force you to sue for payment.

Because most lawn care customers tend to own their own homes, a high proportion of non-payers will respond to a collection letter from your attorney.

For those who do not, you may have to sue them to compel payment. Attorney fees and court costs can be high, and can only be shifted onto the non-paying customer by the terms of your written contract.

The courts will generally enforce attorney fee agreements if they are reasonable and in writing and agreed to at the beginning of the contractual relationship.

Written notice of problems

Customers often remember problems with your service only after they receive a collection letter.

This can be several months after the service, and in some cases a year or more after the service (by the time you give up trying to collect and hand it over to your attorney).

Complaints range from "they burned my lawn" to "chemical reactions killed my pets" to "they never came and I know, because I was in the house all morning on the day they said they supposedly came."

Most of these problems can be avoided if the contract provides that written notice of any service problems must be delivered within a finite number of days, say, 7 to 10 days after the service is performed.

This works well when a billing memorandum or other evidence of service is left with the customer.

An alternative would be to require notice of a service problem within 7 to 10 days of receipt of the invoice.

Regardless of the exact details you put in your contract (which should be repeated on each invoice and statement), the outcome is the same: Real problems will surface earlier, when you have a chance to correct them.

This mechanism is consistent with the legal concept of "opportunity to cure," well known in commercial law, whereby a merchant under certain circumstances is not forced to refund money for a product unless he or she is first given an opportunity to cure an alleged defect with that product.

With lawn care, the reasoning applies to prohibit a customer from failing to pay when

he or she did not give the LCO an opportunity to cure an alleged defect in a timely manner.

This is particularly important in an industry directly tied to the whims of nature

Attorney fees and court costs can be high.

and seasonal changes.

Rather than have to engineer this argument after the fact, put it in your contract beforehand.

Eliminating dubious excuses from potential non-pay-

ing customers at the beginning of the relationship is the sort of "preventive law" that can be accomplished through a written contract.

Posting

Placing flags or signs on a lawn after each application is tangible evidence of your performance of the contractual bargain.

Duplicate records by the LCO will corroborate this action.

If you can establish that this is your routine procedure, testimony to that effect should be admissible in court to help overcome the defense of "I

never saw them, and I know, because I was there all day."

Part of the profitability of lawn care is keyed to the fact that it doesn't take long to perform each application.

For the same reason, it's easy for the homeowner to fail to see the application being performed.

Conclusion

Contracts won't solve all of the many problems of the lawn care business, but they will help avoid inadvertent and deliberate customer misunderstandings.

Now that we have discussed the role of the contract in some

detail, the next challenge is implementing this document in your business.

If you don't have a serious collection problem, the bother may outweigh the benefit.

If there is room in your business for the use of lawn care customer contracts, the document should be tailored to fit your particular needs in consultation with an attorney.

LCI

About the Author

Edward N. Tiesenga is a lawyer with Hoogendoorn, Talbot, Davids, Godfrey and Milligan in Chicago, Ill. He serves a number of lawn care industry clients.



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Recognition can mean more to employees than pay



Mike Hiller: Companies should provide timely and proper recognition to workers.

COLUMBUS, OHIO—Do you as manager have a sense of how happy your employees are working for you? If not, you have little control over how long they'll stick around.

Ed Wandtke and Mike Hiller, consultants with Columbus-based All Green Management Associates, offer tips on motivating employees. Hiller is a former marketing director of Perf-A-Lawn Corp., New Carlisle, Ohio.

Managers must first realize that what motivates them as managers is not what necessarily motivates employ-

ees. "What gets your motor running is not what necessarily excites your employees," Hiller says. "You're two different cats."

Hiller says that for employees, recognition is often more important than pay, even though the employees won't say so if asked.

Plaques and certificates for a job well done will make employees very happy, particularly if they are older employees. He says cash is usually more important to younger employees who are often at the lower end of the

pay scale in the company.

Hiller says employers must be aware of the work "hygiene factors"—company work policies, working conditions, attitude of management, interpersonal relationships, pay, status and security.

"These things are only important if you don't have them," meaning they have the capacity to dissatisfy the employees if they're missing. They will not, however, motivate the employees.

To motivate employees, the management must have programs that provide timely and

proper recognition.

When to use incentives

Incentive plans are programs that reward employees for performance beyond what is expected of them, Wandtke says. Employees should not be given extra rewards for doing what is expected of them. Bonuses for incentives, therefore, are not part of the company's regular budget.

Employees should have it spelled out for them what is expected of them. An incentive plan should spell out what extra efforts will earn extra rewards.

An incentive program that fails to accomplish this goal—rewarding for performance beyond what is expected—can do more harm than good.

Wandtke relates the story of the lawn care company opening a new branch that offered service technicians \$10 for every customer above a minimum amount. The problem was that the minimum was way too low for what should have been expected for a new branch in the particular market area.

The company ended up paying out \$9,000 in incentives for a total of 8,000 customers beyond the minimum expected 2,000.

Wandtke gives the following tips on incentive plans:

- They should be designed not just to increase revenue, but to increase operating efficiency as well.

- They must be specific—the employee must know exactly what he is expected to do—and it must be in writing.

- There should only be one incentive plan in place at a given time and it should have a distinct beginning and end.

- Cash rewards, when given, should not be included in an employee's paycheck—the incentive should be given in cash.

"Don't let incentive plans carry on too long," he says. New customer acquisition, for example, will not be the company's goal all year long. **LCI**

Wild birds don't drop weed seeds

KANSAS CITY, MO—Wild birds don't spread noxious weed seeds said the Wild Bird Feeding Institute this winter.

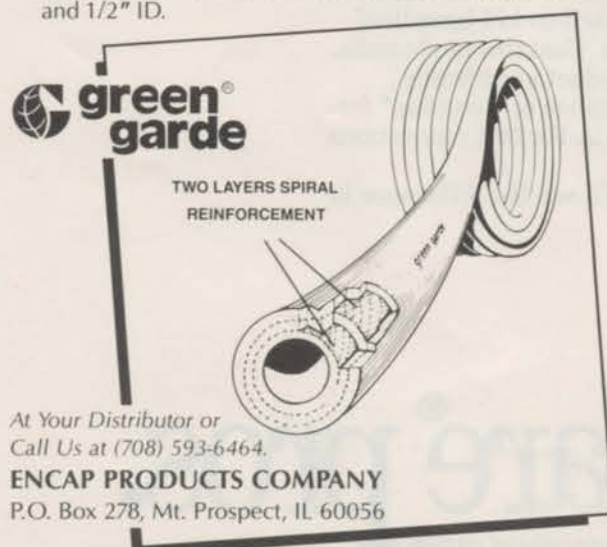
"True seedeaters crush essentially all seeds they eat in their gizzard," said Gregory Butcher, director of bird population studies at Cornell Laboratory of Ornithology.

He added that "other seedeaters hull most seeds they eat; hulled seeds are easily digested and do not survive." Dr. Butcher concluded, "Since most weed seedeaters digest all seeds they eat, dispersal of seeds is the exception." **LCI**

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Circle No. 104 on Reader Inquiry Card

FAMILY

from Page 11

anyone in the family who needs one." Such a policy tells both non-family members and hard-working relatives that personal effort really doesn't count for much.

Now consider a company whose goal is to increase sales or market share by a certain percentage, or to double its size in five years—goals that require hard work and team effort by family and non-family members alike.

If family members agree on and understand objectives like these, the family-owned lawn care business has a head start.

Loyalty and the willingness to sacrifice for the common good are powerful family values that can enhance the competitiveness of a business. But the advantage is lost unless the goals are clearly and specifically defined and make "good business sense."

3. Work satisfaction is important, whether the business is family owned or not. Like any employee, a family member who is not reasonably content with his or her job is not going to reach full potential with the company.

Try to uncover the source of the person's dissatisfaction. A son or daughter might say, "I just don't like the lawn care business."

Often this means, "I don't have enough (or I have too much) responsibility."

Almost every business offers a variety of jobs to match an individual's talents and aptitude. Discuss the situation with the family member to determine whether another position, or a revised job description, might solve the problem.

4. Change is inevitable; learn to anticipate it, welcome it, use it. In a family, resistance to change can be a strength; the objective is to keep the family unit intact.

In the lawn care business, unwillingness to change can be fatal. Businesses must adapt to changing market conditions, develop new products or services, experiment and take risks. In short, businesses need to grow.

The family leader has the responsibility to encourage innovation and to manage and direct growth. Individuals usually respond better to change when they understand the need for it and have the opportunity to provide input.

5. Everyone needs feedback. Family business leaders have to monitor the professional performance of their relatives just as they do other employees.

Of course, performance evaluation is a delicate task when the employee in question is a son or daughter.

Evaluations based on written job descriptions and performance criteria can make

the task of objective evaluation easier, and can lessen the potential for family conflict over who's doing or not doing his or her job.

Employees—family and non-family—want and need to know how they're doing.

6. The succession plan should be known and understood. Just as family members need to understand and agree on the business' goals, they need to understand and agree on what will happen when "Dad" dies or retires.

It is understandable that a founder/owner may avoid facing the fact that he or she is not immortal.

But ignoring the inevitable

can lead to devastating personal and business consequences—for example, sibling rivalries that result in the loss of lawn care clients.

Family businesses should have a succession plan that provides for the selection, training and installation of a new generation of management. Family members who have input into the plan are more likely to understand and support it.

7. Dictatorship doesn't work. Family-business owners are often entrepreneurs who like to run the whole show. So what's wrong with that formula, if it works?

Nothing, in the early stages

of business formation. But as the enterprise grows, sharing responsibility becomes a practical necessity.

The LCO who reserves all power to himself or herself will be seen as a tyrant by other family members who also have a genuine stake in the company's success.

On the other hand, an owner who distributes power and responsibility appropriately will enhance each family member's motivation and productivity.

8. Families should have systems in place to prevent problems from becoming crises. Lines of communication—regular

family meetings, for example—are the basis for a problem-resolution system.

Get the family to agree on a mission statement, strategic and management plans and a succession plan.

The family can then resolve disputes with less acrimony by referring to agreed-upon policies.

9. Secrecy erodes team spirit. In a family business, it's common for a founder/owner to keep information to himself or herself.

Whatever the reason for secrecy, it can nevertheless erode that sense of team spirit that gives the family business its unique strength. LCI

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Dean: More rules not answer for pesticide overuse

ITHICA, N.Y.—The recent Public Citizen's Congress Watch report on lawn pesticides highlights serious public concerns about pesticide use, but fails to provide forward-looking solutions based on available and emerging research, said David L. Call, dean of Cornell University's College of Agriculture and Life Sciences.

Keep Off The Grass, the report from the Washington-based consumer and environmental group, criticized the way the federal government reviews lawn pesticides, rated states' regulation of the lawn care industry as generally inadequate, and proposed recommendations for state and federal action.

Call saluted the report's objective of curbing unnecessary or unsafe pesticide applications on turfgrass, but expressed reservations about what he termed incomplete data, overreaching interpretation and scientifically unsupported conclusions. While saying that the report contains some excellent recommendations, Call said the overriding problem with the Public Citizen's Congress Watch report was that it responds to the problem of excessive pesticide use by seeking more regulation. "There's an important role for federal and state oversight, but we must realize that the care and feeding of a bureaucracy to implement, monitor and enforce another code of regulations will not be inexpensive," Call said. Although he faulted the report for failing to consider how pesticide use can be cut by research and education as well as by regulation, he expressed hope that public reaction to the report will focus greater emphasis on research and public education.

Call, referring to the 1988 New York State Integrated Pest Management Program's annual report, said that in commodity after commodity, applied research and sound education have led to the adoption of integrated pest management (IPM) recommendations and techniques.

"Experience tells me that this voluntary adoption process is ultimately more beneficial to society than modifying behavior through coercion and threats," he said. "I'm optimistic that the report will encourage consumers to seek more information and ask lawn care companies to use more modern practices." He added that he expects it to stimulate lawn care companies to adopt IPM turf grass practices now available from Cornell and other research institutions.

Public Citizen is reasonably concerned with the ability of lawn care applicators to

knowledgeably and safely use chemicals and fertilizers, Call continued. The report accurately noted that New York does not mandate universal applicator training and testing, but Call said it is misleading to rate the state efforts as "inadequate". State Department of Environmental Conservation (DEC) regulations require all commercial pesticide applicators to function under direct supervision of a certified applicator. Working together, DEC and Cornell Cooperative Extension

trained 3,161 commercial applicators and 1,067 private applicators in 1988 who then successfully passed written examinations to earn state certification. In addition, DEC offered many re-certification courses in 1988, said state pesticide control specialist Richard Hager.

Call concurred with Public Citizen's recommendation that Congress appropriate additional funds to the Environmental Protection Agency's IPM unit, but expressed dismay with the report's asser-

tion that few states promote or encourage the use of non-chemical alternatives to pesticides.

"That assertion simply is not true," said Call. "In fact, a national conference of IPM researchers was held late last month to share findings on non-toxic pest control strategies where chemical pesticides are viewed as the choice of last resort," he said. Cornell has been concerned with the volume of pesticides being used and has sought pest control strategies that rely less

heavily on chemicals since it IPM research began in the early 1970s. With funding from the state Department of Agriculture and Markets over the past three years the program has expanded its focus to reduce pesticide use on vegetables, dairy and field crops, fruits, ornamentals and turf grass.

"I'd like to extend an open door to Public Citizen and other citizen groups to come to Cornell and visit the future," Call said. Cornell's IPM turf grass efforts have focused on

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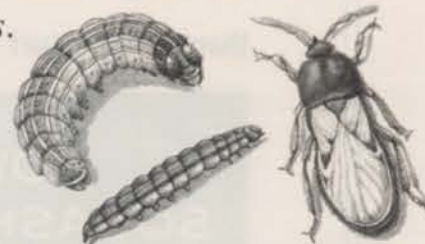
Weigh the alternatives. New TEMPO uses approximately 80% less active ingredient than the leading insecticide. Which means there's approximately 80% less chemical for you to carry around. And 80% less chemical to impact the environment.



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TEMPO effectively controls surface-feeding pests like cutworms, armyworms, chinch bugs, and sod webworms.

