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ALA

FEBRUARY 1985
VOLUME 6 NUMBER 2

THE COVER

Franchising is an attractive business proposal to many lawn care operators because it seems to offer the best of both worlds — you can be your own boss and have a “business partner” to fall back on. Turn to page 32 to learn more about lawn care franchising. (Props by Morgan Uniforms & Linen Rental, Cleveland, Ohio; Photo by Barney Taxel).

CALENDAR

Feb. 19-20

Northeastern Pennsylvania Turfgrass & Grounds Maintenance School, Luzerne County Community College, Prospect St. & Middle Rd., Nanticoke, PA. Contact: William Kleiner, Luzerne Co. Ext. Serv., 200 Adams Ave., Scranton, PA 18503; 717/825-1701.

Feb. 20

1985 Construction Industry Legislative Conference, Sacramento, CA. Contact: Bob A. Gouley, California Landscape Contractors Association, 2226 K Street, Sacramento, CA 95816; 916/448-CLCA.

Feb. 21

Commercial Turfgrass Short Course, University of Georgia Cooperative Extension Service, Atlanta, GA. Contact: Gil Landry, 2400 College Station Rd., Athens, GA; 404/542-5350.

Feb. 22

Recreational Turfgrass Short Course, University of Georgia Cooperative Extension Service, Atlanta, GA. Contact: Gil Landry, 2400 College Station Rd., Athens, GA; 404/542-5350.

Feb. 25-28

National Fertilizer Solutions Association, Fluid Fertilizer Training Institute, Clarion Hotel, St. Louis, MO. Contact: Dennis E. Brown, 8823 North Industrial Rd., Peoria, IL 61615; 309/691-2870.

Feb. 26-28

Western Pennsylvania Turf & Grounds Maintenance School & Trade Show, Pittsburgh Expo Mart/Marriott Hotel, Monroeville, PA. Contact: Christine King, Pennsylvania Turfgrass Council, P.O. Box 417, Bellefonte, PA 16823; 814/355-8010; or James Helbling, 965 Balmoral Dr., Pittsburgh, PA 15237; 412/366-9018.

BUSINESS FEATURES

Lawn Service Industry Franchising

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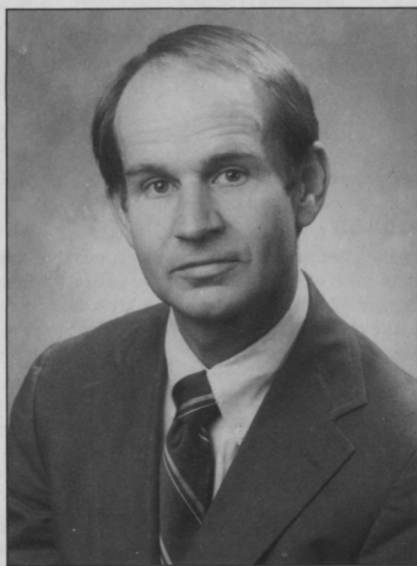
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ALA PUBLISHER'S FEEDBACK

ChemLawn is not the only lawn service corporation moving into the pest control service business — they just happen to be the largest and most visible! We've learned of many other lawn care operators who have branched into structural pest control in 1984, and of even more that are planning marketing efforts in this business area for 1985. It's an interesting development that we'll be watching with keen interest.

As you may be aware, we also publish a magazine for the pest control industry (*Pest Control Technology*) and sponsor a national business conference and trade show for that industry. PCO Expo was established in 1984 as the first *all business* conference for PCOs. It was designed to help them meet the challenges of a competitive marketplace. Our second annual conference will be held at the Hyatt Regency Atlanta later this month (February 28 — March 2), and it will present over 60 educational seminars on all facets of operating a pest control business — as well as several sessions on lawn care. The seminar series on lawn care will probe different turf issues and explore new technologies and methods in lawn care.

For those of our readers looking at pest control for business expansion, PCO Expo represents a great opportunity to meet and interact with over 500 pest control professionals from around the country, in addition to bringing



home a wealth of useful information for your business. Included in our educational program are seminars on: Choosing Pesticides for General Pest Control; Contracts and Warranties Workshop; How to Sell and Service the Institution Market; Growth By Acquisition; Marketing Strategies in Pest Control; Managing Your Customer List; Exploring Franchising and Marketing Groups; Operating Pest Control and Lawn Care Under One Roof; Account Analysis for Lawn Care and Pest Control Operations; Managing Your Major

Departments; and much more.

PCO Expo will also have many general business subjects that apply to lawn care operators as well as PCOs, including: Computerizing Your Business; Tax Planning for the Closely Held Corporation; Getting Money Out of the Business; Employee Evaluation Techniques; Successful Interviewing and Firing Practices; Supervisory Development; and 45 other business seminars.

All seminar registrants also receive a free admission badge into the Showcase Exhibition, a trade show which features leading manufacturers' displays of products. Attendees, both pest control and lawn care operators, will also benefit from the conference's inspiring keynote address, entitled "Getting the Best Out of Yourself."

If you are interested in gaining valuable insight in the pest control service business, PCO Expo is your opportunity to ask questions of the industry's leading businessmen, an opportunity to listen and learn. For more information, call 800/243-3238.

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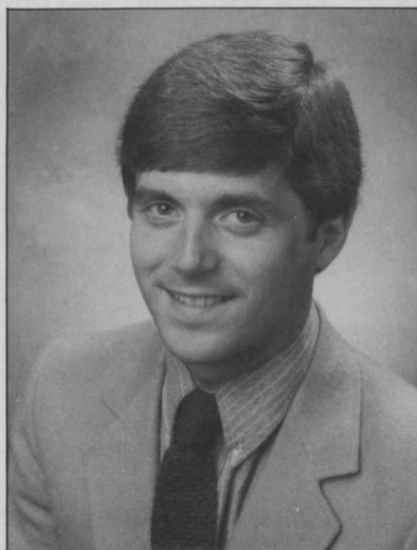
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ALA INSIDE STORY

When you think of franchising, you generally think of fast food, thus the inspiration for our cover photo this month. Franchising is certainly big business in the lawn care industry, but this mode of doing business has not caught on to the degree that it has in the fast food and motel industries. Of course, the lawn care industry is still relatively young, so franchising could someday play a bigger role in the way operators do business.

But if you are interested in operating a lawn care franchise today, then this month's cover story is "must" reading. We talked to some of the country's leading lawn care franchisors to get input on what they look for in a franchisee, how their franchisees operate, what the franchisee should expect from the franchisor and other details of franchise ownership.

In conjunction with the cover story, we also have an article from Ed Wandtke and his associates at All-Green Management Associates, Columbus, OH. Wandtke addresses the franchising



issue by posing a number of questions a potential lawn care franchisee should ask himself before signing a franchise agreement.

Whether you are considering a franchise or not, you will no doubt be inter-

ested in Assistant Editor Vivian Fotos' article on lawn care pricing strategies and trends. We also have a happy note on the status of the "right-to-know" ordinance in Lyndhurst, OH; the ordinance has been put to rest, at least for now, following a mayorial veto. On a sad note, we have a report on the tragedy in Bhopal, India and its effect upon United States' supplies of the insecticide Sevin®.

As always, we have a highly informative collection of technical turfgrass research articles. We have "Bluegrass Necrotic Ring Spot," by Dr. Gayle L. Worf and Jana S. Stewart; "Tank-mixing Herbicides for Weed Control in Bermudagrass Turf," by Professor B.J. Johnson; and "Variations in Response of Cool-Season Turfgrasses to Growth Retardants" by Dr. Nick E. Christians and James Nau. Read on!