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developing cultural, monitoring and biological-control techniques to eliminate calendar-based preventive pesticide applications and to reduce total pesticide use, according to turf grass science Assistant Professor Norman W. Hummel Jr. "With the information we have right now, we can cut pesticide use on lawns and other turf grass areas by at least 25 percent with no compromise in quality," he claimed and went on to explain the three kinds of IPM techniques:

● **Cultural Practices.** Homeowners can establish and maintain lawns without pesticides, Hummel said. His

paper "Lawn Care Without Pesticides," explains that success depends upon selecting grass varieties for disease and insect resistance and using mowing, watering and fertilization techniques developed for residential lawns. Over the last three years, for example, Cornell researchers have conducted field trials without pesticides in upstate New York and Long Island with more than 300 varieties of turf grass. At least 40 varieties show excellent potential for natural resistance to diseases and insects, he noted.

● **Monitoring Practices.** By actively monitoring turf grass for insect infestations, resi-

dential and commercial lawn managers can eliminate preventive pesticide applications and use pesticides only when destructive insects are present in large numbers or are at a vulnerable stage in their life cycle. A pilot project conducted in 1988 by Cornell IPM associate Gerard W. Ferrentino demonstrated that preventive fungicide spraying is not necessary to control all golf course turf diseases. Pesticide use was reduced by up to 85 percent where treatment decisions were based on frequent visual observations and correct disease diagnosis. New York has more than 800 golf courses covering 80,000

acres, according to Ferrentino.

Use of a naturally occurring sex scent, called a pheromone to lure unsuspecting cutworms to traps is another IPM technique being tested in monitoring insect populations, Hummel said. In another 1988 experiment, graduate assistant James Skorulski tracked weather data, including temperature, humidity and precipitation, to test its value as an aid to forecasting turf grass diseases.

Diagnostic kits that measure the presence of disease organisms in a few blades of grass also show promise as an early detection tool to help golf course and institutional turf



Too much spraying?

grass managers avoid unnecessary pesticide use, Hummel said.

● **Biological Controls.** To date, microorganisms, including at least 250 viruses, 80 bacteria, 460 fungi and 250 protozoans, have shown themselves capable of introducing diseases to destructive insects, according to Cornell entomologist Michael G. Villani of the New York State Agricultural Experiment Station in Geneva. Several already are commercially available, and others are in research and demonstration trials as potential IPM alternatives to pesticide use.

Grubs are the prime concern of turf grass managers in the Northeast; control of Japanese beetle larvae cost Americans \$78 million for pesticide control and another \$156 million to replace damaged turf in 1983, according to Villani. A bacteria known as milky spore is commercially available to control Japanese beetle larvae, but the Central Atlantic strain is not hardy enough to withstand New York winters. Cornell IPM researchers are working on milky spore strains suitable to New York's climate.

Another biological control, known as BT, is now commercially available to control caterpillars, including the armyworm, cutworm and sod webworm. According to Villani, research at a number of universities is seeking a strain of BT that will work against grubs.

Cornell plant pathologist Eric B. Nelson has found that composted organic wastes have the potential to suppress turf grass diseases such as dollar spot and brown patch without the use of pesticides. The technique may be able to eliminate four to seven fungicide applications over a two-month period and help alleviate the state's waste problem. Nelson also pursues genetic engineering to design strains of bacteria to fight turf grass diseases.

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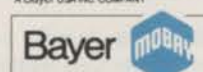
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Green industries invest in program, reap graduates

PLATTSBURGH, NY—Green industry companies in north-eastern New York designed a work-study program at Paul Smith's College in Adirondack Park to create a pool of trained employees. The program gives students on-the-job training in aboriculture, turfgrass management and landscape installation.

Companies such as ChemLawn Services Corp. and the F.A. Bartlett Tree Expert Co. provide field training and financial support for the program.

"Basically, the industry

brought to our attention the need for such a program," says Grover Katzman, associate professor of forestry at the college. "They were crying out for trained, educated people in the field, but there was an incredible shortage of people with the knowledge and experience required to fill all the jobs."

Michael Simmons, technical representative for Tree Inject Systems, a J.J. Mauget distributor, agrees. "We see a tremendous shortage of skilled labor in the future unless we can attract more young people."

The program, started in 1986, is operated under the college's forestry department under the title, Urban Tree Management. Its advisory board consists of seven industry representatives, including ChemLawn, Bartlett and the National Arborist Association.

The companies have also been helpful providing equipment, Katzman notes. "Not only did they tell us what type of courses we should include, but they also made sure that the program became a reality by donating the equipment

needed to properly teach this program." About 100 different firms have donated equipment, Katzman says, a total investment of about \$40,000.

The students care for trees and turf areas along the streets and in the parks of the city of Plattsburgh, areas not serviced by private companies.

The project began with a tree inventory with 316 trees being examined for insects, diseases and dangerous limbs. Then the students began pruning, cabling, landscape construction, insecticide and fungicide applications, fertil-

ization, aeration and removal of dead and dangerous limbs. Industry reps chipped in with training seminars. LCI

Tips given for shaded turfgrass

RICHMOND, VA—Managing lawngrass in shaded areas can be made easier by using an appropriate mixture of cool-season turfgrasses. The ideal mixture in the transition zone, according to one specialist, is: five pounds tall fescue, one pound Kentucky bluegrass and one pound fine fescue.

Dr. Arthur Bruneau of North Carolina State University says that selecting shade-tolerant, cool-season cultivars is the first step in managing turf in shaded areas. Bruneau says:

- Provide for air flow.
- Prune low branches in the area.
- Selectively prune high branches.
- Raise the mowing height.
- Periodically prune the roots.
- Minimize traffic in the area.
- Remove fallen leaves.
- Irrigate deeply and frequently.
- Minimize nitrogen and maximize potassium.
- Monitor disease activity.

LCI



Bruneau: Use the right mixture.

NUS is offering industrial risk safety programs

GAITHERSBURG, MD—NUS Corp., an engineering and environmental consulting firm, has formed an industrial safety group to help companies with risk management programs.

"NUS specialists provide clients with a full-service, coordinated team that can develop and implement programs to safeguard the health and safety of employees and the community while protecting the environment," says Roy Denham, vp of the industrial safety group.

NUS, 910 Clopper Road, Gaithersburg, Md. 20878. Phone: (301) 258-6000. LCI

When you need color and turf density — Glade. It does the job in sun and up to 60% shade. Widely accepted as the improved sun and shade bluegrass variety, Glade gives you confidence that your turf will perform beautifully — excellent texture, pleasing green color, and offers improved disease resistance.

For a healthy turf in sun or shade, insist on glade in every mix — from your local wholesale seed distributor.

Sun

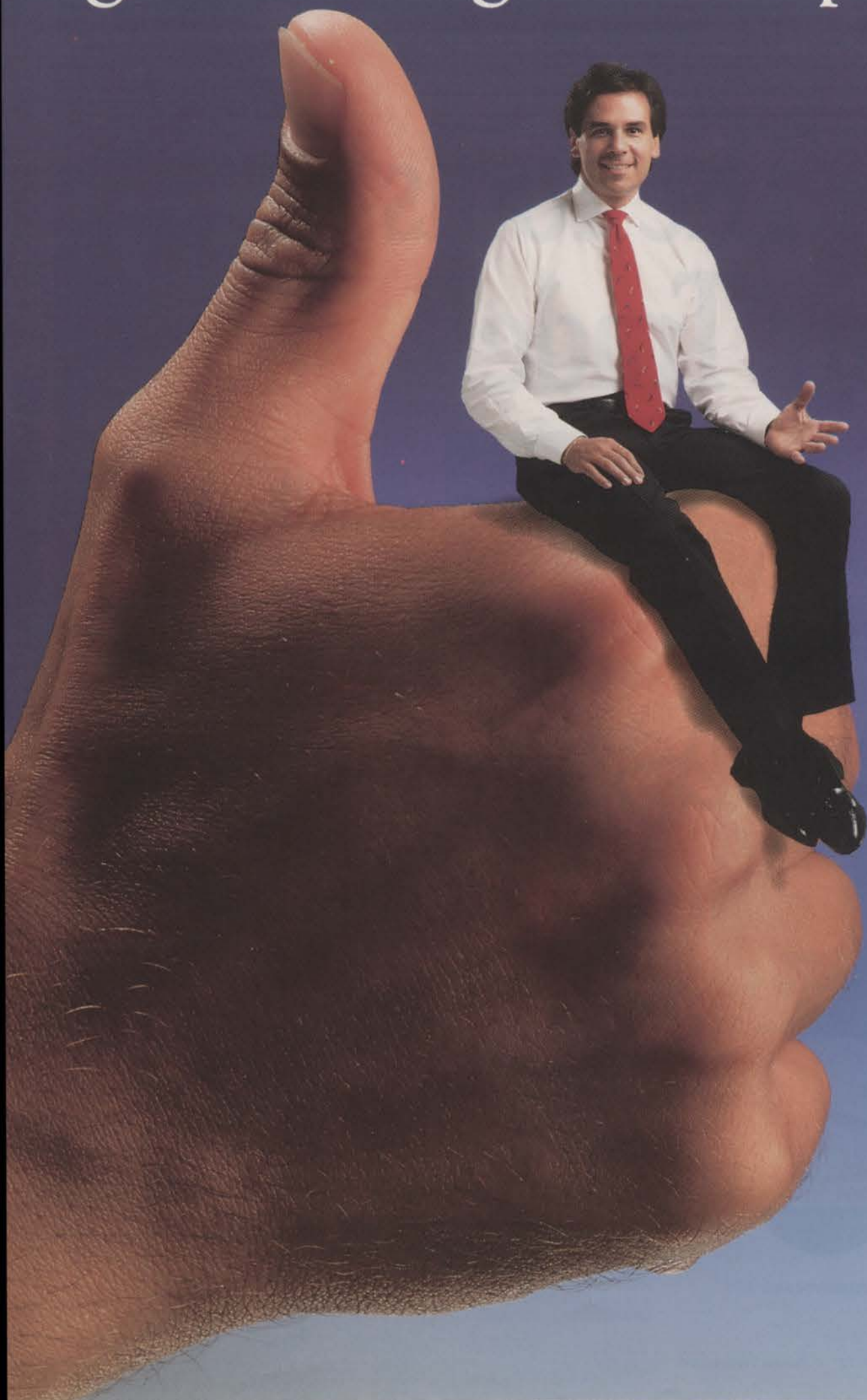
Shade

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Kentucky bluegrass

Another fine, quality controlled product of Jacklin Seed Company
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"TURFLON* herbicides give us about 95% control of problem weeds. The standard three-way products give control in the 80-85% range."—

Rick Steinau, president
Greenlon Lawn Care Services
Cincinnati, OH

In the lawn care business, you know that exceptional performance reduces callbacks and cancellations—and costs less in the long run.

Less callbacks.

"We started using TURFLON three years ago," explains Rick Steinau. "TURFLON simply does a better job on the hard-to-control weeds like spurge, oxalis, ground ivy and wild violets. These are the problem weeds that customers usually complain about most. With TURFLON, we've seen a 25% reduction in weed-related callbacks and a 15% drop in cancellations."

More savings.

"We are definitely saving money by using a premium herbicide," continues Rick. "We know that a treatment with TURFLON costs about 50¢ more per lawn than a standard three-way herbicide, but we actually realize a 30% savings in our herbicide program."

Rick Steinau knows that the performance of TURFLON herbicide has made a big, big difference in his business. Just think what it can do for yours. Call us to find out more. 1-800-373-2DOW (2369).

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Circle No. 113 on Reader Inquiry Card

Earthworm product gets good marks on client's lawn



Rider: The material is easy to spread and it produces a lush lawn.

RACINE, WI—Mike Rider, Rider Enterprises, Racine, WI, says a product made with worm castings tested well on a customer's lawn.

His Rider Turf Care used Wiggle Worm Soil Builder (Unco Industries, Racine) on a portion of a client's lawn. "You could see where you put it down, and the color difference was amazing," says Rider. "The areas where it was put down came up lush green."

Wiggle Worm is applied as a topdressing one-eighth to one-

fourth-inch deep.

"Earthworm castings are an incredible fertilizer," says Michael Marshall, Unco's national sales manager.

The material reportedly contains various levels of nitrogen, sulfate sulfur, phosphate, potash, magnesium, calcium, sodium, iron, manganese, copper and zinc.

Although Marshall acknowledges that the NPK numbers are low, he claims the product is still effective because of its fine texture, making nutrients more available to

grass plants.

Dr. Daniel A. Potter, associate professor and horticultural entomologist at the University of Kentucky, is not familiar with the Wiggle Worm material, but he says earthworms in general are good for soil—their castings are high in bacterial and microbial activity and help decompose thatch.

"The castings will bring back microbial activity" to lawns with depleted earthworm populations, he says.

The Wiggle Worm material is a by-product of a night-crawler production system.

Marshall invites industry researchers to examine the product's effectiveness on turf. Unco Industries, Inc., 7802 Old Spring St., Racine, WI 53406; (414) 886-2665.

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Marshall: The better bait worm creates a better fertilizer.

Tall fescue is versatile

RICHMOND, VA—There are good reasons for lawn grass managers to consider turf-type tall fescue grasses, says Dr. Arthur Bruneau, assistant professor at North Carolina State University.

Tall fescues—especially the newer turf-type varieties—offer greater shade and disease tolerance, says Bruneau, and perform well at low mowing heights. He suggests mowing heights of 2½-3 inches.

Bruneau also suggests watering turf-type fescue lawns infrequently but deeply and fertilizing in split applications: 1 lb. of nitrogen per thousand square feet in September, 1-2 lbs. in November, ½/2-1 lb. in February.

Bruneau recommends mixtures of 90 percent tall fescue and 10 percent Kentucky bluegrass for good results.

LCI

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Call Chemtrec
1-800-424-9300

For the cost of a candy bar, Bob Kapp made the sweet move up to TURFLON.



"Our customers expect and demand quality —and we deliver. If it costs an extra 50¢ a lawn to keep customers, it's well worth it."—

Bob Kapp, President and CEO
Kapp's Green Lawn
Munster, IN

How much is customer satisfaction worth? For Bob Kapp of Kapp's Green Lawn, it's worth the performance difference that TURFLON® herbicide can provide.

What price customer satisfaction?

"We switched to TURFLON two years ago because we weren't pleased with our previous herbicide," says Bob Kapp. "Cost has never been a deciding factor in the products we use. The extra 50¢ per lawn for a treatment with TURFLON herbicide doesn't make a bit of difference. In this day and age, you simply have to retain customers—it costs too much money and time to replace them."

Its rewards.

"TURFLON did a much better job, particularly on our problem weeds like wild violets, ground ivy and spurge," Bob continues. "Since switching to TURFLON, we've reduced our weed related callbacks and service cancellations by 50% from a year ago." With performance like that, you'll be able to add some sweetness to your bottom line. Call us to find out more. 1-800-373-2DOW (2369).