Jim Weidner

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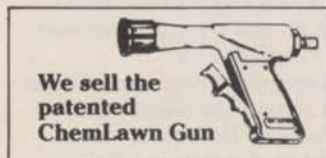
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ALA LETTERS

IN COMPLETE AGREEMENT

Dr. B.J. Johnson's article on Bermudagrass weed control in your September issue was most interesting and timely. We are in complete agreement with his statement that "combinations of 2,4-D plus mecoprop plus dicamba controlled henbit, common chickweed and spurweed, but the control of corn speedwell and parsley-piert was inconsistent." Our Trimec® Broadleaf Herbicide, an amine formulation of the same active ingredients, also gave erratic control of these two weeds and poor control of spurge and ground ivy in late summer after they "hardened off."

For this reason we developed Trimec Turf Ester, soon to be called Super Trimec Broadleaf Herbicide, which contains 2,4-D, 2,4-DB, and dicamba. With this product we have no report on parsley-piert. Control of spurge and ground ivy has been excellent; control of various Veronica species in the upper Midwest and Northeast also good to excellent; though "the injury is

still out" on the control of two tough Veronica species in the Northwest.

*Ted G. Lewton, Jr.
Sales & Marketing Manager
Professional Turf Products
PBI/Corporation
Kansas City, Missouri*

RAVES AND REPRIMANDS

My compliments to you on the article on Lyndurst in your November 1984 issue. It was a good job of describing that situation. On the other hand, I was very disappointed with its cover. Does it really "serve the American lawn applicator" to picture a sign with "Beware" over a skull and crossbones? Even the most zealous anti-pesticide activist has not suggested that extreme.

My concern is for the people who work in this industry and their families who see that kind of unwarranted cover message. I see it as an appropriate objective for *ALA* and other trade magazines to report the environmental safety issue as accurately as any other. This includes

not exaggerating concerns about pesticide safety to people who earn their livelihood spraying lawns.

*Ralph W. Lund
Vice President
Corporate Marketing
ChemLawn Services Corporation
Columbus, OH*

MY COMPLIMENTS

I recently was given several copies of your monthly magazine that services the American lawn applicator and maintenance professional. My compliments on a fine magazine. I am a 1984 turfgrass management graduate from Michigan State University and have worked on golf courses, with landscaping companies, and in the lawn care industry. I found your magazine very informative, interesting, and certainly vital for someone in my line of work. I am interested in starting my own subscription immediately!

*Thomas J. Geyer
Turfgrass Management Graduate
Whitehall, MI*

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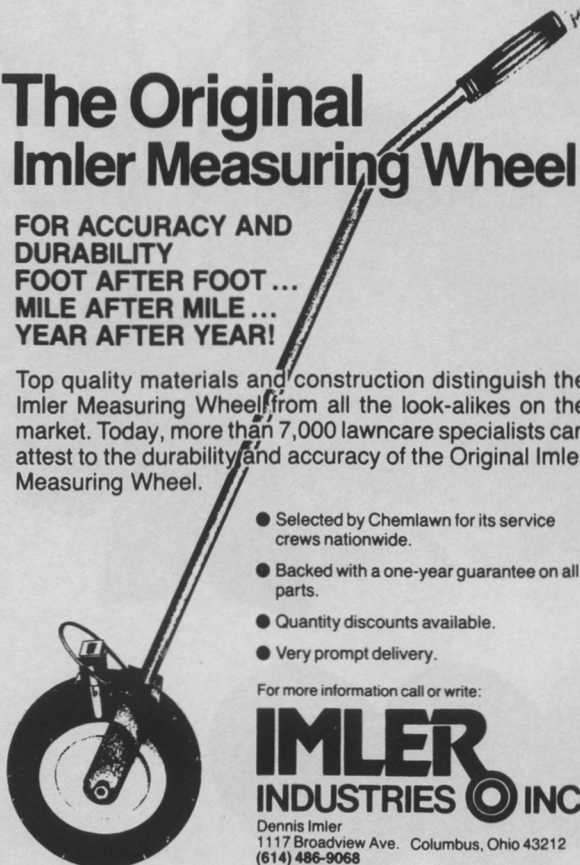
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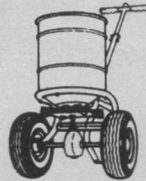
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2,4-D Acid Equivalent (1.7% - 2 pounds per gallon)	43.1%
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ALA NEWS IN BRIEF

OHIO TURF CONFERENCE DRAWS RECORD ATTENDANCE

The Ohio Turf Conference and Show at the Ohio Center in Columbus, OH, December 3-6, drew another record-breaking attendance with approximately 2,500 total attendees. Dr. John Street, executive secretary of the Ohio Turfgrass Foundation and professor of agronomy at Ohio State University, says he has "had nothing but excellent comments and everybody thought the educational program was super. It was probably our best ever, but one of these years I won't be able to say that. It has got to stop sooner or later!"

The Ohio conference's yearly growth may stop sooner or later, but if the present trend is any indication, conference goers can look forward to many years of progressively bigger and better conferences. Before last year, conference organizers had tried unsuccessfully for two years to break the 2,000 attendance mark, then in December of 1983 the conference drew 2,232 attendees. The recent conference also recorded a record number of exhibitors

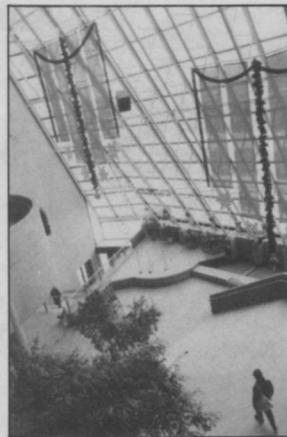


The Ohio Conference attracted about 2,500 attendees.

who manned 312 booth spaces.

In recent years the conference has begun to alternate between sites in Columbus and Cincinnati, and will again return to Cincinnati this December. The facilities in both Columbus and Cincinnati have been excellent, according to Street, but he points to the strategic location of Columbus as a reason for the conference's growth in that city. "Columbus is really the hub of the lawn care and golf course industries," Street says. "It is centrally located in the Midwest."

A good deal of the credit for the conference's growth should go to the corresponding growth of the lawn care industry which has been swelling the attendance figures in recent years. Conference organizers have responded



The atrium of the Ohio Center in Columbus.

to the growing segments of the green industry by expanding educational seminar offerings to include other market segments. "In the last two or three years we have incorporated more workshops and tended to place more emphasis on

ornamentals, rather than just turf subjects." Street also says that in the last two years more sessions have been designed specifically for operators in the grounds maintenance and athletic field markets to bring in "a new group of people we really hadn't been getting in the past."

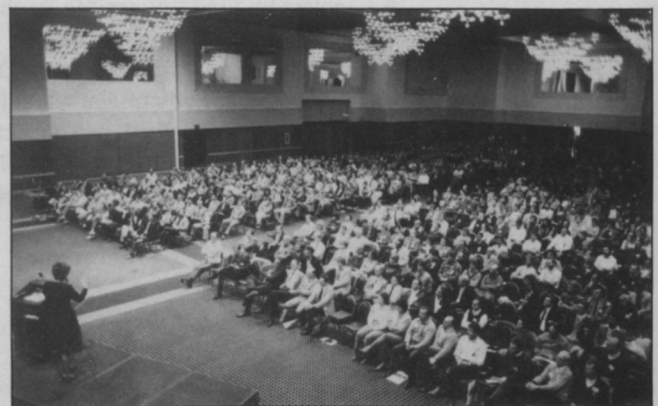
The Ohio Turf Conference has tried to cater to as broad a range of green industry professionals as possible by breaking its seminars up into three concurrent categories: Golf Course, Professional Lawn Service and Grounds Maintenance. The seminars ran concurrently for three days, from 9 a.m. to 12 p.m., then picking up again at 2 p.m. and wrapping up at 5 p.m. Lawn care operators were informed of a variety of lawn care topics, such as "Chemical Soil Conditioners" by Dr. Martin Petrovic of Cornell University. Marty Erbaugh, president of Lawnmark, Inc., Kent, OH filled the audience in on the latest efforts to stem the tide of Ohio pesticide regulatory activity by the Ohio Pesticide Pro Task Force.