Move up to TURFLON



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Circle No. 114 on Reader Inquiry Card

POOL

from Page 8

analysis is performed.

Taking a sample to your local swimming pool shop is not a problem. Note that neither the DPD test nor most swimming pool shops are equipped to determine chlorine demand. In addition, when a chlorine demand occurs the DPD test kit will (erroneously) indicate 0 total chlorine (and also 0 free chlorine), similar to when there really is no chlorine in the pool.

Products available

Common products (calcium hypochlorine) for chlorination

include: HTH, Burn Out and PACE superchlorinator and shock treatment.

Ammonium, nitrate, potassium or phosphorous fertilizers should not cause any significant problems and will not affect the chlorine level.

Tap water naturally contains about 500 to 900 ppm total dissolved solids (TDS), most of which are potassium, calcium, sodium and, to a lesser degree, ammonium salts.

Phosphorous is basically inert in water, although it may react with other minerals (e.g. calcium) and form a precipitate. High levels of calcium phosphate can make a pool

cloudy; however, normal filtering will remove it.

If necessary, diatomaceous earth (DE) filters can be temporarily connected to most systems to speed the filtering.

The chlorine-like odor and eye irritation common to many swimming pools is usually due to insufficient free available chlorine and excess chloramines; not, as you would suspect, from too much chlorine. These symptoms mean the pool is past due for superchlorination.

Urea fertilizer can affect the free available chlorine level in a pool. However, routine pool maintenance procedures will resolve the

problem.

For additional information, Olin Corp. (203) 271-4171 and Bio-Lab (800) 241-5176 are swimming pool chemical suppliers that have literature and technical support people. LCI

About the Author

Dr. John S. Ahlrichs is a former research scientist for ChemLawn Services Corp. He now works for Cenex Land-O-Lakes, a farm cooperative. LCI

Coupling hose easy way

For coupling braided thermoplastic spray hose, LCOs can have success by following these six easy steps:

1.) If the coupling stem is difficult to insert into the hose, simply immerse the cut end of hose into hot glycol solution.

Obtain a suitable container large enough to accept the end of the hose to be coupled. The container must be deep enough to submerge the hose to the full length of the coupling plus several inches.

2.) Fill the container with ethylene glycol. (Use an anti-freeze solution with a glycol base.) Plain water is not recommended because it boils at a temperature too low to adequately heat the hose.

3.) Place the container on a heat source such as an ordinary hot plate. Heat the solution to 250 degrees.

4.) Submerge the end of the hose in the solution. Allow it to stay in the solution about 45 seconds for every inch of hose inside diameter.

Caution: Do not heat the hose to the point that it becomes limp.

5.) Insert the coupling into the hose. It will easily slide into the tube.

6.) Allow the hose to cool on the coupling for 5 to 15 minutes before applying the coupling bands. Always use high tensile stainless steel bands for clamping.

Remember, you are working with high pressures and chemicals that can be dangerous to plants and humans if fittings come loose. LCI



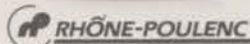
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dependable. Applied in a preventative program, CHIPCO® 26019 provides the kind of reliable disease control that eliminates customer complaints and costly call-backs. Best of all, by upgrading your service with CHIPCO® 26019, you keep your current customers satisfied and build additional business through word-of-mouth. Add CHIPCO® brand 26019 fungicide to your spray schedule today, and you may just have to make room for a new truck in your fleet.



Chipco 26019
Fungicide



As with any crop protection chemical, always read and follow instructions on the label. CHIPCO is a registered trademark of Rhône-Poulenc. © 1990 Rhône-Poulenc Ag Company

Circle No. 145 on Reader Inquiry Card

Pro tips for hose care

Lawn and tree care operators will find the maintenance and care of thermoplastic hose is just about the same as any rubber hose if these recommendations are followed:

- Always use the proper hose and couplings as recommended by the hose manufacturer.

- Do not exceed recommended working pressures.

- Keep the hose out of working or traffic areas where it could be struck or run over by vehicles or falling objects.

- Avoid excessive pull, and store new hose in an area protected from direct contact with the weather. It should be kept in the original shipping carton, preferably on pallets.

- Flush and coil the hose between extended periods of non-usage.

- Wipe off, as soon as possible, caustic or corrosive materials that come in contact with the hose cover.

- Inspect thermoplastic hose on a periodic basis. Look at the ends of the hose. LCI

When Jim Gourley moved up to TURFLON, callbacks in Kenosha went down, way down.



"Our resprays have decreased by almost 50%."—

**Jim Gourley, owner
Lawn Masters,
Kenosha, WI**

If you're like most LCOs using standard three-way herbicides, there are days when you wish the phone wouldn't ring again. Callbacks and cancellations can really get you down. Well, maybe it's time you moved up to TURFLON® herbicide.

One good reason to switch.

"We switched to TURFLON because we were having too many resprays," explains Jim Gourley. And after 22 years in the business, he's happy with the results: "Our records show that we do have much better weed control and many fewer resprays this year than we've ever had."

You'll save money in the long run.

"Yes, we pay more for TURFLON," Jim says. "But when I figure how much it costs us per respray, it's saving us lots of money. And that justifies the extra cost."

Jim adds that there's another reason he can't afford to make too many callbacks. "When you have to go out and do a respray, you're taking a chance on losing that customer."

Isn't it time you moved up to a better herbicide for better weed control? Call us to find out more. 1-800-373-4DOW (4369).

Move up to TURFLON



*Trademark of The Dow Chemical Company

Circle No. 115 on Reader Inquiry Card

Lofts' seed gets a plug

BOUND BROOK, NJ—Two of Lofts Seed Inc.'s perennial ryegrasses recently appeared on Japanese TV, and got great notices. Palmer and Prelude were winter-overseeded on dormant zoysia turf in Japan's National Stadium in Tokyo for the prestigious Toyota Cup, the world championship of club soccer teams. During his narration, the TV reporter praised the field's color and beauty. LCI

Proprietary's two new releases

SALEM, OR—Crew-Cut dwarf-type tall fescue and Vantage perennial ryegrass are new turfgrass releases by Proprietary Seeds, Inc.

That company claims that Vantage is an improved turf-type perennial ryegrass that demonstrates resistance to

many diseases, especially stem rust. Vantage is a medium dark-green color and complements other ryegrasses, fine fescues and bluegrasses when used in mixtures.

Vantage is reportedly available in limited quantities this spring, but will be in good sup-

ply after the 1990 harvest.

Crew-Cut, says Proprietary Seeds, shows a dramatic reduction in vertical growth rate (less mowing), along with narrower leaves, increased density and upright growth habit. Crew-Cut will be available in the fall of 1990. LCI

Normarc says Phoenix is ready

TANGENT, OR—Normarc Seed Company says its new turf-type tall fescue Phoenix was released in August 1989. It describes Phoenix as a per-

sistent, attractive, low-growing cultivar with medium density and leaf texture.

Normarc says Phoenix has shown good winter hardiness

and excellent seedling vigor, and it requires medium to low fertilizing.

Phoenix is an advanced-generations cultivar. LCI



Seed coat corporation started up

ROLL, AZ—Valley Seed Company, a division of Arizona Grain, Inc., and Canadian Seed Coaters Limited, formed a joint seed coating venture known as Precision Seed Coaters.

The new entity will serve the large Bermudagrass seed and other grass and legume seed production industry.

Canadian Seed Coaters, Brampton, Ontario, Canada, began commercial production in 1977 and has, together with its parent companies, nine wholly owned or joint venture coating plants. The parent companies are Hodder & Tolley Ltd., Palmerston North, New Zealand, and Osco, Inc., Brampton.

Valley Seed, established in 1898, markets seeds throughout the world and is based in Casa Grande, AZ. It conditions and sells Bermudagrass seed, hybrid pearl millet and a complete line of seeds for the Southwest. LCI

IN THIS BUSINESS, YOU CAN TELL THE SUCCESSFUL PEOPLE BY WHAT THEY DRIVE.

So you've finally landed your first really big commercial lawn mowing contract.

Say, a 27-acre industrial park.

It's a sure sign of success.

But it could also be a sign of real problems.

You see, trying to cover all that ground with a walk behind mower could very possibly run you out of business.

You need to step up to the Toro ProLine 118 riding mower. The 118 is packed with features that make it more efficient than walk behinds for larger jobs.

It has variable ground speed up to 7 mph, so you can mow a lot in a little time. Controls, including the automotive-type steering wheel, are conveniently placed and easy to use, so you'll have less operator fatigue. And that means, hour for hour, you'll get the most mowing out of every employee.

Trimming, too, is quicker and easier with the ProLine 118. Unlike garden tractors, the 118 lets you trim fast and close with rear wheel steering for superior maneuvering and hydrostatic drive for single pedal operation of forward and reverse. Plus, the out-front offset deck, in either 44" or 52" sizes, is big enough to cover a lot of turf, yet small enough to get into tight spaces.



ProLine 118 shown with 52" deck and optional six-bushel bagger.

Finally, the 118 has a powerful engine that can handle the toughest conditions. The 18 horsepower, twin cylinder, air cooled Kohler Magnum engine is a proven, reliable and durable design that will keep you up and running longer.

So when you start getting

those bigger jobs, don't get behind even before you've gotten ahead. Get a Toro ProLine 118.

There's no better way to deal with success.



ProLine
The Professionals
that keep you cutting

Bluegrass from Idaho released

WORLEY, ID—Alene, a new bluegrass variety, has been released to an association of seed growers by the University of Idaho.

Alene is being described as durable and drought-resistant with a medium-dark genetic color and improved disease resistance (compared to the common grasses). The developers of Alene think it will be particularly useful for low-maintenance lawns and in mixes replacing unavailable proprietary varieties.

The original plants of Alene were discovered during a collection expedition in southwest Europe.

Seed West, P.O. box 113, Rockford WA 99030 or Seeds Inc., Rt. 2, Box 28, Worley, ID.

LCI

The problem will continue to grow.

Lawn Doctor franchisees hear the facts about Lyme Disease

ATLANTIC CITY, NJ—Lyme disease won't be going away soon and will be a bigger issue during the 1990s. So says Bill Davis of Lawn Doctor.

Franchisees of that company learned more about the disease at their annual seminar here. Says Davis, "The peak period of Lyme disease incidence (May through July) corresponds with people's outdoor activities, and north-eastern states have shown a high concentration of the disease."

The disease is transmitted by the tiny (about the size of the head of a straight pin) deer tick, and research is indicating that most bites occur in people's own lawns. Lyme Disease (named after the city of Lyme, CT, where it was first diagnosed several years ago) is reportedly spreading.

Davis said LCOs can help homeowners reduce the

chance of contracting the disease by telling them:

- to keep their lawns mowed and raked and to remove underbrush.
- to locate bird feeders away from the house.
- to have them inspect children and pets for ticks: look closely, deer ticks are extremely small.
- to stay away from wooded areas.

Davis also suggested that applicators keep their ankles covered while working. He said Dursban 50 WSP or Dursban granules can help control fleas and ticks.

There are three stages of the disease: 1) a bulls-eye rash; 2) chills and fever, headache, fatigue, pain and swelling in joints; and 3) irreversible arthritis, cardiac damage, facial paralysis, nerve damage. LCI



1990 New York New York State Turfgrass Association officers: (back, l. to r.) Karl Olson, Steve Griffen, Tom Strain, Mike Maffei, Steve Smith, Tim Madden, Tom Corell, John Fik. Front l. to r.: Gene Bowler, J.R. Brundage, Bill Stark and John Liburdi.

Tidewater

from page 31

professional. Still, "we have a lot of part-timers here," says Randal W. Jackson, extension agent in Virginia Beach.

"This is a group that we have failed to reach. It's hard to reach these fellas or ladies," says Jackson.

"They tell me that they can't afford insurance: If they can't afford insurance they can't afford to be in business—they could lose everything," he says.

"The problem I'm dealing with is that it leaves a bad taste in the customer's mouth (about professional lawn care in general)," Jackson comments.

Madden points out, though, that the summer heat and fungus often put the part-timers out of business in a hurry. "They usually don't last very long."

Landers sees some hope that Tidewater LCOs are making an impact. "I think that most of the industry around here is concerned with image." LCI

Nason at post

OGDEN, UTAH—National turf specialist, a new position created by Great Salt Lake Minerals & Chemicals Corp., is held by Danton Nason.

In the new post, Nason provides technical and marketing support for Great Salt Lake's sulfate of potash turf fertilizing programs, says GSL's Bryan Evans. LCI

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Crop biotechnology to strengthen future lawn care

BY DAVID N. DUNCAN

In 1982, Monsanto researchers pioneered and developed the capability of plant transformation in petunia, tobacco and tomato plants.

Today, Monsanto researchers at its state-of-the-art Life Sciences Research center in Chesterfield, MO, have successfully transformed several vegetable and field plants, including cotton, soybean, oil seed rape, potato and tomato.

Monsanto is committed to the future of agriculture. With

its leading technical position in plant sciences, Monsanto's goal is to be the most successful plant genetics company in the world.

\$ to biotechnology

With more than \$100 million devoted annually to its effort in biotechnology, Monsanto is involved in a full spectrum of research including animal, human health care and plant sciences.

This article focuses on Monsanto's technological advances in the genetically engi-

neered plant science effort, and its forecast for the future of agriculture.

Traditionally, plant breeders have looked for desirable traits in plants, and then, through cross-breeding, tried to create new lines of plants that include the desired traits, often requiring eight to 10 years before a variety with new traits could be released.

Speeding the process

Biotechnology techniques offer ways to place specific traits into superior plants in a

shorter period of time and with greater precision. Genetic engineers have the ability to significantly enhance the efficiency of seed production.

Monsanto is primarily working to introduce three single-gene traits in crops: resistance to plant-eating insects; resistance to infection by specific viruses; and tolerance to Monsanto's Roundup herbicide, an effective, non-selective product with low toxicity and desirable health and environmental safety charac-

teristics.

Successfully transferring genes from other organisms to plants was a method pioneered by Monsanto using a naturally occurring bacterium—*Agrobacterium tumefaciens*—as a sort of vector.

DNA involved

This little bacterium has the capability of inserting some of its own DNA into plant cells. But this usually results in a disease to the plant called crown gall.

Monsanto researchers developed a method to stop the agrobacteria from causing crown gall, while at the same time keeping its ability to insert DNA into cells.

The altered cells are then regenerated into healthy plants through a process known as tissue culture.

Using a common paper punch, discs are cut out of leaves, and placed with the *Agrobacterium* containing the desirable DNA into a test tube. The *Agrobacterium* attaches to the discs through the cut or wounded area of the leaf, and in doing so transfers its own DNA—including the desirable trait.

Each tiny plant will then be identical to its parent plant, except it will include the desirable trait, for either virus or insect resistance for herbicide tolerance.

Finding more plants

Currently, dicotyledons, such as tomatoes, tobacco, soybeans and oil seed rape, are more easily transformed using the *Agrobacterium* vector approach just described.

Monocotyledons, such as corn or wheat, have been more difficult to transform.

Other methods used for gene transfer are newly developed. These include electroporation, microinjection and the use of a promising, new particle gun, which can directly "shoot" minute gold or tungsten beads coated with pieces of DNA directly in plant cells.

Another single-gene trait is the resistance to infection by specific viruses.

Viruses are a significant problem in crops such as tomato, potato, corn wheat and sugar beet, and are responsible for millions of dollars of losses each year.

No treatment yet

There is no chemical treatment for the control of plant viruses.

In the 1988 Illinois field trial, non-engineered plants were compared to engineered plants. Non-engineered plants showed virus stunting, curled leaves, etc. The engineered plants, also inoculated, grew vigorously.

Yield decreases experi-

Turf-Seed's CITATION II contains naturally pest resistant endophyte ... a fungus that occurs within plant tissue between the cells.

New turf breeding discovery proves resistance to bill bugs, sod webworm, and other pests without harmful chemicals!



Left, insect damage in perennial ryegrass. Right, endophytic ryegrass resists insect pests.

CITATION II Turf-Type Perennial Ryegrass

is well known for its rapid establishment, fine texture, dark green color, improved mowability and drought tolerance, both in a monostand or as part of CBS II blend. But, the REAL plus is Citation II's high endophyte level (over 80%) that make it naturally resistant to leaf eating insects.

This plus results in savings... in chemical costs to maintenance people and less exposure to insecticides for applicators, homeowners, golfers and picnickers.

Citation II is not only an investment in finer turf, but it's a savings account for turf managers... and our delicate planet.

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Black lines are endophyte mycelium in leaf tissue.



Magnified endophyte in seed.

Qualified turf grass associations can earn cash for turf research by saving Citation II Oregon certified blue tags. Call us or write for details.



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Circle No. 151 on Reader Inquiry Card

enced by the non-engineered plants were up to 70 percent.

Monsanto and Washington University were able to take a component of tobacco mosaic virus called the coat protein and, in effect, vaccinate plants by genetically inserting the DNA directing production of that protein into plants.

When the virus tries to attack the plant, the coat protein produced in the plant stops the virus from reproducing and the plants show no symptoms of viral disease.

In the area of insect control, home gardeners have been applying a commercial, naturally occurring bacterium called *Bacillus thuringiensis* (or B.t.) for years on their tomatoes and other crops to ward off hungry, leaf-eating caterpillars and worms.

B.t. a friend

Monsanto researchers took a gene from that bacterium and genetically engineered potato, cotton and tomato plants to protect themselves from these insects. Monsanto inserted a B.t. gene into cotton, potato and tomato plant cells, causing the plants to produce a specific protein.

Unprotected plants can be badly damaged by leaf-eating insects such as pinworm. In genetically engineered plants, when a worm or insect feeds on the plant, it ingests the protein along with a small portion of the plant.

The protein affects the insect's feeding ability, it dies and the plant is left virtually undamaged. (The protein has no effect on beneficial insects such as ladybugs or wasps.)

Monsanto estimates that some of its first biotech-produced crops will be marketed by 1993.

The use of genes

The licensing of high qual-

ity biotech products forms the basis for Monsanto's "trans-tech" effort. Once the firm successfully researches and field tests a candidate for commercialization, it plans to transfer that candidate gene into proprietary crop varieties.

Monsanto's method is unique. The firm has contractual agreements with leading seed companies possessing advanced gene pools, distribution systems and marketing strategies.

Monsanto will market its technology to seed companies and then to farmers and receive royalties from the licensing of genes. The royalties are

based on the added value of the improved seed, which is sold to farmers.

These improvements are expected to reduce the overall cost and improve efficiency of crop production for farmers.

Thus, the transtech strategy is the foundation to the plant biotech effort.

Agricultural biotechnology is a power science still in its infancy, with new knowledge and new techniques developing continuously.

Analysts estimate that by the year 2000, the total biotech industry will be generating as much as \$100 billion in sales on a global scale.

Nowhere will the impact of

this developing science be greater than on agriculture. But as it's refined, the impact will certainly be felt in the turf and ornamental industries.

Monsanto's message is simple: for farmers, biotech means a more cost efficient harvest, an improved competitive situation, and solutions to problems currently going unsolved. Biotech will also benefit all mankind and our environment, as new ways to grow crops emerge.

For consumers, this new technology means a continued supply of quality food, and ultimately, more affordable food. A truly global benefit from biotechnology. LCI

You never know what's hit you when you see patch disease. It could be Fusarium blight. Or necrotic ring spot. Or summer patch. Or take-all patch. Or spring dead spot. Or any combination.

They all look very similar on turf. Only with a microscope can you tell them apart. So guessing which one's causing your patch disease still leaves your turf open to the other four.

That's why complete coverage pays. And only Rubigan is labeled to prevent and treat all five of these pathogens that cause patch disease.

Not to mention dollar spot, snow mold, copper spot, red thread and stripe smut. And this spring is an excellent time to begin your preventive program.

Why take chances controlling only part of the patch disease problem? Span the spectrum with Rubigan. See your Elanco distributor. Or call toll-free: 1-800-352-6776.

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Only Rubigan® spans the patch disease spectrum.

Circle No. 121 on Reader Inquiry Card

Home buy triggers spending

GILFORD, NH—Consumers spend more on lawn care products and services after moving into a new house than at any other time in their lives, says a marketing study.

"Like buying baby products after having a baby, buying a home triggers an unprecedented spending spree," says Richard Wright, editor/publisher of *New Home* magazine, which sponsored the study.

The study was conducted among buyers of homes above the national median price of \$85,000. It found that these buyers have about \$18,000 on the average to spend on home-related items.

Some 17.1 percent undertake a landscaping project within three months of moving in, the study reports. In addition, 24 percent plan one within six months, and 18.1 percent within the year. Those planning a project six months and beyond expect to spend an average of \$2,281.

The study was conducted among 2,000 movers for *New Home* magazine, a bi-monthly magazine sent to new owners within two to four weeks of their deed registration. The magazine is based in Gilford, NH. LCI



COVER STORY

Fungus treatments sell in Tidewater marketplace



Brissette and Barnhart: Their military background instills good work habits, customer relations skills and a can-do attitude.

By JAMES E. GUYETTE

Fungus treatments are getting a good response from lawn care clients in the Tidewater region of Virginia.

"Tidewater is God's gift to fungus," says Gary Cooper, owner of Cooper's Lawn Aeration Service.

His fungus control program nets him a 17 percent profit as customer acceptance continues to mushroom.

Tidewater, also referred to as Hampton Roads, includes the southeast corner of Virginia near the James River and Chesapeake Bay.

The area is in the heart of the transition zone, and it carries its own "micro-climate,"

according to Cooper.

A snowfall 100 miles away will manifest itself as a rain shower in Tidewater because of the Bay and the Atlantic Ocean.

"We get a lot of moisture and we get hot temperatures day and night in midsummer," says Dr. Ed Borchers, director of the Virginia Tech Hampton Roads Agricultural Experiment Station.

Constant moisture can lead to fungus.

"It's very severe here," reports Steve Madden, president of Lawn Doctor of Kempsville. "We get much more of it than other areas."

Ponders Cooper: "Does fungus control sell? Yes?"

"It's a very inexpensive marketing technique, but it

pays off big-time," adds Cooper worker Richard Brissette.

"You're selling a service," points out Thomas J. Barnhart, another Cooper employee.

Out of 350 Cooper clients last year, 215 opted for monthly fungus control at about \$250 annually.

Alternating treatments of Daconil 2787 and Chipco 26019 are used.

Also, every Cooper customer gets monthly liquid iron applications.

In addition to making the grass greener and harder, "It allows us to be on the customer's lawn to look for problems on a monthly basis. From March through December you have a monthly inspection of

LCOs

from page 1

Willcock says she emphasizes service, not chemicals. "If I go out to a yard and the owner says to me, 'I want all my weeds gone yesterday,' I tell them, 'You've got the wrong company'. We're a lawn care company and we use chemicals only when we have to."

Atwood Lawncare Inc., Sterling Heights, MI, services over 2500 accounts in the metropolitan Detroit area and Tim Doppel says it's aiming for 10 percent growth in 1990. "We're optimistic about this year. There's good potential and we're looking for an improved year," he says.

The big question mark in his market area is car sales. Says Doppel, "We like to think we target a more upscale customer that won't be directly influenced by any slowdown in the automotive industry, but that's something we can't overlook."

"We're looking for growth, we're planning for growth and we won't settle for anything short of growth," he says.

George T. Jameson, Crockett's Green Lawn Service, Northboro, MA, remains "optimistic" because quality

home builders in central Massachusetts are still putting up homes in what, over the past decade, has developed into one of the highest-priced home markets in the nation.

"New homes in this area are selling in the \$200,000 range and up, and many of the people buying them are professional people, two-income families and they don't have time to spend on their yard. When they have free time they want to spend it doing other things than fertilizing and weed control," says Jameson who describes Crockett's as a landscape contracting firm with a 25 percent business mix of lawn care.

Fewer than one in four

homeowners in his area contract for professional lawn care. "That's why I think there's still potential in this area," says Jameson. "Also, there's a lot of competition around here but it's good competition and we don't seem to have a lot of price cutting or bad mouthing."

Roger A. Young foresees no growth in lawn care business for Lawn-O-Green Inc., Summerville, SC. Many of the lawns Lawn-O-Green serviced are gone, wiped out by Hurricane Hugo last fall.

"It's going to create a lot of problems a lawn care company wouldn't normally encounter. The number of customers we've lost as a result of the

storm has been significant," says Young. "Much of the Isle of Palms (just outside of Charleston) ceased to exist. We do have some customers there but in some locations there's a lawn but no house and in others a house but the lawn has been covered with up to 12 inches of sand."

David Ransome, aims for 20 percent growth for his Northern Turf Spray, Elyria, OH. "I'd like to get the customer base up to about 800 and I intend to go with some direct mail advertising, hand distribution of brochures in target neighborhoods. And I might try some newspaper advertising. I know that that type of advertising is probably

too general but I want to keep our name out in front of the public."

"We're planning for growth," Tim Doppel

Ransome said he's always stressed "personal service" and he thinks that's helped him weather downturns in the northern Ohio economy. "There's still a lot of new business out there and we've always been pretty strong in keeping our present customers from year to year," says Ransome. LCI

BOOKSTORE



420 - HERBICIDE INJURY TO TREES AND SHRUBS
By Jeffrey F. Derr and Bonnie Lee Appleton
Describes how to diagnose herbicide damage to nursery crops and landscape ornamentals. Injury symptoms resulting from the herbicides used today are described and compared to other plant disorders to assist in diagnosing plant problems. Tables list common names, trade names, major uses and injury symptoms for the herbicides currently used in agronomic, horticultural, landscape and noncrop areas. \$15.95

450 - HANDBOOK OF PLANTS WITH PEST-CONTROL PROPERTIES
By Michael Grange and Saleem Ahmed
Provides information on approximately 2,400 plant species having pest-control properties in addition to the plant's specific common and family names, coded information is provided on such plant characteristics as life cycle, classification, and the ecological conditions suited for growth. Also lists 1,000 plants that are potential candidates for screening pest-control activity due to their poisonous nature or their ability to control human and animal diseases. \$46.95

620 - TURF MANAGEMENT HANDBOOK
By Howard Sprague
Practical guide to turf care under both healthy and poor turf conditions. Chapters cover turf in cooler and warmer regions, fertilizer use, regular turf care, weed and disease control and special turf problems. Useful seasonal schedules for management of turf areas. \$26.60



415 - INNOVATIVE APPROACHES TO PLANT DISEASE CONTROL
By Edward C. Martin
Brings together alternative approaches and methods that have potential to control diseases caused by fungi, bacteria and viruses. Major concepts of disease control systems, their possible mechanisms, potential application and genetic improvement. \$54.95

110 - TURF MANAGERS' HANDBOOK-Second Edition
By Daniel and Freeborg
ENTIRELY UPDATED. A practical guide for the turf practitioner. Chapters on grasses, growth regulators and diseases have had extensive modification. Innovations resulting from research and practice have been added to reflect the current techniques available for turf managers. \$32.95

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By James Beard
Comprehensive basic text and reference source used in many leading university turf programs. Includes findings of current research compiled from more than 12,000 sources. \$52.00

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by Gregory M. Pierceall
An excellent reference for individuals involved in the design and development of plantings and constructed features for residential sites. Illustrations and actual residential case study examples are used to communicate graphic, planning and design concepts which are the focus of this text. \$53.00

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Kathleen W. Kerr, Editor
An updated unit cost data reference for designers and cost estimators. Developed to fill the tremendous need for detailed landscape construction cost data. Laid out in easy-to-use CSI format. Annual. \$39.95

010 - ADVANCES IN TURFGRASS PATHOLOGY
by Joyner and Larsen
Leading U.S. turf pathologists report on turfgrass diseases, pythium blight, snow molds, fairy rings, leaf spot of Kentucky bluegrass in Minnesota, initial and field fungicide screening, turfgrass disease resistance, etc. Contains new ideas on how to combat turfgrass problems. \$27.95

370 - LANDSCAPE OPERATIONS: MANAGEMENT, METHODS & MATERIALS
by Leroy Hannebaum
An in-depth examination that combines technical training in landscape science with methods of accounting, business management, marketing and sales. Discusses effective methods for performing lawn installations, landscape planting and maintenance. Step-by-step accounting calculations are explained in simple terms. \$52.00

320 - LANDSCAPE REJUVENATION
By Bonnie Lee Appleton
Explains how to rejuvenate a landscape renovation. Included is information on how to make an appraisal of the landscape, how to determine landscape needs, maintenance considerations, how to execute a landscape renovation. \$15.95



Roger Heider knows every yard on his routes in Omaha, NB, area.

the lawn," says Cooper. "We're out there scouting—looking for problems—and doing something useful at the same time."

The fungus program has a net profit of 17 percent.