Current regulatory activity was also on the mind of Dr. Norm Hummel, Department of Floriculture and Org-Ornamental Horticulture, Cornell

(continued on page 16)



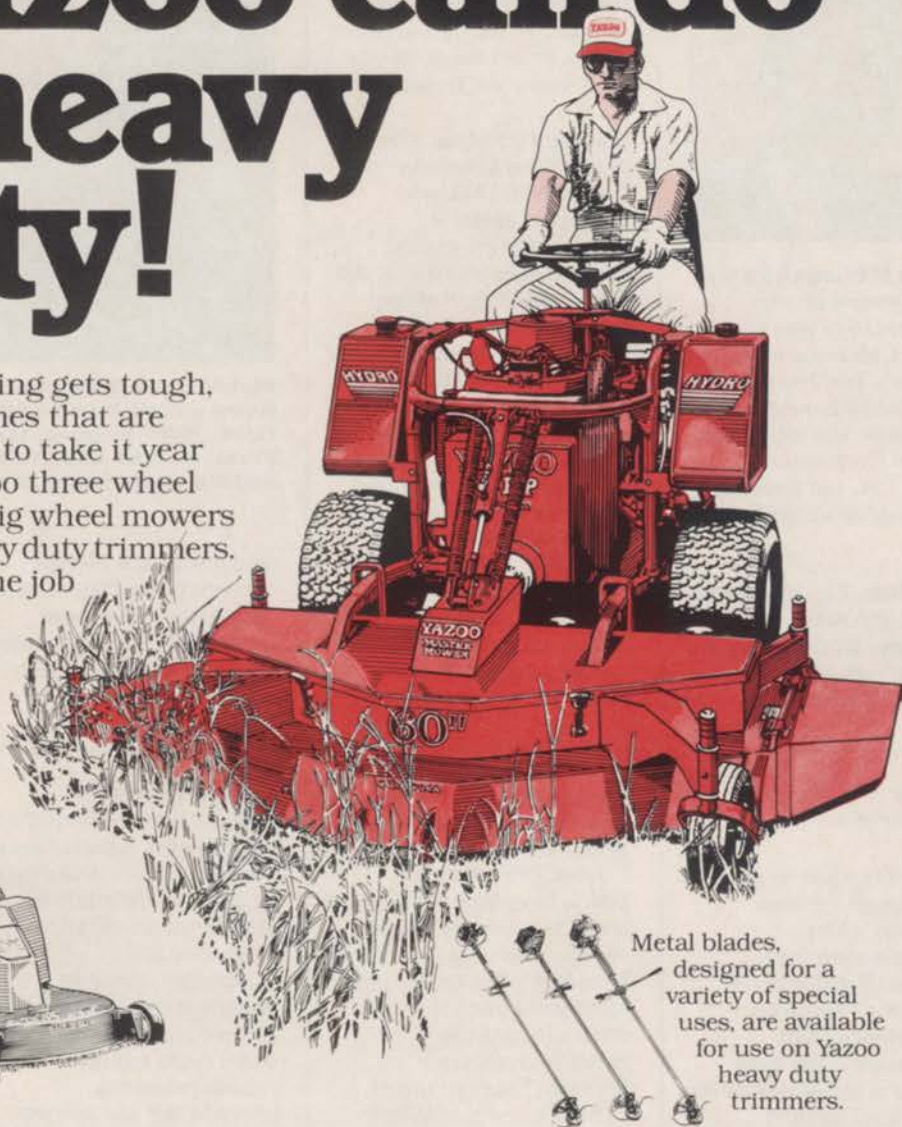
The conference's general sessions were packed.



Consultant Bobby Gee presents the keynote address.

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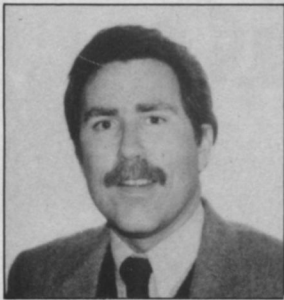
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Steve McLaughlin is a new sales and service representative with the Perris, California-branch of Warren's Turf Nursery, Inc., Crystal Lake, IL. Most recently he was with Plant Control Corporation, Irvine, CA, and formerly with Rancho Verde Sod Farm.

BCS Mosa, Inc. announces an addition to their staff.

Thomas C. Cosper, Jr. has been appointed general manger. Previously, he was

with the Homelite Division of Textron where he held various sales and marketing positions over the past nine years. Prior to that, he was with Black and Decker.

Howard Phelps, who founded the Sensation Company in 1938, was honored recently at Sensation's first annual national sales meeting at the American Club, Kohler, WI. Phelps was given a plaque recognizing his "outstanding contributions to the Sensation product and the power equipment industry." It was presented by Carl Johnson, president of Sensation, now a division of Gilson Brothers Company.

Phelp's first mower was powered by an electric motor taken from a Hoover vacuum cleaner. It was mounted to a plywood deck



Pictured as Warren's Turf Nursery, Inc. signs with Rathke Blair Kerns and Frost Advertising are: (left to right) Mike Holmes, Warren's general manager; Jack Frost, Rathke Blair Kerns and Frost's vice president; and Walt Pemrick, Warren's operations manager.

and linked to a 24-inch straight blade. "Someone saw this unusual lawn mower that I had fashioned and told me emphatically, 'That's sensational,'"

Phelps related, "and that's why I named the company Sensation." At the age of 83, Phelps remains keenly aware of trends in the lawn care field.

NEWS

(continued from page 14)

University when he gave his presentation entitled "Ground Water Contamination from Nitrogen Fertilizers and Pesticides." Hummel acknowledged that fertilization is the most important service lawn care operators offer their customers, but he also noted that lawn fertilizers have come under fire from municipalities that have tried to tie the chemicals to groundwater contamination. Lawn care operators will need some facts about the relationship between fertilizers and groundwater contamination to defend their use of fertilizers, but unfortunately, the available information is very confused.

Researchers like Hummel are trying to piece together the groundwater contamination puzzle, especially in chemically-sensitive places

like Long Island, NY where approximately three million people live. In Nassau County, NY alone, \$3 billion have been spent to protect the county's water supply, according to Hummel. "The culprit most often mentioned for contaminating the groundwater is lawn fertilizer," says Hummel. "There is one municipality that prohibits Kentucky bluegrass to be used on lawns because of what they believe to be a high fertility requirement."

Hummel says the chance of contamination by lawn chemical elements is based upon the mobility of those elements. Phosphorus is very immobile, while potassium is somewhat mobile, according to Hummel. "In sandy soils, you would have to say there is a potential for potassium groundwater contamination." However, Hummel says potassium is an essential nutrient for warm-blooded animals like ourselves. "If you're like

me, you've probably ingested more potassium at one turfgrass conference in the beer you drank than you would from a lifetime of drinking contaminated groundwater."

Nitrogen, the most important lawn fertilizer component, has been given much more serious consideration as a groundwater contaminant because it is very mobile in soil when it is in the nitrate form. However, Hummel says nitrogen can also be present in the ammonium form which is very stable. "We can lose nitrogen in gaseous forms, as ammonia gas through volatilization or de-nitrification where we have water-logged conditions in the form of primarily nitrous oxide," says Hummel. "We know nitrogen can be tied up in organic matter, such as the thatch and, of course, there will be some nitrogen tied up within the turfgrass plants themselves."

But the real question is why nitrogen is of any

concern in the first place. Nitrogen becomes a health hazard for humans when it is in the nitrate form and is thought to cause a number of diseases in humans. One of the most serious is blue baby syndrome which can affect infants six months old or younger. "The nitrates are converted to nitrites within the baby and tie up the hemoglobin molecules so they are unable to take in oxygen," says Hummel.

There is also a concern over nitrates being converted into nitrosamines within humans. It has been proven that nitrosamines are mutagenic, teratogenic and carcinogenic. "The multi-million dollar question here is whether nitrates are converted into nitrosamines," says Hummel. "This has not yet been proven." However, a lot of people opposed to nitrogen lawn fertilization are arguing that nitrate-to-nitrosamine conversion does occur. A great deal of research work

(continued on page 18)

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NEWS

(continued from page 16)

is needed to resolve this controversy.

No doubt next year's Ohio Turfgrass Conference and Show will bring lawn care professionals more information on the groundwater contamination issue and other issues affecting the industry.



A cocktail reception highlighted the opening of LESCO's corporate headquarters in Ohio.



Burkhardt and FitzGibbon, founders of LESCO.

LESCO CELEBRATES OPENING OF OHIO HEADQUARTERS

Last November 29, LESCO, Inc. celebrated the opening of the company's Rocky River, OH corporate headquarters with a gala tour of the facilities and a cocktail reception. The celebration was designed to show LESCO's gratitude to its loyal customers who have shown their support for the company. In attendance at the reception

were Jim FitzGibbon and Bob Burkhardt, chairman and president of LESCO, respectively, as well as all the other company officers and employees.

The celebration was also an occasion for looking back on LESCO history. Founded in 1962 by FitzGibbon and Burkhardt, LESCO began as a local supplier of turf maintenance

equipment. Since then, the company has continually diversified and expanded to become a nationally-known manufacturer, formulator and distributor to the green industry. In addition to the company's recently refurbished corporate headquarters in Rocky River, a western Cleveland suburb, the company has five regional manufacturing and warehousing facilities extending throughout the eastern half of the United States.

NY TURF CONFERENCE SETS ATTENDANCE RECORD

The New York State Turfgrass Conference and Trade Show broke its former record when 1,150 registrants attended the recent meeting in Syracuse, NY. The increase in

(continued on page 22)

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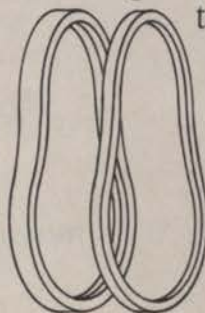
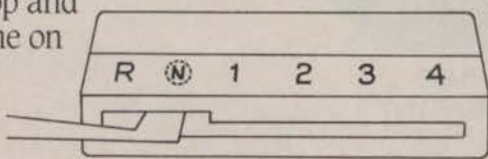
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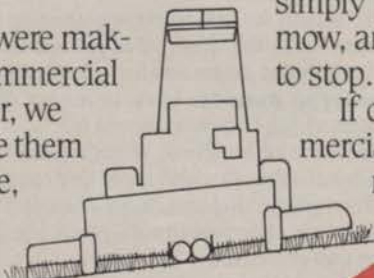
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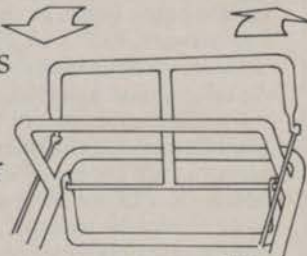
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NEWS

(continued from page 18)

attendance of over 20 percent has led the association to announce new plans for next year's conference. Since booth space sales have continued to greatly increase over the past few years, the trade show next year will move into the arena at the Syracuse War Memorial, which allows for a 40 percent increase in floor space.

The increased demand for educational opportunities will result in more offerings geared for specific aspects of the turfgrass industry at next year's meeting, including "hands-on" workshops on equipment maintenance. Again, the association will receive the cooperation of Cornell University in assembling its highly praised educational program. Further information on the conference, trade show or

membership in the New York State Turfgrass Association, which is now over 700, is available from Ann Reilly, New York State Turfgrass Association, 210 Cartwright Boulevard, Massapequa Park, NY; 516/541-6902.

EPA APPROVES LABEL FOR LIMIT PGR

Limit[®], the recently introduced turf growth regulator from Monsanto Company, has received Environmental Protection Agency label approval. Limit is designed to save fuel and equipment repair costs and provide effective turf growth control on utility turf areas, according to the company. Limit reduces vegetative growth of bluegrass, fescues,

perennial ryegrass and eliminates seedhead development.

REPORT COVERS CHANGES IN BUSINESS TAXES

Released by the Independent Business Institute, "Your Business and the 1984 Tax Act" provides a concise, business-language description of all changes in business taxation in the complicated new tax law. Among the sweeping changes:

- All new investment credit and depreciation on medium-size and larger autos
- Sharp personal-tax implication on all company

cars

- Business/investment real estate depreciation now 18 years
- No deduction for accrued interest
- Travel and entertainment records tightened
- Changes in stock-purchase acquisition treated as asset purchase
- Installment sales in trouble again
- Major changes in minimum interest rates
- Capital gains now six-month holding period
- Complications with sale of S corporation
- Tax returns virtually public
- Tax problems from over valuations or under valuations

The entire report is available to business owners, managers and their heirs for \$1, which covers postage and handling. Send money and request to Independent Business Institute, P.O. Box 159, Akron, OH 44309. Please ask for report No. 600.

ALA PLCAA UPDATE

Forty-six state coordinators and the Professional Lawn Care Association of America's (PLCAA) administrative staff will now be working together in an effort to gather and evaluate the effects of various public issues on the lawn care industry nationwide. The network, PLCAA's Public Issues Alert Committee (PIAC), is asking local lawn care companies to participate in the information-gathering process.

Donald Burton, past PLCAA president and Public Issues Alert Committee chairman, hopes that many lawn care operators will use the offices of the committee to quickly inform the PLCAA of news events in their localities that could impact the industry. "Being a watchdog becomes a new role for many lawn care operators," explains Burton.

How it works. PLCAA members will form the nucleus of the "look-out" monitors, but Burton hopes that non-members will also participate, especially in areas where PLCAA does not have member representation. "The mechanics are simple," says Burton. "Local PLCAA monitors and non-member observers are to send any news item of concern to his state coordinator, who then evaluates and forwards the information to PLCAA headquarters in Atlanta. PLCAA can then alert its nationwide network if the information is pertinent."

If a news event has potential for adverse developments, a state coordinator can simultaneously alert PLCAA and other interested parties within his state, especially if a quick counter-response is necessary. "This coincides with the two most important and imperative PIAC objectives: getting the story early, and allowing enough time to marshal forces for an effective counter-action," says Burton.

State monitors needed. Monitors for the states of Arizona, Alaska, New Mexico and Wyoming are still needed to complete the network. Their functions include:

- Receive news event reports from localities and forward to Atlanta.
- At the state level, make contacts to gather pertinent information affecting the industry (through state university departments, state governmental legislature and state administrative organs).
- Develop liaison for information gathering and exchange information with other interested groups and with adversary groups, such as environmentalist organizations.
- Newsworthy events.** Local monitors should watch for events concerning (but not limited to):
 - Pesticide use and handling, including drift.
 - Commercial applicator and reporting requirements.
 - Hazardous waste, disposal, toxic chemical spills, etc..
 - Residual toxic chemical runoff, particularly affecting water resources and pollution.
 - Insurance matters for vehicles and environmental contamination.
 - Customer claims, workmen's compensation, general business and product liability.
 - Fertilizer and seed use restrictions.
 - Rules governing promotional practices and warranty interpretations.
 - Legal matters governing contractor services and "negative option" renewals.