Cooper has a complete handle on his profit rates. Aeration nets 35 percent; dethatching, 45 percent; seeding, 24 percent; granular materials (fertilizer and crabgrass control), 46 percent; pelletized lime, 19 percent; postemergent weed control, 41 percent; liquid iron, 22 percent; and Gallery, 20 percent. Each customer gets Gallery treatments plus iron.

Rebel II tall fescue is Cooper's choice for seeding work, but Tidewater LCOs say it takes a lot of effort to produce good lawns no matter what type of turf is planted.

"I consider this an interesting and challenging place to grow grass," observes Lawn Doctor's Madden.

He estimates that 90 percent of the yards have tall fescue lawns, 7 percent have Bermudagrass and the rest are zoysia or St. Augustine.

The Bermuda is often viewed as a weed.

Local resident Paula O'Meara refers to it as "wiregrass" that attacks and spreads throughout her flowerbeds.

A "leopard effect" is found on some lawns where Bermuda and tall fescue grow together in blotches.

In situations where residents actually want Bermuda, peer pressure from neighbors will often put a stop to those plans.

"You get Bermuda on a cul de sac and everyone will get it eventually," says Madden.



Madden and Cooper: High humidity and clay soils make it tough to grow turf in Tidewater.

Madden points out that "it's hard to seed in this area because the soil is not too good

here. Most of our lawns are on very heavy clay, that doesn't drain well."

Conditions vary between pockets of clay and sand.

Any attempt at spring seeding is gobbled up by fungus and summer humidity, reports Ron Walden, research associate at the Hampton Roads agricultural experiment station.

"People want their lawns seeded like they do everywhere else, but it doesn't usually work that way here," Walden explains.

Efforts are under way to improve the professionalism of the area marketplace, but there's still work to be done, says Virginia Landers, who is with the beautification, parks and recreation department in Chesapeake.

"I think there are more people in the area who are more concerned with being more

See **Tidewater** Page 27

Tidewater marketplace has military influence

Tidewater has close to full employment, and a large military presence in the area assures a basically robust economy, although enlisted service families often cannot afford professional lawn care.

"Growth-wise we haven't peaked yet," says Gary Cooper, owner of Cooper's Lawn Aeration Service. He notes that "there's also an effort by the city councils to control growth."

His business is doing well, and he is mulling expansion plans.

"I'm increasing at a steady 13 to 14 percent a year by word of mouth—no advertising or anything," says Cooper. "We're just a small chunk of the market."

Cooper is a retired Marine Corps. lieutenant colonel, and the success of his business is largely due to the military precision applied to the operation and employee selection.

Cooper usually hires military people to work part-time.

"The work ethic's been instilled in them. They know how to take charge of a situa-

tion and handle it," he explains.

In addition to the can-do take-charge attitude, they are polite to the clients.

The equipment is rebuilt during the winter, and during the season each truck carries spare parts so repairs can be made in the field.

"I don't want to be stuck with somebody else's timetable," explains Cooper employee Thomas J. Barnhart, using a military analogy: "You pack your own parachute."

Currently assigned to the U.S. Coast Guard, Barnhart remains on call as a Navy SEAL, which is a highly specialized covert action com-

mando unit.

He has been awarded two Silver Stars, two Bronze Stars and seven Purple Hearts among his 33 decorations. Barnhart spent six years in Vietnam, plus he continues to be called upon for secret SEAL missions that he will not discuss except in the most general terms.

Barnhart keeps his "war bag" packed 24 hours a day, seven days a week, and Cooper says he occasionally gets a call from Barnhart saying that he has to leave on a mission—now—and that he won't be in to work for a while.

Cooper employee Richard Brissette is a retired Navy

lieutenant commander.

They say their background helps the marketing aspect of the business because they have an immediate common bond with most potential clients.

"We can target a house and keep them because I'm military and I can relate to them," Barnhart explains.

Because enlisted service people tend to have low salaries and cannot afford professional lawn care, officers and retirees are often the best bet for making a sale.

Although it varies by neighborhood, it's estimated that 70 percent of the highly mobile enlisted population usually cannot afford steady lawn care.

"You tend to have a higher turnover in the enlisted ranks," says Steve Madden at Lawn Doctor of Kempsville.

"A lot of people will buy our service with the thought that they are trying to sell their house," Madden observes.

"Also, I've had military wives call me and she wants a lawn care company because her husband's going to be gone for six months and she wants the lawn to look as good as when he left—but she can't take care of it."

According to Barnhart, the best clients are obtained in upper scale areas where homeowners are trying to keep up with their neighbors. "They have to have some sort of competition out there." **LCL**

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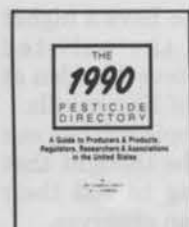


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by Lori Thomson Harvey and W.T. Thomson
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Boutillier with Ringer Corp.

EDEN PRAIRIE, MN—Scott Boutillier became commercial marketing director for Ringer Corporation last year. Ringer manufactures and markets natural, organic fertilizers, pesticides and composting products.

Previously Boutillier served as marketing director for Nitragin (Lipha Chemicals, Inc.), Milwaukee, WI, and before that he worked with Rhone-Poulenc in Montana and New Jersey. He holds a bachelor's degree from the University of Idaho and did graduate research work in insect physiology at the University of Minnesota. LCI

Santakumari at Aquatrols

PENNSAUKEN, NJ—Dr. Mane Santakumari joined Aquatrols as senior scientist where she will assist the director of research in quality control, technical services and product development. Dr. Santakumari has her Ph.D. in Plant Physiology from Sri Venkateswara University in India.

"Dr. Santakumari's research experience in plant water relations, anti-transpirant development and herbicide activity makes her a valuable addition to the Aquatrols' team," said Robert Moore, president of Aquatrols.

In a related matter, Phil O'Brien became a technical sales representative for the company. He is a graduate of Glassboro State College and has more than nine years experience in industrial sales throughout South Jersey and Pennsylvania.

Aquatrols manufactures and markets a variety of water management products used by turf and horticulture professionals. LCI



Santakumari is Aquatrols new senior scientist.

NCTGA's new director eyes regional workshops

BISMARCK, ND—Betsey B. Smith, the new executive director of the North Central Turfgrass Association, says her goal is to expand NCTGA services to its members.

A first step in that direction will be the establishment of regional workshops around western Minnesota, northern South Dakota, eastern Montana and throughout North Dakota. She also plans to offer NCTGA services to the landscape irrigators in this region.

"It's only logical that landscape irrigators should be a

part of what the lawn care operators and golf course superintendents pursue," said Smith. "What each of these professionals do will have an effect on water use...We need to be communicating."

Smith promises continued cooperation with the Professional Lawn Care Association of America, the sponsorship of turf scholarships and support for research efforts at North Dakota State University.

Betsey Smith has a BS degree from The Ohio State University, Columbus, OH, and while in Ohio headed up her

own landscape servicing business. She also has sales and service experience in the lawn care industry in both Ohio and Texas, before moving to North Dakota in 1985.

For the past five years NCTGA was run by a board of directors aided by the volunteer efforts of Kevin Stayton. "NCTGA has grown over the interim to the point that it needed a director to schedule meetings, workshops, watch over finances and handle correspondence," reported NCTGA President Mark Bergstrom. LCI



Betsey Smith: wants to begin offering workshops for NCTGA in the upper midwest.

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Grass, as we like it, isn't Mother Nature's choice

By JAMES D. WILMOTT

Is the use of insecticides, herbicides and fungicides to maintain turf quality unnatural? Many who oppose the use of these pesticides claim that their use is not Mother Nature's choice.

This, of course, is true! If Mother Nature had her choice we would not have any lawns, golf courses or athletic fields. Here in the north-eastern states, we would have all deciduous forests with some evergreens mixed in.

Some folks may enjoy living in the woods, but personally, I like my lawn. As we know, maintaining a high quality turf area takes a lot of work—work against Mother Nature.

Who or what is Mother Nature anyway? Those who use her as a reference in their argument against pesticides must be referring to some basic principles of ecology. Let's take a look at ecosystems.

These are composed of living organisms which interact with themselves and their

physical environment.

Natural ecosystems have developed over a long period of time without interference from Man. They are characterized by tremendous variability both in the number of different species and in the gene pool of each species. This variability contributes to balanced populations.

In other words, the number of individuals in each population neither gets too high nor too low. When populations remain in balance, an ecosystem is considered stable. The ability to keep

stable is a feature of a natural ecosystem.

Areas of turf are good examples of just the opposite. Turf ecosystems lack variability both in the types of organisms and in the genetic makeup of the grass plants. Thus, the system lacks the ability to keep all of its populations in check.

Typically, the populations that get out of balance are those of the organisms we call pests. Without inputs or management from man, pests will overcome the turf grass.

This is also true in agri-

culture where plants are produced in monocultures. Monoculture simply means that the genetic makeup of the plants being grown is the same.

While the plants are all genetically similar, the pests are not. They are highly variable and can adapt to environmental adversities—like pesticides.

Turf ecosystems, like agroecosystems, are crippled in that they cannot protect themselves from pests. Because of this we have the science of plant pest management.

Turfgrass quality, as it relates to pest problems, is a function of our inputs. Higher quality requires greater care including a reduction in competition from weeds, insects and pathogens.

Maximizing the health of turf through good cultural inputs is vital.

"Proper" fertilization, irrigation, thatch management, mowing and aeration will go a long way in enabling turf to overcome pest problems. The selection and establishment of well adapted and genetically variable turf types will make it difficult for pathogens.

Even hard physical work will help if one is willing to pull weeds and reseed problem areas. Under some conditions, pest problems will become severe and pesticides will be the only alternative.

The point is, we need to implement a comprehensive strategy to minimize pest damage.

Pesticides must be used judiciously along with all other alternatives. Remember, we created the turf ecosystem, not Mother Nature, and therefore we must maintain it. LCI

About the Author

James D. Wilmott is a cooperative extension agent with the Cornell Cooperative Extension Association of Monroe County in Rochester, New York.

ALCA chooses Orlando firm

ORLANDO, FL—Ground Control Landscaping, Inc., received a Grand Award for commercial retail maintenance in the 20th Annual Environmental Improvement Awards program sponsored by the Associated Landscape Contractors of America (ALCA).

Ground Control, established in 1978, is one of the largest landscape firms in Florida. The winning project involved the maintenance of the Peabody Orlando Hotel, a

See ALCA Page 35

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Turned down last year? Ask again

Searching for new customers

BY ERNEST W. FAIR

Americans are searchers. They're always searching for something. For identity. peace. Happiness. New customers. *New customers?*

Now that rings a bell, particularly in the lawn care industry where many companies do a lot of searching and considerably fewer do much finding. This raises the thorny question: where does one search to actually find a new customer?

There's no single answer and that's the way it should be, but there are some places where the search is most likely to be get new customers. For example:

- New arrivals to your market area. These people are unlikely to have any local fixed loyalties. Many are ready to have your service if you only ask.

- Within past failures to sell. Sooner or later an LCO is going to give up on certain prospects. That doesn't mean the LCO can't come back a year later and try again on these very same prospects.

- Your prospects change. The single man or woman who buys a home or the homeowner who gets a promotion, these are potential clients for you. Buying habits change as a person's income rises.

- You offer a new or different service. Anytime you develop a new wrinkle to your business or feature a new service, you automatically open up new opportunities for increased sales. Sometimes a person who declined your initial offerings will be excited by your new service.

- Couples just getting started, particularly young professionals. Many are two-income earners. They have promising careers. They're socially active. They don't want to spend their weekends caring for their lawns.

- Customers you've lost. Some were probably dissatisfied with your service but that's no reason to give up on them. Go after them. If you can win them back (it'll probably take some extra attention), they can become your greatest supporters.

- Leads from customers. Rare is the individual who resents being asked for leads. Most will be flattered and they'll be eager to help. Few, however, will volunteer the information without being asked.

- Casual contacts are important. Talking sales at every drop of the hat isn't wise, but there's no reason why you can't speak optimistically and truthfully about your company and its services. You

might be surprised at who's listening.

- Within the activities of other members of your family. Does your family understand the importance of your service? Do family members speak of it in a positive light when they're with their friends?

- When businesses and properties change hands. Actually there a set of prospects in each transaction, the buyer and the seller. The buyer of the property

probably needs your service. The seller suddenly has cash.

But the best place to find a new customer is where you're certain no new customer could possibly exist. There are few such places and a LCO can find new customers in, seemingly, the unlikeliest situations if they're persistent enough.

Customers show up only now and then for LCOs who rely on chance to bring in new business. **LCI**



About the Author

Ernest W. Fair is a freelance writer and businessman living in Clackamas, OR.

ALCA

from page 34

luxury convention hotel on a 22-acre site. Maintenance includes mowing, edging, pruning, tree/palm trimming, fertilization, plant disease/pest control, plant replacement, annual flower change-outs and irrigation maintenance and repair.

ALCA's Environmental Improvement Awards Program reflects the association's commitment to creating and preserving the beauty of our landscape. In sponsoring the program, ALCA also strives to increase public awareness of environmental improvement through quality landscaping. **LCI**

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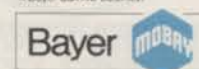


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A sound financial control system helps aid success

BY JOSEPH ARKIN
MBA, CPA

An effective financial control system is vital for effective business management. From another perspective, the lack of an effective control system inevitably damages a firm's earnings. In more extreme cases, poor financial and accounting controls can lead to business failure.

To help reduce the potential damage, we will review the major elements that make up an effective financial control

system in a business. Not every element is necessary in every business. But the absence of too many elements suggests that a firm's internal controls may be inadequate. That increases the potential for unforeseen management problems.

Regular statements

In any circumstance, a business should produce financial statements in a regular, timely manner. That typically calls for an up-to-date balance sheet and income statement every month.

A current balance sheet provides an up-to-date picture of a firm's financial circumstances. Attentive managers use that picture to help spot potential problems before they become severe. Small problems easily can elude managers operating without current balance sheets. That gives those problems the opportunity to grow into severe financial threats before attracting management attention.

Measuring results

A current income statement stands as a natural fi-

nancial complement to a current balance sheet. That accounting document measures the results from a firm's operations—i.e. its profit or losses—across a specific operating period. Again, prudent managers have income statements prepared on a monthly basis.

An income statement remains essential for effective expense control and profit management. In the absence of an income statement, a firm's expenses can creep out of control and erode a firm's earnings without manage-

ment's knowledge. Managers become aware of the higher expenses and lower earnings belatedly. The damage may not prove financially fatal. But the business operating without current financial statements earns less than it should.