Sample report forms, which describe newsworthy events to be forwarded to state coordinators, are available from

(continued on page 28)

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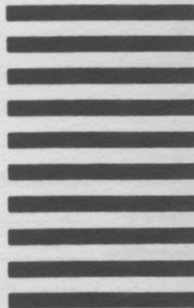
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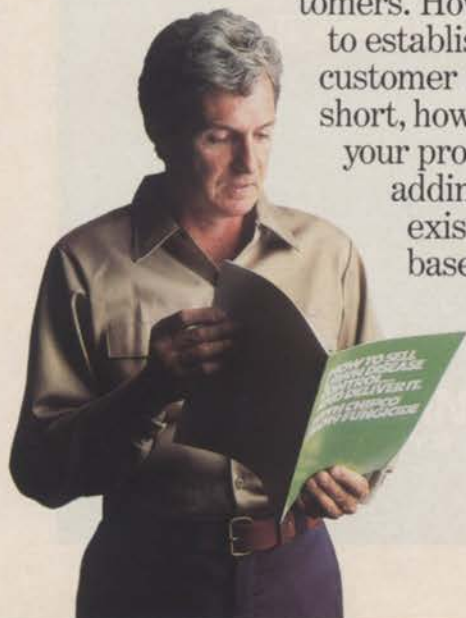
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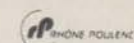
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PLCAA UPDATE

(continued from page 22)

PLCAA on request. Burton reports that the state coordinators are moving to get on mailing lists of various state university cooperative extensions, and state administrative and legislative committees. Hopefully, each coordinator can contact monitors for a more formal introduction and exchange of ideas.

The future. Ultimately, Burton sees the PIAC structure broadening its duties. Coordinators and monitors may disseminate PLCAA educational material and possibly the association's "Position Papers." In the pesticide area, this could mean educating the industry's customer base on such topics as: "The Role of Pesticides in the Environment;" "Pest Controls in our Service and Safety;" and "What is a

Commercial Applicator?"

Where public controversy does erupt, PIAC can work in conjunction with other groups such as 3PF (Pesticide Public Policy Foundation) to rally efforts and present the industry's side of the story.

Burton hopes that PIAC members will eventually gain expertise on how to counter adverse events in the industry. He plans to ask the PLCAA board of directors for seminar time for coordinators and monitors at the next Conference and Trade Show, to be held next November in Tampa, FL. He explains, "We're on the move now! With the enthusiastic welcome we're getting, PIAC will be positive in outlook and action oriented. We promise that!" For more information on PLCAA and PIAC, contact Jim Brooks, executive director, PLCAA, or your state monitor in the following list.

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703/389-0596

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LAWN SERVICE INDUSTRY FRANCHISING

BY TIM WEIDNER

Have you ever wished you didn't have to shoulder all the business responsibilities at your company? Have you ever wished your company had a little better name recognition? Have you ever wanted to increase your buying power? If you answered yes to any of the above, you might be a prime candidate for lawn care franchising.

Owning a lawn care franchise is an attractive business proposition for many lawn care operators because it seems to offer the best of both worlds; you can be your own boss, and yet you also have a business "partner" to fall back

Small independent operators may want to consider buying a franchise if they are currently having problems with marketing, training for their staff, or getting decent price breaks when buying supplies.

on. Potential franchisees possess certain traits that distinguish them from other lawn care operators. Bill Fischer, president of Spring Green Lawn Care Corporation, Plainfield, IL and president of the Professional Lawn Care Association of America, says the typical franchisee has a "burning desire" to own his own business. "Yet they are not totally independent, they want the independence of being their own boss and owning their own business, but

they want somebody to share with them the responsibility of figuring out how to run the business," says Fischer.

Spring Green. The franchisee is willing to invest the effort and money required to get his business off the ground, but he wants someone, namely the franchisor, to teach him how to succeed. A good franchising lawn care company, according to Fischer, can put a novice lawn care businessman far ahead of the game by teaching him the right way to operate his business. "A good franchise puts a person in business for themselves, but not by themselves," says Fischer.

You might think that franchisors get a lot of inquiries from independent lawn care operators who, for one reason or another, want to get out of business on their own and become franchisees. But franchisors like Fischer say that really is not the case. In fact, almost all of Spring Green's franchisees have had no prior experience in lawn care. However, Fischer expects to see more current independent operators become franchisees in the future. He looks to two specific types of lawn care operators to start this trend.

One type is characterized by the growing 'mom and pop' operation that has plenty of agronomic savvy, but needs to improve its marketing and general business skills by becoming a franchisee. These businesses needed no management or personnel supervision in their early years when there were only two people in the business. But as the business grows, it develops "a marketing need to generate enough dollars to support a layer of management and then you need management skills to know how to take care of this layer of management," says Fischer. "That group has a very big potential for a franchising company."

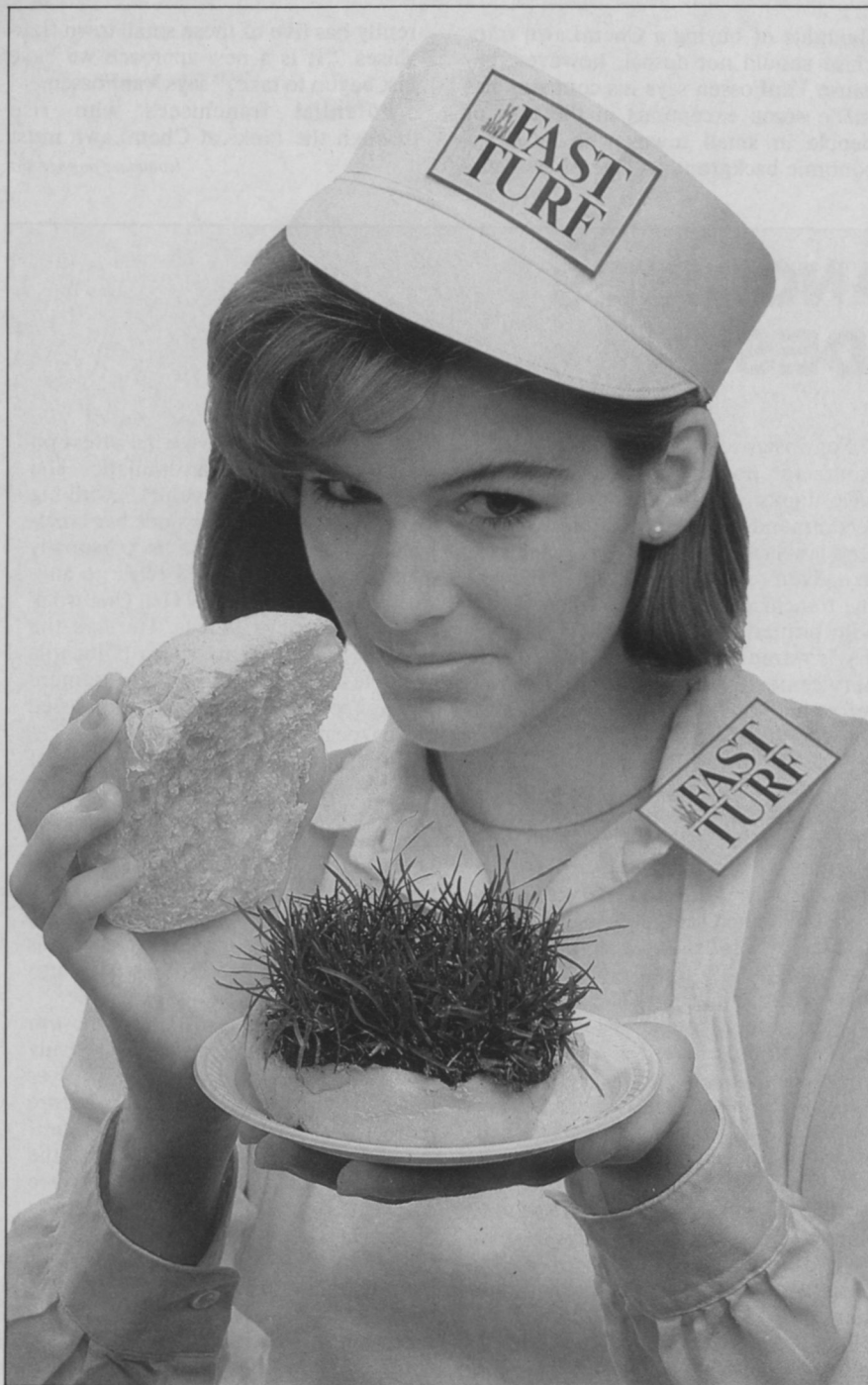
The second type of operator in Fisch-

er's scenario of current independent operators who would make good franchisees are middle management personnel currently employed by larger lawn care companies. Fischer is quick to point out, however, that he is not in the habit of "headhunting" or luring middle managers away from his competitors. Still, he has had contact with his competitors' middle managers and says he will no doubt be granting some of them franchises in the near future. Fischer says these people are generally very satisfied with the company they currently work for, but their companies offer them no franchising opportunities where they currently live. These people will come to a franchisor like Fischer because, like the 'mom and pop' operators, they have that essential "burning desire" to be their own boss, but they also require management and personnel supervision.

Whether the prospective franchisee is a novice or belongs to one of the two groups described above, he must undergo a screening procedure before he can become a Spring Green franchisee. Upon expressing his interest in a franchise, the applicant is first sent a packet of information. If he is still interested, he must fill out a personal financial statement. "The first hurdle the prospective franchisee must clear is to show us the financial wherewithal to carry the investment," says Fischer.

The investment consists of a \$10,900 franchise fee. Thereafter, the franchisee pays seven percent of his gross monthly profits as a royalty fee. Franchisees are expected to meet a monthly quota, but Fischer says the quota will vary with the size of the franchisee's territory. Spring Green franchisees are guaranteed exclusive marketing rights to the territory they buy.

"We do a market penetration study with the prospect before he buys the



see is informed of how he is doing with weekly and monthly computerized reports which are sent back to him from corporate headquarters, based upon an analysis of the reports he has submitted.

Fischer's system for getting franchisees in business and keeping them in business must be working because he says he has 75 franchises to date and has yet to have a single failure. The nine-year-old company averages 12 to 15 franchise openings per year, with 16 openings last year. Fischer plans to accelerate that figure to 25 openings per year within the next three years. The corporate headquarters/research and development center near Chicago is the only company-owned office in Fischer's operation and is also the incubator for future corporate personnel.

Owning a lawn care franchise is an attractive business proposition for many operators because it seems to offer the best of both worlds; you can be your own boss, yet you also have a "partner" to fall back on.

ChemLawn Corporation. "We take a little bit different approach to franchising," says Jack VanFossen, chairman of the board, president and chief executive officer of ChemLawn Corporation, Columbus, OH. "We basically look at franchising as another opportunity for our employees," says VanFossen. "As a consequence, almost all of our franchises have been granted to employees who have been

(continued on page 34)

franchise so he knows what is expected of him. It will tell him how many prospective customers there are in that market and we will require a certain penetration." That may sound a little frightening, but Fischer claims he has never "terminated" a franchisee for not making his quota.

Once the applicant has passed muster, he is enrolled in an eight-day initial training course at the company's Chicago corporate office. The training course consists of both classroom and field training to teach the new franchisee the basics of the business he has just bought into. "One of our field representatives in their region will catch

up with them when they get back and help them set up their office, help finalize their marketing plans and put together a business plan. Once we are through that phase, we maintain regular weekly phone contacts through that representative." The franchisee also attends regional meetings four times per year and Fischer says his company makes as many field visits as necessary to make each franchise a success.

In order to closely monitor the success of each franchisee, Fischer says they are expected to submit weekly reports regarding sales and production. Franchisees also must submit monthly profit and loss statements. The franchi-

with the company for a minimum of three years."

Those of you who have entertained

thoughts of buying a ChemLawn franchise should not despair however, because VanFossen says his company has made some exceptions in the case of people in small towns who have agronomic backgrounds. ChemLawn cur-

rently has five of these small town franchises. "It is a new approach we have just begun to take," says VanFossen.

Potential franchisees who rise through the ranks at ChemLawn must

(continued on page 36)

DIAL ONE FRANCHISES SERVICE TRADES

BY TIM WEIDNER

Franchising in the conventional sense may be attractive enough for some lawn care operators, but Dial One International of Long Beach, CA offers an original idea in franchising that lawn care operators just may want to investigate. When we first talked with Dial One executives this time last year, the company had sold over 200 franchises nationally to nearly 40 different types of residential and commercial service firms, including lawn care companies. The company can now boast about its network of over 650 franchises.

Entrepreneur magazine recently published an article which placed Dial One in the number seven position in the top 25 franchises in existence today — between McDonalds and Wendy's! You are probably asking yourself why this franchisor has grown so rapidly and received such acclaim. Dial One's success is due in large part to its unusual franchising system.

The Dial One system is patterned after the real estate franchise giant Century 21, not surprising since Dial One's founder and President Dr. Bill Kroske is a former Century 21 executive. Dial One's four other key executives are also former Century 21 executives. "We had been looking for the right vehicle to do the Century 21 story over again, to find something that could be franchised," says Kroske. The Dial One team found they could convert existing service industry businesses into Dial One franchises, rather than create new franchise companies from scratch.

The "system" itself relies on a referral network of franchisees. The company has 17 regions across the country and each is composed of franchisees who are plumbers, electricians, building contractors, pest control operators, and yes, lawn care operators. To get the full benefit of the system, this diverse group of franchisees must actively refer one another to their customers.

For instance, if a Dial One roofing contractor notices that his customer's lawn looks a little shabby, he could recommend the services of his Dial One lawn care peer. All the franchisees in a given region are kept up to date on the franchise companies in their region with printed listings and their comradery is reinforced with company parties. Servicemen from various trades can interact and get to know one another at these parties.

Dial One of the Tri-State, Inc., headquartered in Columbus, OH and one of the largest Dial One regions, serves Ohio and parts of Kentucky and West Virginia. This region sold its first franchise on June 22, 1983 and now its network of franchisees control over \$30 million in annual gross billings. One year ago the Tri-State region's collective service companies had 60 vehicles on the road; today the Columbus market alone can boast 170 vehicles. Michael Widdis, president and regional director of the Tri-State region, is proud of his company's accomplishments and says the lawn care businessmen in the system are quite satisfied.

"The lawn care people here are very pleased with the system," says Widdis. "We have provided them with everything we said we would provide and they are willing to work the system, which is key. It is working exactly the way we said it would work because of the people who are in it." The lawn care operators are benefiting from their participation in the referral network, but they are also getting the benefit from television advertising which Widdis says is well received by local consumers.

About 25 lawn care companies nationwide have become Dial One franchisees and four of them are in the Tri-State region. Philip Manes, president of Dial One Accord Lawn Services, Columbus, OH, has been with Dial One about two years now and is very satisfied. "I am very pleased with what it has done in our marketplace in Columbus," says Manes.

Manes had been an independent operator for about seven years prior to

joining Dial One and says the effect on his business has been dramatic. The presence of those 170 vehicles with big Dial One logos on their sides has created the illusion that he is personally operating a vast fleet. "I can't go anywhere without passing a Dial One truck someplace," says Manes. He says the Dial One advertisements on billboards and television have given him tremendous exposure, but it has also boosted employee morale at his company.