Financial forecasts

In any event, current financial statements only provide the starting point for an effective financial control system in a business. Those accounting documents then provide the basis for preparing a company's financial forecasts and cash flow budgets. These complementary projections provide the foundation for effective financial planning.

A financial forecast helps anticipate a firm's need for funds that inevitably accompany growth. After all, an increase in receivables, inventory and other assets results naturally from a higher sales volume. The typical business must finance some of the asset expansion with borrowed funds. A financial forecast helps anticipate that need.

Remember cash flow

But a financial forecast isn't sufficient for a conscientious planning effort. A manager also needs a cash flow budget. That budget focuses on the timing of the cash flow into and out of a business. Even a financially healthy business can have a cash short fall in a particular month. A cash flow budget helps foresee such short falls. The foresight provides the time a manager needs to obtain the funds to prevent that cash flow problem. From a different perspective, a cash short fall comes as an unhappy financial surprise when business managers operate without a cash flow budget.

Some business managers view efforts to develop financial forecasts and cash flow budgets skeptically. That skepticism stems from the premise that accurate predictions in an uncertain economic environment remains impossible.

A good guess

But precise predictions aren't necessary to make forecasts and budgets beneficial. In most instances, a firm's financing needs remain predictable with a reasonable margin of error.

In any circumstance, a conscientious planning effort reduces the potential for then occurrence of a financial problem as an unanticipated surprise. That planning effort helps managers anticipate and prevent problems that otherwise could prove financially damaging.

Of course, an efficient accounting system provides the basis for the information in-

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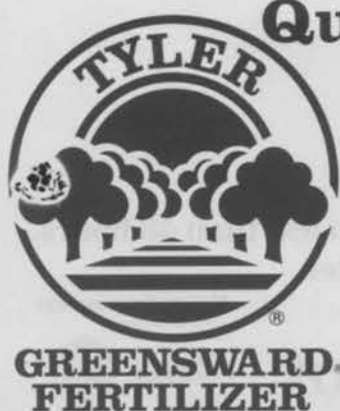
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cluded in a firm's financial statements and projections. And an effective accounting system remains essential for financial controls. To ensure that your firm's system is operating properly, conduct some checks on the system.

First, make sure the general ledger and other account records are posted up to date. At first glance, that may seem to be a mundane concern. After all, a business exists to earn a profit by delivering products and services to its customers. Maintaining up-to-date accounts presumably remains a secondary consideration.

But the failure to keep accounting records posted up to date undermines the fundamental financial control effort. Without current accounting records, a business cannot produce the current income statements and balance sheets that remain essential for effective financial management. And the absence of current accounting records makes sensible financial planning impossible.

Loss of control

From a different perspective, the failure to maintain current assets erodes a manager's ability to control a firm's financial activities. A manager with unposted accounts can't be sure of the status of his receivables and payables. A manager with unposted accounts can't be sure of his inventory totals.

Short lags in posting accounts seldom poses a serious problem. But some managers allow their accounting records to lag behind current business transactions by several weeks or months. Such lax accounting procedures easily can result in unnecessary problems that absorb a busy manager's time.

Credit problems

For example, unposted accounts can lead to trade credit problems. Moreover, that can occur even though a business has the cash necessary to make payments for purchases on schedule. A firm's poor records can leave important suppliers unpaid because managers lack the necessary spur to remit payment. Eventually rendering payment in response to supplier reminders doesn't alter the fact that the payment arrived late.

From the other perspective, unposted accounts can damage a firm's cash flow when managers lack the information necessary to follow for uncollected receivables. Even customers who normally pay promptly can overlook scheduled payments. And slow-paying customers will take advantage of any excuse to pay later.

Tracking deadbeats

A business with accounts posted up to date has the information necessary to urge

payments from past-due customers. The information provides the basis for reminding payments that good customers have overlooked. And the information provides the basis for the actions necessary to collect from slow-paying customers.

In either circumstance, the business that fails to maintain current accounts suffers. In one instance, the inadvertent failure to meet supplier payments promptly will damage its trade credit rating. In the other instance, delayed payments from customers will damage its cash flow. In either instance, the business that fails to maintain current ac-

Slow-paying customers will take advantage of any excuse to pay later. The business must keep accounts current.

counts sustains a setback.

Bank accounts

Closely monitoring a firm's bank account stands as another essential step in an effective financial control program. As a basic consideration, a firm should have a reasonable number of bank accounts. Extra, unnecessary bank accounts can become risky.

Managers also should insure that all of a firm's bank accounts are reconciled on a timely basis. Moreover, the reconciliations should be completed by employees who have no other cash functions. The failure to make that distinction increases the potential for employee theft.

Many managers refuse to take the potential for em-

ployee theft seriously. They presume that trusted employees would never steal from the firm. But some common sense easily contradicts that presumption.

Employee theft?

Trusted employees remain responsible for most significant internal thefts from businesses. Those who lack a manager's trust have less opportunity. Managers restrict those employees' access to a firm's accounts.

From a different perspective, the most trustworthy employee can be motivated to steal by severe problems.

See **FINANCES** Page 41

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ALCA asks for trucking reg changes

WASHINGTON, D.C.—The Associated Landscape Contractors of America is urging the Federal Highway Administration (FHWA) to revise federal motor carrier safety regulations to exclude commercial vehicles where the hauling of goods and services is only incidental to the job.

In comments that the association submitted to FHWA officials concerning the criterion used to define a commercial motor vehicle, ALCA pointed out that the trucks contractors use vary in size from half-ton pickups to two-and-a-half ton C-70 single axle units.

ALCA noted that the companies are not motor carriers, and that the workers who drive these vehicles spend little time on the highway and do not suffer from fatigue.

Congress has passed three comprehensive bills that are aimed at increasing the safety

of buses and trucks.

In 1982, Congress passed the Surface Transportation Assistance Act, which in part established an incentive grant program to the states to develop roadside safety inspection programs.

Under the program, states are required to adopt the Federal Motor Carrier Safety Regulations for both interstate and intrastate motor carrier operations.

Also, the requirements mandate equipment standards, driver qualifications and hours of service.

In 1984, Congress enacted the Truck Safety Act, which in part required safety audits at individual company headquarters.

The act mandated that the Department of Transportation establish a system to perform safety audits, which included an analysis of company safety policy, procedures

and overall compliance with vehicle regulations.

In 1986 Congress enacted a national Commercial Driver's License Program as part of the Omnibus Drug Bill.

Under this program, drivers are required to possess one driver's license and the DOT is required to develop a grant program for the state to establish testing programs to license commercial motor vehicles.

ALCA also recommended that the DOT raise the gross weight rating for compliance to 26,000 pounds, as opposed to the current rating of 10,000.

ALCA also recommended that the definition of "worker," as used in the regulations, should not apply to operations where driving is only incidental to the performance of other job responsibilities, and whose total driving time does not exceed 40 hours in 7 consecutive days.

LCI



Special honors

Dr. Ralph Smalley (above, l.) received a plaque at the dedication of the SUNY Cobleskill Turfgrass Building, named in his behalf. Right, Bob Emmons, turfgrass professor, with a plaque given to the New

York State Turfgrass Association for its financial support of the building. Bottom center, Joe Hahn received NYSTA's Citation of Merit, flanked by former winners, Sherwood Moore, l., and Mel Lucas, r.

LCI

All Green calls 1989 a profitable year

MARIETTA, GA—Fiscal 1989 was a good year for All Green Corp. because the firm achieved its profit objective and realized a 45 percent growth in revenue.

Founded in 1987, All Green has expanded to 14 offices in eight states. "Expansion has occurred primarily through internal growth, augmented by strategic acquisitions," said Paul Anderegg, president. "In 1989, our company has continued to position itself for the future by adding new offices in Orlando and Ft. Lauderdale, FL, and Las Vegas, NV."

Bill LeBaron, vice president

of operations, said: "Paralleling with our strong growth in 1989, All Green has also continued its ongoing programs to control costs and to increase its responsiveness to the needs of competitive local markets."

LeBaron says the success of the firm is the "direct result of the commitment and dedication of our outstanding people. We recognize the most important resource we have is our people, who represent the reason we have achieved our position as a leader in the chemical lawn care industry, while offering services to our customers."

The services include pest

control and tree and shrub operations.

Anderegg said the firm is "a quality-oriented company expanding in a controlled manner for the future."

LCI

Correction

EDITOR'S NOTE—In the February issue it was incorrectly reported on Page 14 that a pesticide injection machine could reduce spray rates by 97 percent. That prediction instead referred to a 97 percent reduction in spray residues.

LAWN CARE INDUSTRY regrets the error.

LCI



Some bad news for your grubs to digest.

Ringer Grub Attack is the only milky spore product made by a patented fermentation process. You can apply it in granular or powder form to match your management practices. It has a very low order of mammalian toxicity.

Milky Spore is the name given to a natural soil microbe that is a death sentence for Japanese beetle grubs. The spores enter the insect's body cavity and germinate, turning the grub "milky white."



When the grub dies, it releases billions of spores back into the soil to kill more grubs.

A properly timed application will control grubs 15 to 20 years. So if you apply Grub Attack this spring, it will still be attacking and controlling grubs 15 to 20 springs from now. For information and the name of your closest distributor, call or write: Ringer Corporation, 9959 Valley View Road, Minneapolis, MN 55344, 612-941-4180. FAX: 612-941-5306.

RINGER
Grub Attack®
Better, naturally

Numbers of pesticides are dropping

WASHINGTON, DC—Pesticide registrations are being cancelled left and right. The reason: registrants didn't pay the annual \$425 maintenance fee in 1989. Most of the products had no recent commercial production.

This information surfaced at a symposium attended by top EPA and USDA officials here. At that gathering, EPA said of the about 45,000 pesticide almost 20,000 pesticides registrations for all uses are being lost. Many at the symposium, co-sponsored by the American Association of Nurserymen, said to expect more cancellations, especially among pesticides with limited commercial uses.

The AAN is seeking modified pesticide re-registration requirements because of low-volume users such as some segments of horticulture.

LCI

ALCA asks for trucking reg changes

WASHINGTON, D.C.—The Associated Landscape Contractors of America is urging the Federal Highway Administration (FHWA) to revise federal motor carrier safety regulations to exclude commercial vehicles where the hauling of goods and services is only incidental to the job.

In comments that the association submitted to FHWA officials concerning the criterion used to define a commercial motor vehicle, ALCA pointed out that the trucks contractors use vary in size from half-ton pickups to two-and-a-half ton C-70 single axle units.

ALCA noted that the companies are not motor carriers, and that the workers who drive these vehicles spend little time on the highway and do not suffer from fatigue.

Congress has passed three comprehensive bills that are aimed at increasing the safety

of buses and trucks.

In 1982, Congress passed the Surface Transportation Assistance Act, which in part established an incentive grant program to the states to develop roadside safety inspection programs.

Under the program, states are required to adopt the Federal Motor Carrier Safety Regulations for both interstate and intrastate motor carrier operations.

Also, the requirements mandate equipment standards, driver qualifications and hours of service.

In 1984, Congress enacted the Truck Safety Act, which in part required safety audits at individual company headquarters.

The act mandated that the Department of Transportation establish a system to perform safety audits, which included an analysis of company safety policy, procedures

and overall compliance with vehicle regulations.

In 1986 Congress enacted a national Commercial Driver's License Program as part of the Omnibus Drug Bill.

Under this program, drivers are required to possess one driver's license and the DOT is required to develop a grant program for the state to establish testing programs to license commercial motor vehicles.

ALCA also recommended that the DOT raise the gross weight rating for compliance to 26,000 pounds, as opposed to the current rating of 10,000.

ALCA also recommended that the definition of "worker," as used in the regulations, should not apply to operations where driving is only incidental to the performance of other job responsibilities, and whose total driving time does not exceed 40 hours in 7 consecutive days.

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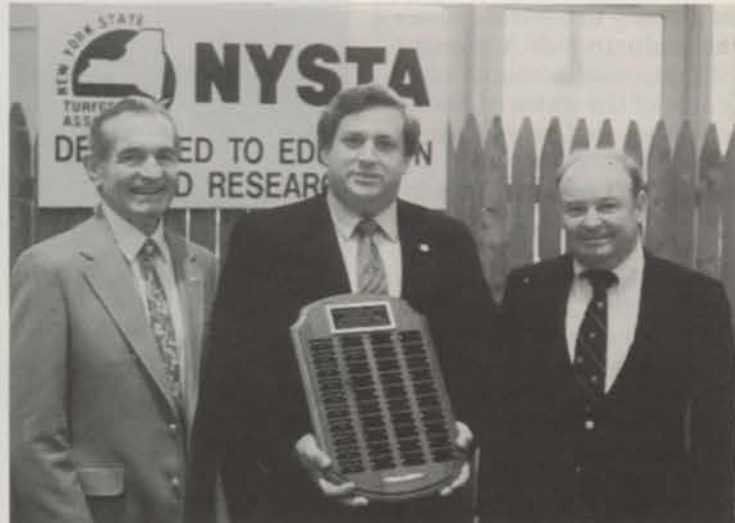
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LCI

FINANCES

from Page 37

Family, drug, or alcohol-related problems can lead to personal crisis that remain concealed from management. In such instances, personal financial burdens can appear overwhelming. An employee with easy access to uncontrolled company bank accounts may elect to "borrow" from the business to relieve that pressure. Only regular reconciliation by other employees can reduce that potential.

The potential for theft also raises the need for the final element in the financial control program discussed here. That comes from a periodic, complete physical count of a firm's inventory. That count remains essential for insuring that the firm's actual inventory corresponds to that indicated on its records.

Check inventory

A periodic physical count remains a necessity to insure that a firm's inventory control procedures remain adequate. That helps reduce the potential for inventory shrinkage from internal theft, external theft, or simply from sloppy record keeping. In some circumstances, an effective inventory can make the difference between a profitable and unprofitable operation.

In any event, an effective financial control system isn't the only element necessary for the success of a business enterprise. And some businesses can overcome the absence of financial controls for long periods. But an effective financial control system remains essential for the long-term survival and success of any business enterprise. LCI

About the Author

Joseph Arkin holds a BBA degree from St. John's University, an MBA degree from Pace University and is licensed by the States of Florida and New York as a Certified Public Accountant. He has written extensively for trade and professional publications.

LAF announces scholarships

WASHINGTON, DC—The Landscape Architecture Foundation (LAF) announced a \$30,000 endowment to fund the Edward D. Stone, Jr. and Associates Minority (EDSA) Scholarship Program. The endowment celebrates EDSA's 30th year anniversary and reaffirms its commitment to recruiting and assisting in the education of qualified minority students. Two \$1,000 scholarships will be available to students entering their final years of undergraduate study in landscape architecture.

For more information: Landscape Architecture Foundation, 4401 Connecticut Ave. NW, Washington, DC 20008. (202) 686-0068. Deadline for receipt of applications is June 29, 1990. LCI

Hendricksen to lead NAA

AMHERST, NH—John Hendricksen, Arlington Heights, IL, is the 1990 president of the National Arborist Association. Hendricksen is president of both Hendricksen, The Care of Trees and Aerial Equipment,

Inc. Hendricksen has served on the NAA board of directors since 1982, and he's a graduate of Northwestern University. LCI



NAA's John Hendricksen.

Sampson new sales director of Greenview

KING OF PRUSSIA, PA—Bert Sampson became director of sales for Greenview Lawn Care Products, a division of Lebanon Chemical Company. Sampson was formerly the division sales manager.

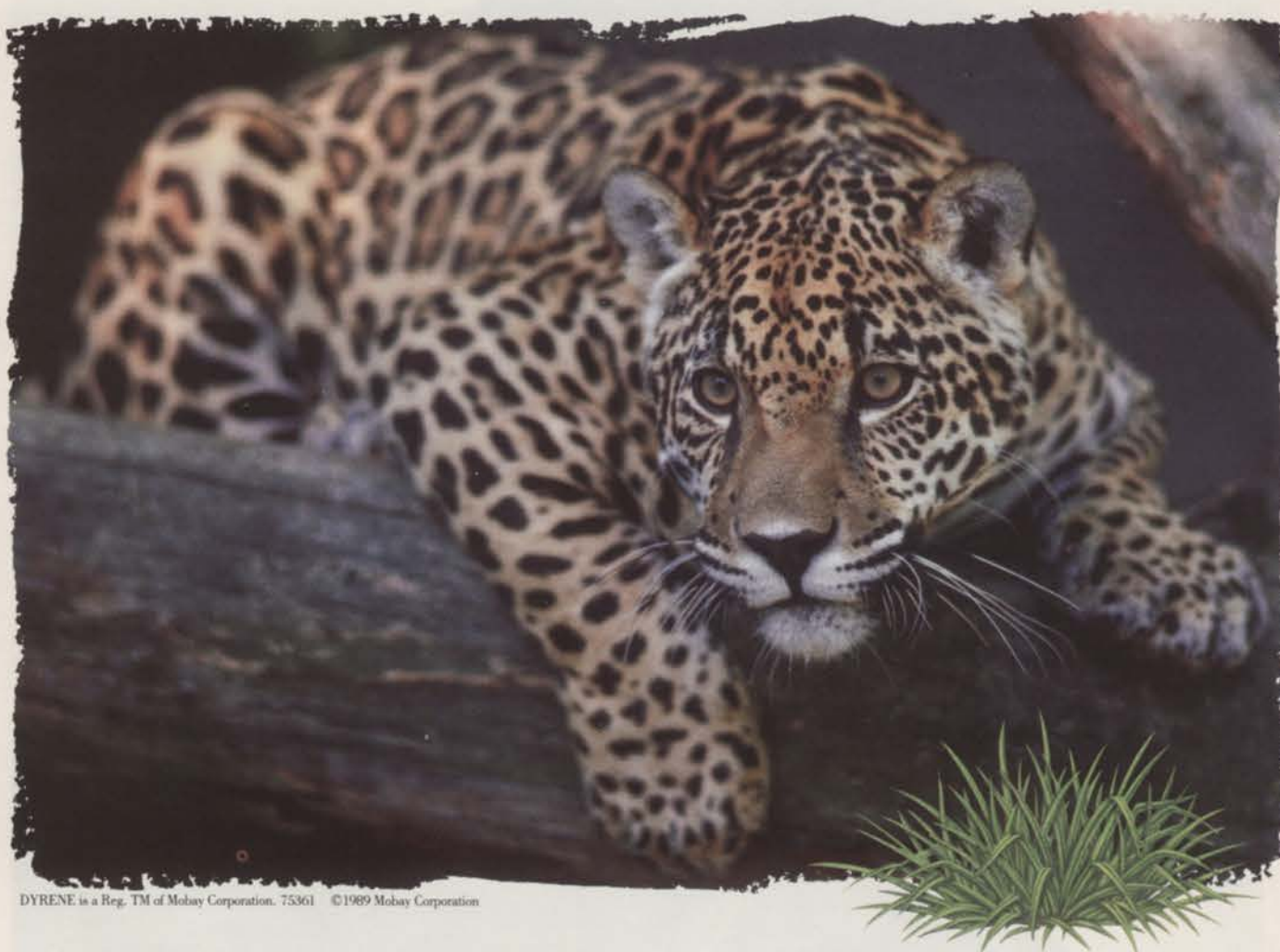
Sampson joined Greenview in 1972 as account manager, was promoted to sales supervisor and in 1978 became division sales manager. Sampson, who lives in Fraser, MI, heads the entire Greenview sales organization which spans 32

states and Washington D.C. Jack Weber became sales supervisor, North Central Division, for Greenview. He joined the company in 1983. LCI



Greenview's Bert Sampson

Some Things in Nature Were Meant to Have Spots. Your Turf Just Wasn't One of Them.



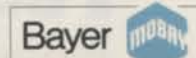
DYRENE is a Reg. TM of Mobay Corporation. 75361 ©1989 Mobay Corporation

"Last August, we applied ROOTS™ to our newly seeded and damaged lawn. A lot of damage had occurred due to heat and heavy rain. Two or three weeks after the application, the lawn showed improvement in density and color. The next summer, we took a look at the lawn and found it was a better specimen than the year before. This year we plan to establish a lawn and recover time and money."

DYRENE® 4 turf fungicide. Effective control in the prevention of leaf spot. It keeps your turf, and your reputation, looking good. There's no better way to keep your turf spotless.

DYRENE 4

Mobay Corporation
A BAYER USA INC. COMPANY



Specialty Products Group
Box 4913, Kansas City, MO 64120

NEW PRODUCTS

Jet rinse excellent for cleaning chemicals

The Jet Rinse from Select Styled Systems Ltd. completely and thoroughly cleans the inside of pesticide containers. Jet Rinse can be used on 1-, 2.5- and 5-gal. containers, metal or plastic.

The system has two parts, the shut-off and the nozzle. Using normal water system pressure (40-45 psi) with the Jet Rinse hooked up to a garden hose or a hose from the nurse tank, you can triple-rinse a 2.5 gallon liquid container in approximately 30 seconds using from 2 to 2.5 gallons of water.



Under ideal circumstances, the manufacturer says that the product should be used while the sprayer is being filled so that the rinsed contents can be used as part of that batch of pesticides.

Circle No. 165 on service card

Versatile seeder uses latest technology

Using the latest technology in the science of overseeding existing lawns and seeding new lawns, BlueBird International has introduced the Lawn Seeder F-20 and F-20B. The seeder unit is an integral part of each Lawn Seeder model, or it can be attached to an F-20 or F-20B BlueBird Lawn Comber.

Seed is dropped, then cut into the soil by the blades of the Delta Reel, which is standard equipment. the Delta blades do not tear up the turf due to their swept-back, beveled leading edges, says com-

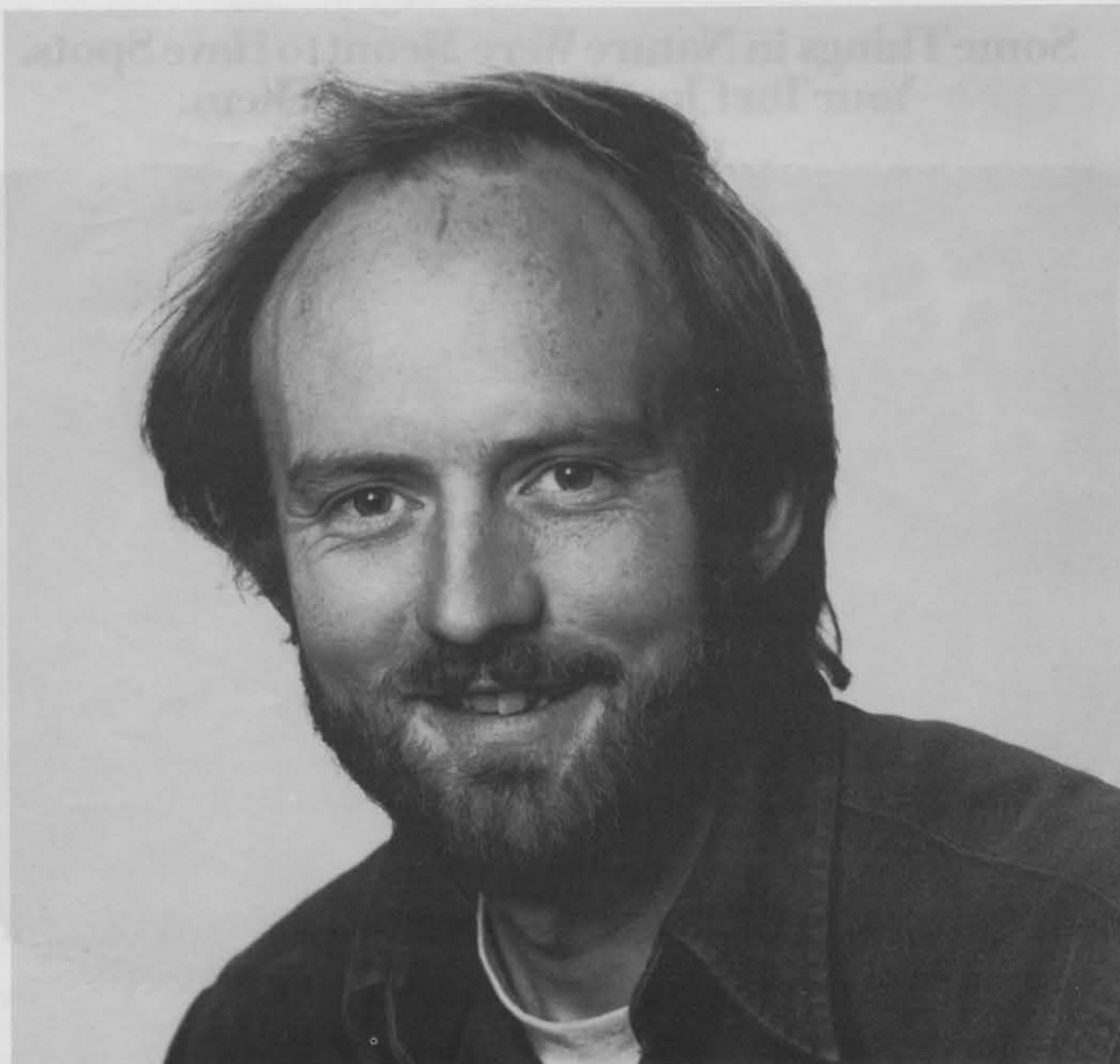


pany president Doug Zehrung.

Specifications: 2-inch blade and seed-drop spacing; 18-inch working width; depth to

1 1/4 inches, approximately 20 lbs. of seed hopper capacity; seed agitator attached to front wheel axle with positive ground engagement.

Circle No. 166 on service card



"Last August, we applied ROOTS* to our newly seeded and distressed lawns. A lot of fungus damage had occurred due to heat and heavy rains. Two or three weeks after the application, the treated lawns showed tremendous improvement in turf density and color. The core samples we took showed twice the root mass as the untreated lawns. There was a definite acceleration in establishment and recovery time. This year we plan to use ROOTS throughout our operation."

roots inc.

25 Science Park, New Haven, CT 06511
ROOTS is a trademark of Soilizer Corporation.

— Marc Blais
The Green Machine
Bloomfield, Connecticut



Circle No. 148 on Reader Inquiry Card

**Windshield cuts down on drift**

The new Windshield from Salco allows you to spray where you want, when you want. No more rescheduling spray jobs because of the wind.

The all-aluminum frame and fiberglass shroud are designed to cut pesticide drift. Windshield is an easy-to-operate, tough 27-lb. machine that helps keep spray out of the air, avoids damage to nearby plants and reduced operator exposure.

Circle No. 167 on service card

**Aerator attachment, lawn rollers new**

Two sizes of lawn rollers and an optional aerator attachment are available from the Gandy Company turf care line.

The 18-by-24-inch and 24-by-24-inch lawn rollers feature convertible handles so users can quickly convert from push handle to two hitch. The rugged 11-gauge drums have a solid internal shaft, replaceable end bearings with grease fitting, a spring-loaded scraper bar and wide expansion plug stoppered opening for easy fill.

For the smaller roller, an optional clamp-on aerator attachment permits dual use of the roller. The shell quickly bolts onto the roller drum.

Circle No. 168 on service card

MEET YOUR TALL FESCUE NEEDS WITH THE BEST

Lofts has three of the best-performing tall fescues available. Each one offers all the good looks and tough performance you need:

- Attractive, dark green color
- Fine-leaved texture
- Resistance to drought, disease, insects and traffic
- No thatch buildup
- Adaptability to sun or shade
- Less maintenance than bluegrasses or ryegrasses

New Rebel Jr.* even offers the added advantage of slower growth.

All of these varieties offer good looks, tough performance and low maintenance. When you need a fescue, choose one of the best!



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Beltsville, MD
(800) 732-3332
(800) 732-7773 (MD)

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

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

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

*Limited quantities available Fall 1989. Commercially available Fall 1990.

NEW PRODUCTS

Slicing attachment is now available

Encore Manufacturing Co. now offers a slicing attachment for the Pro Power-Thatch, its heavy duty commercial dethatcher. Cutting blades of the new slicing attachment adjust to 3½ inches in depth and from 1½ to 3 inches in width.

The Pro Power-Thatch easily cuts a 20¼-inch to 23½-inch path through dead grass. Tough on thatch, yet operator friendly, the Power-Thatch features a single-action height adjustment, 28 self-cleaning flail-type fingers and minimal vibration. It is



powered by a 5 hp Briggs and Stratton engine.

Circle No. 169 on service card

Self-propelled unit does seeding, fertilizing

The new Brouwer Seeder/Overseeder is a self-propelled unit that is perfect for seeding/overseeding and fertilizing. Available basically as a seeding unit, the optional fer-



tilizer hopper and overseeder attachments are quickly and easily fitted.