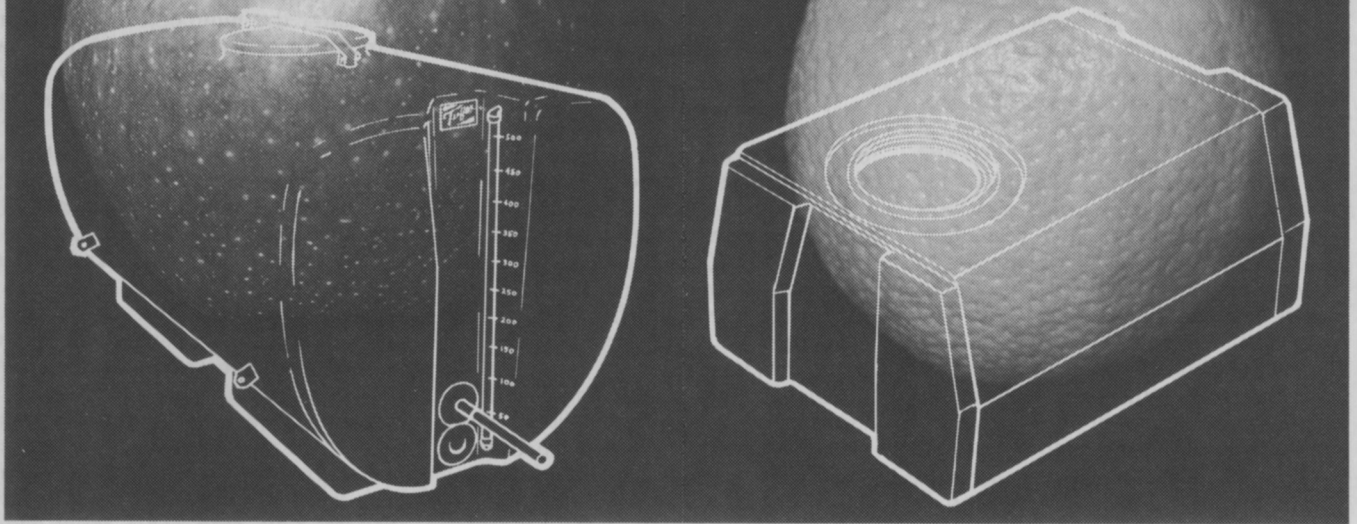
He says the entry level applicators on his staff tend to look at themselves as menial laborers, but Dial One has changed their attitudes. "Wearing the Dial One uniform gives them a sort of pride in themselves," says Manes. "We have noticed that our employee turnover has gone down, which spells more profit for me because I don't have to re-train so many new people."

Manes says his new-found exposure and access to mass media advertising has benefited his commercial sales as much as his residential sales. Before joining Dial One, Manes says his commercial work bids were just like the other bids for a given job which were compiled by the client for the purpose of figuring an average price for the job. "Many times I was not a serious contender because people weren't familiar with us as a quality company," says Manes. "The name recognition we get with Dial One now has probably played some significant role in the number of commercial contracts we have been able to land."

Widdis thinks the Dial One franchising concept is as natural for the service trades as franchising in general has been for the real estate, fast food and motel industries. He encourages lawn care operators to check out Dial One. "We want people to look at us and see if we are what they want," says Widdis. "If we aren't what they want, at least they know we are coming in as good competitors. We are not made up of a bunch of has-beens or schlock outfits."

If you would like more information about Dial One franchising, write Dial One International, 4100 Long Beach Blvd., Long Beach, CA 90807.

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FRANCHISING

(continued from page 35)

first be recommended by their branch managers. "The branch manager has to be familiar with his agronomic background and also his managerial capacities," says VanFossen. "The branch manager basically has to make a recommendation of the person to the vice president of franchising." The prospective franchisee must also meet "certain minimum limitations" in his ability to bring capital to the franchise deal, according to VanFossen.

One of the cheapest aspects of financing the franchise venture is the initial purchase fee. "Today it is \$2,500 and we allow them to pay the initial fee over a period of five years," says VanFossen. "During the first year, they pay us 6-1/2 percent of revenues as a royalty fee, the second year they pay us eight percent, then the third year and thereafter they pay 10 percent."

To help ease the cost of setting up the franchise, franchisees can use the mass purchasing power of ChemLawn's purchasing department to buy their equipment and supplies. Franchisees are only required to use the company's standard design of equipment and provide the financing for the equipment. "They have their choice of either

The franchisee is willing to invest the effort and money required to get his business off the ground, but he wants someone to teach him how to succeed. A good lawn care franchisor can teach a novice lawn care businessman the right way to operate his business.

buying their materials from us or from an independent source, although we control the agronomic programs they use. They have to use the programs we write for them, but they have the right to purchase the chemicals anywhere they want. Our policy has been to sell chemicals to our franchisees at our cost," says VanFossen.

ChemLawn maintains ongoing communication with its franchises on a monthly basis, or more often during the busier times of the season. While ChemLawn is not an extensive franchisor, (the company owns 165 branches and has only 25 to 30 franchised operations) it has had considerable success

with franchising. "We have only had three franchises that we did not feel were successful and we bought back their franchises, basically to keep them from getting into a bad financial situation. That was not an obligation on our part, it was just something we thought we should do." VanFossen says one other franchise was also bought back because the franchisee wanted to get into another business.

With that moderate rate of franchise mortality, the number of ChemLawn franchise operations should grow steadily in coming years since VanFossen says his company has been opening about five new franchises per year. Franchising has no doubt contributed to ChemLawn's considerable sales revenues. In 1984, the company recorded \$289,000,000 in gross sales, of which \$15,600,000 was taken in as after-tax profits.

Hydro Lawn. Hydro Lawn of Gaitersburg, MD can also claim some pretty impressive sales revenues, but company President Jerry Faulring says he has never really considered franchising his operation. "I think the concept has more merit today than it might have had five years ago, given the fact that we have seen some fairly good franchising operations come to the surface," says Faulring.

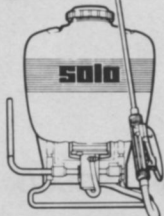
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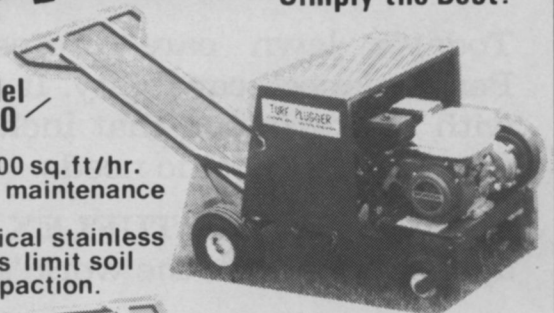
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Independent lawn care operators have approached Faulring with franchise offers, but he remains skeptical of their ability to succeed as franchisees. "On many occasions people have come to us and asked us if we would be willing to franchise our name and help them get started in another market area," says Faulring. "We have never solicited, so we have never really found out if there are some good people out there. The people who come to us, we just never felt were of the type we are looking for. They may have had the money, but beyond that, we felt they didn't have the business experience or the potential."

Faulring's operation is exclusively company-owned because, in large part, he likes the tight control he possesses as sole owner. If a particular franchise was doing well and earning its keep, that would be fine, but he is afraid he would have to spend as much time with the healthy franchises as he would with the struggling franchises. He is hesitant about spreading the costs around in such a disproportionate manner. "If we were to do it, we would certainly look at it from a different perspective," says Faulring. "We would go after it in a big way."

Davey Lawnscape. The management of Davey Lawnscape in Kent, OH

Spring Green Lawn Care Corporation has 75 franchises to date and has yet to have a single failure. The nine-year-old company averages 12 to 15 franchise openings per year and plans to accelerate that figure to 25 openings per year within the next three years.

has similar feelings about lawn care franchising. Gordon Ober, Davey's general manager, says his company has looked into franchising, but continues to expand solely through company-owned facilities. Like Faulring, Ober has had a number of inquiries from franchise hopefuls, but he also cites the importance of corporate control over company branches. Several years ago, Ober says he averaged about a dozen calls a year from people as far away as California, but in the last year the calls have tapered off with the growing public concern over the safety of lawn chemicals. But an even greater influence on the lessening of franchise in-

quiries has been a drying-up of the small market areas that have traditionally been prime for franchises.