It is powered by a Honda 5 hp engine with a heavy duty chain-and-gear drive for excellent traction in a variety of conditions. The gear-driven contra-rotating blades and guides place the seed precisely, in adjustable depth slits that are 1½ inches apart. Offset wheels then cover the seed for the best possible germination conditions.

The operating width is 22 inches and the seed flow is calibrated for efficient distribution.

Circle No. 170 on service card

Mechanical agitation on fiberglass tanks

The Broyhill Co. has expanded its state-of-the-art 3000 Series to include fiberglass tanks. The new 3000 Series is available in 120-, 170- and 300-gallon sizes with a choice of 14 gpm at 550 psi diaphragm pumps and 30 gpm at 100 psi centrifugal pumps. Both systems are standard with 10 hp Briggs & Stratton electric start I/C engines.

Agitation on the diaphragm pumping system is provided by Broyhill's exclusive full length 1-inch stainless steel mechanical agitation while the centrifugal pumping system units use "quadra-jet" agitation.

Trailer options will accommodate tires up to 31x13.5-15 NHS.

Circle No. 171 on service card

**New-concept cultivator for top-flight aeration**

The Agri-vator's turf cultivator by First Products Inc. uses a low axle-weight system that bores through turf without adding to compaction around and below the punched holes.

Powered by a top-mounted 5 hp 4-cycle industrial engine with a double B-belt clutching drive, Agri-vator's burrowing motion gives deeper and larger holes with soft side walls for more storage capacity and faster absorption of air, water and nutrients, the company says. Most of the loosened soil remains in the hole for a better finished appearance with no unsightly cores left on the top of the turf to be picked up.

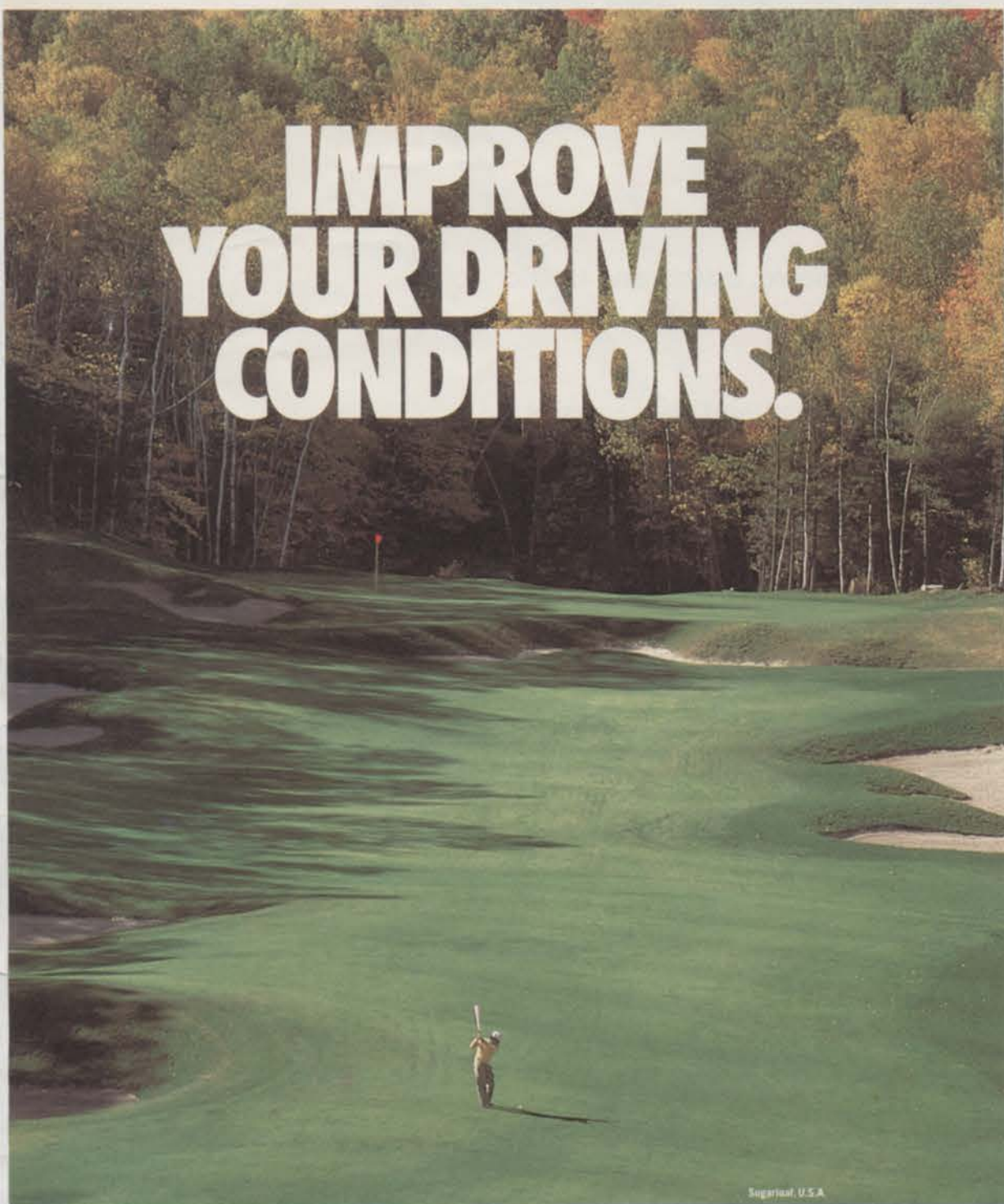
It aerates to a width of 40 inches with a hole pattern of 6 per sq.ft. and penetration up to 3 inches. The ½-inch diameter by 3¼-inch long forged and hardened spikes are mounted on four 14½-inch OD rotors with triple-sealed bearings, 16 spikes on each.

Circle No. 172 on service card



Questions about Pesticides? Call 1-800-858-7378 National Pesticide Telecommunications Network

IMPROVE YOUR DRIVING CONDITIONS.



Sugarloaf, U.S.A.

ORTHENE® Turf, Tree & Ornamental Spray keeps pests out of your club.

Stop pests from playing a round on your course with ORTHENE Turf, Tree & Ornamental Spray. One treatment provides a broad spectrum of protection for turf as well as a wide variety of trees and ornamentals.

ORTHENE kills quickly on contact, then by systemic action. So you'll keep hard-to-kill pests like mole crickets, armyworms and leafhoppers under

control. ORTHENE supplies long-lasting residual action against other insects including tent caterpillars, aphids and thrips.

ORTHENE Turf, Tree & Ornamental Spray. It's more than enough to drive unwanted pests right off your course.

ORTHENE® Turf, Tree & Ornamental Spray

Avoid accidents. For safety, read the entire label including precautions. Use all chemicals only as directed. Copyright © 1990 Valent U.S.A. Corporation. All rights reserved. ORTHENE is a registered trademark of Valent Chemical Co.

VALENT.



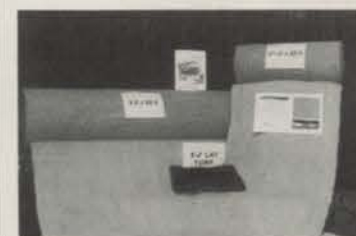
Circle No. 155 on Reader Inquiry Card

This sprayer handy for many small jobs

Maruyama says its ST31 Slide Sprayer is handy for spraying shrubs, small trees and other small areas. It has dual nozzles which can be adjusted to spray a wide pattern or a straight stream reaching as high as 25 feet. The nozzle cap can be rotated 360°. The trombone-type sliding action produces a steady spray on both the in and out strokes. The ST31 comes with a weighted pick-up line to drop into a bucket of chemical solution.

LCI

Circle No. 173 on service card.

**Turf mats make new grass ready and easy**

International Absorbent Products, Inc., describes its E-Z Lay Turf mats as preseeded wood-fiber mats, 5 feet wide and 50 feet long that make establishing new turf a breeze. IAP Inc. uses sterilized aspen wood fibers (identical to hydromulching material) blended with a biodegradable, starch polymer that absorbs up to 200 its weight in water. E-Z Lay Turf mats are light weight (2.5 oz. sq. ft.), inexpensive to transport and install, and they can be cut easily with scissors. They come in the customer's choice of turfgrasses.

LCI

Circle No. 174 on service card.

NEW PRODUCTS

Blue marks the spot with spray additive

Hi-Light, a blue colorant made by Becker-Underwood, can be added to spray mix to help increase the accuracy of applications.

Reducing skips, overlapping and drift can decrease the amount of chemical applied by 10 to 30 percent, according to the Ames, Iowa, manufacturer.

Hi-Light comes in quart and gallon containers with self-calibrating spouts. Also available in larger quantities.

For a free color brochure, call (515) 232-5907. **LCI**

Circle No. 173 on service card.

ease and drought damage. In warm season grasses, IronRoots helps prevent spring root decline brought on by early spring fertilization, a flush of growth and then a sudden cold snap.

Circle No. 175 on service card

Two Scotts fertilizers have added nutrients

Two new ProTurf fertilizers have been formulated by the O.M. Scott & Sons Co. to correct micronutrient deficiencies—especially on golf course tees and fairways.

Fertilizer with Minors (26-4-13) has all major nutri-

ents plus selected minor and secondary nutrients: sulfur, copper, magnesium, iron, manganese, molybdenum and zinc, says the Marysville, Ohio, company.

High Density Fertilizer Plus Manganese (22-0-12) supplies plant-available manganese (9.18%) to correct and prevent deficiencies, and contains nitrogen and potassium, the company says. The dense, homogeneous product is designed for quick greenup plus sustained release of nitrogen.

LCI

Circle No. 176 on service card.

**Lawn care catalog for safety-conscious**

Safety Equipment & Supply Co. introduces its free 1990 lawn care catalog.

The company specializes in supplying arborists, landscapers, groundskeepers, maintenance crews and lawn care operators with safety products. Included in the catalog are gloves, goggles, protective clothing, emergency equipment and more, most at competitive prices.

Circle No. 177 on service card

U.S. SAVINGS BONDS

1-800-US-BONDS

A public service of this publication.

**Catalog lists all kinds of equipment**

Cushman has published the newest catalog of its turf care vehicles and accessories.

The full-color catalog covers the complete line of Turf-Truckster vehicles. Also included is the Cushman Runabout vehicle and the full line of accessories and attachments available for Turf-Truckster vehicles, including the Core Harvester, dump boxes, seed and fertilizer spreader and four spray models.

Circle No. 174 on service card

Bio-stimulants are designed for lawn care

Roots Inc., a crop science company, introduces Roots and IronRoots root growth enhancers for the landscape and turf maintenance professional.

Both products are concentrated liquid bio-stimulants developed with scientists from the Yale School of Forestry. Roots is a natural bio-stimulant containing peat humic extracts, marine algae extracts, intermediate metabolites and co-enzymes. It is formulated to promote root growth and stress tolerance in the establishment and transplanting of horticultural and agricultural crops. Benefits include reduced transplant damage and loss, and quick establishment of new seedlings and ground cover.

IronRoots contains the same natural bio-stimulants as Roots plus 3% chelated iron citrate. It is formulated to promote stress tolerance, healthy color and recovery from seasonal stress damage in maintained turfgrass and ornamental plants. Benefits include better water and nutrient uptake, longer lasting green color without excess nitrogen, and fast recovery from insect, dis-

Spray herbicide directly over the top of your established shrubs and ornamentals? Go ahead. Surflan® lets you spray with complete confidence.

All you'll see are the bright colors of your landscape or lawn. No crabgrass. No oxalis. No chickweed. And no prostrate knotweed and 50 other grasses and weeds, either. You won't see them for six to eight months, in fact, when you spray Surflan preemergence herbicide.

You'll also see Surflan is more stable on soil surfaces. It'll wait three weeks for water. Then it stays put,

Circle No. 118 on Reader Inquiry Card

even in heavy rainfall, to provide outstanding weed control. Yet it's gentle enough to spray over the top of 175 different ornamentals.

So go ahead. Fill up with Surflan and take your weed control where you never thought possible. Over the top of your ornamentals without injury. See your Elanco distributor. Or call toll-free: **1-800-352-6776**.

Elanco Products Company
A Division of Eli Lilly and Company
Lilly Corporate Center
Dept. E-455, Indianapolis, IN 46285, U.S.A.
Surflan® — (oryzalin, Elanco)



Take your weed control where you never thought possible.

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

FOR SALE

"HOW TO SELL A PEST CONTROL COMPANY FOR THE HIGHEST AND BEST PRICE". Report \$19.95 + \$3.00 handling to: A + BUSINESS BROKERS, INC., 1605 S.E. Elm Street, High Springs, FL 32643. TF

AKRON LANDSCAPE SUPPLY: Start saving with our complete line of commercial walk behind mower parts, blades, air filters, monofilament line, wheels, baggers and accessories. To fit Bobcat, Kees, Bunton, Scags and more. Call today for a Free Catalog (216)867-5344. 4/90

FMC TREE SPRAYER - (DO60/1000): 5 years old. 1000 gallon, stainless steel. 60 GPM, V-4 Wisconsin. (65 HP). Hose, reel and gun. Mint condition. Picture on request. \$11,995/best offer. 516-585-1335. 3/90

FOR SALE- Landscape Maintenance Company. Major Texas Metro area. Sales of 1.5 Million. High profile accounts. Industry leader in area. Seeking being acquired by larger landscape maintenance company, or by fertilization/spray company wanting to expand in Texas market. Owner will stay if desired. Principals only. Send confidential inquiries to LCI Box 219. 3/90

1977 Ford F-600 Spray Truck, 60,000 miles. 1200 Gal. Stainless Tank, Mechanical Agitation, Beam 20-20 Pump, Twin Hannay Hose Reels, P.T.O. or 12 H.P. Kohler. No Rust. Excellent. \$8,000. Contact Bob at (502)782-2730. 4/90

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

LAWN CARE SPRAY TRUCK: 1987 F-350 Diesel XL package with auxiliary fuel tank, P.T.O. Hypro pump, electric hose reel, 10' steel bed, back flow preventor, G.P.I. flow meter, DuPont Imron paint throughout, very low mileage, well maintained. Call (201)337-0017 in New Jersey. Asking \$17,600; optional injection system for \$1,000. 3/90

FREE CATALOG



COMPLETE TRANSMISSION
159.99

PART # JT-215

OTHER SPECIALS:

GEAR BOX REPAIR KIT (BOBCAT)	99.95
GEAR BOX REPAIR KIT (BUNTON)	99.95
BUNTON 10" COMPLETE ASSEMBLY	23.95
SNAPPER 7" STEEL WHEELS	4.75
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