"A lot of the secondary markets are already kind of filled up with three to five lawn care companies," says Ober. "If a major company didn't feel the market had enough potential to open an outlet there, they would go ahead and sell a franchise, knowing it wouldn't be worth their business in the long run to start a company operation there." Many markets have limited population growth potential. The small towns that already have five or six lawn care companies probably have reached market saturation. "The number of virgin markets for a potential franchisee aren't there," says Ober.

Barefoot Grass. Still, many lawn care companies, like Barefoot Grass Lawn Service of Worthington, OH, are successful franchisors and have an ongoing commitment to franchising. Although Barefoot is not a large scale franchisor, the company makes a conscious effort to open about two franchises each year. "That is by design," says John Dunham, Barefoot's vice president of franchising. "We also open company branches each year and try to keep our growth controlled to service everybody properly."

(continued on page 38)

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Like ChemLawn, most of Barefoot's franchises have been sold to company employees. "We won't take somebody that has absolutely no lawn care experi-

ence," says Dunham. "Even with our training programs, a franchisee is on his own out there *a lot*." The novice franchisee cannot be expected to gain enough lawn care experience in one or two weeks of classroom work to survive in the marketplace. Some people have

gone to work for Barefoot just to see if they had what it takes to be a franchisee. "I have had several people come to work for us for a year or two to gain the basic knowledge and also to find out if they really like the business."

Dunham says the potential franchisee

BURNING FRANCHISE QUESTIONS

BY ED WANDTKE,
JOHN LINKHART AND
RUDD MCGARY

As the lawn service industry grows, there are options for the organizations already within it and for those outside who wish to become a part of it. One of the major areas of interest today is franchising, both from the standpoint of the company deciding that offering franchises is a viable way of expanding into new marketplaces and from the standpoint of the potential franchisee, looking for help in establishing a company in a growing industry.

There are a lot of things to consider when investigating lawn care franchises. The franchisee should examine the financial resources needed to buy the franchise, the funds or financing needed to obtain the operating equipment and vehicles to start the business and the working capital needed to carry the business prior to the initial inflow of revenue. The franchisor should be able to answer all these questions and back up the answers with some factual data. Be particularly careful that the answers to these questions are relevant to your specific market area since regional changes in agronomic conditions and seasonality of lawn services will change the requirements from area to area.

If you are a prospective franchisee you need to find all there is to know about a potential franchisor. Is the franchisor correctly registered in the state and current with all necessary fees? How much of the firm's history and past business practices can you obtain? Have franchisees sued the franchisor or are there any current legal proceedings that could influence your decision? Does the franchisor have the talent to really service all the franchisees he has to the level he is promising? What if you are not happy and wish to get out of the franchise? Are people waiting in line to obtain the franchise or will the franchisor buy out your franchise on some formula basis determined in advance? Can the franchisor terminate your franchise for reasons that you

don't believe are reasonable? What are your territorial rights and at what price can you extend your franchise area? These are some questions you should explore when looking at a franchise commitment.

Operations. In the operating area there are also several key questions, many of them dealing with information management. In starting your franchise, you will need to have an accounting system to handle billings and collections for services performed. Does the franchisor offer a manual system or is a computer the recommended way to go? Will you be getting operating manuals and will they be periodically updated? Will someone come to your site to train your people in the correct way of running the administrative side

If you are a prospective lawn care franchisee you need to find out everything there is to know about a potential franchisor.

of the business? How have other offices of this franchisor started? Are they still operating the same way today as they did when they started? When asking questions like this, it is a good idea to get several names of other franchisees and call them. Make sure you get a large enough selection that you can find all the information you want, not just talk to somebody who is a cheerleader for the company.

Again in operations, what are you going to do about equipment and vehicles? Will the parent company help you in terms of costs of vehicles? Will they help work on the vehicles so they are ready to roll when you need them? Do they have a mechanic you can call for help? Equipment can also be a major expense. Will you receive better prices on equipment because you are a franchisee? Will the correct equipment be made available to you? Does the franchisor have a list of all necessary equipment that you will need and is the list correct for your particular market?

A final set of operations questions to consider deal with chemicals and their costs. Do you have an idea what the percentage markup is on the chemicals you buy through the franchisor? Is the markup realistic in terms of other sources you can buy from? Can the franchisor recommend local sources for chemicals? If not, how and where will you get small orders for chemicals serviced? It is fairly easy when you are getting your first order to put together a truckload. Make sure you know what kind of backup resources there are in your area along with the costs involved.

Marketing. The issue of company image in the marketplace is one which is foremost in making decisions concerning the potential benefits of becoming involved in franchising. Many companies, when attracting potential franchisees, suggest that they offer a strong identification image in the marketplace. You should ask how this image has been formed and if it is really the way it is portrayed by the franchisor.

If the company does a great deal of electronic media advertising, radio or television, it is possible that communities not yet serviced will be within range of the media. In this case, the advertising will help to establish a corporate name and this will be helpful to the franchisor and franchisee.

What about the case of a company with home offices in Indiana that is working with franchises in Utah? In this case, the advertising done electronically in Indiana will not have reached the Utah market and will not help establish the company in the distant location. This is most often the case with the exception of major national companies that advertise electronically on a large scale basis.

The issue for the franchisor or franchisee in most cases is how to leverage the image of the company in the new territory. You should ask about market research done in existing markets. If the consumer response is good in existing markets, is there some way that this information can be communicated to potential consumers in new markets? The answer to this question is yes. It is the function of both the franchisor and the franchisee to understand that it can be done and to work out ways in which

had better be certain he is getting into a business he wants to stay with. "I can't think of a better way to get involved than to just go out and do it for a season with some company," says Dunham. "It would be kind of silly to find out two years later that you really don't like

working outdoors or dealing with consumers."

Small independent operators may want to consider buying a franchise if they are currently having marketing problems, having trouble getting decent price breaks when buying sup-

plies or if they feel their training for applicators or sales staff is not up to snuff, according to Dunham. Independent operators with fairly large operations may want to consider franchising if they are having trouble with record keeping, scheduling, billing and other office procedures that could be expedited by a franchisor's computer system. Buying a franchise can allow franchisees to share in the business "luxuries" only a large franchising corporation can afford. "In one sense, you might compare a franchise company to a co-op where several people get together to benefit all the partners of the co-op," says Dunham.

Barefoot has not sold too many franchises to lawn care people, but some franchises have been bought by retail garden store owners and other retailers in green industry-related businesses. "They decided this is a good fit for them," says Dunham. "In those cases, the people have a lot of sales and technical experience. We are able to provide them with a system that makes lawn care work and it blends in with their other operation fairly well."

As with other franchisors, potential franchisees must expect to be screened by Barefoot's franchising department. In the case of an employee, the company already has a pretty good idea of how stable he is, whether he can sell his service and how hard he is willing to work. However, a financial statement is required of all applicants regardless of whether or not they are Barefoot employees. "Beyond that, we just sit down with them and explain how it works and what they need to know," says Dunham.

Like any other franchise, the franchisees are expected to finance the facilities, equipment, supplies, uniforms, etc. Franchisees can take advantage of Barefoot's purchasing power and order supplies through the company, but they are not required to do so. "All of our franchisees probably get back their royalty fee just in reduced product and advertising costs," says Dunham. "It may take a week of a guy's time talking to a half dozen truck dealers and working with a bank or leasing company to work out a good lease. We have people here who can do that for them." Since Barefoot is trying to get the best possible lease agreements for themselves, Dunham says it only makes sense for the franchisees to take advantage of their system.

While franchisees are not required to lease or buy through the company, Barefoot does have a well-defined list of image and quality standards. These standards apply to the type of fertilizers and pesticides franchisees can use. Barefoot's lawn care program includes granular fertilization and liquid weed

it can be done, economically, effectively and efficiently.

Make sure you don't make the common mistake of thinking that because the franchising company is well known within the lawn care industry that the consumers are as aware of the company as those in the industry. Also, don't think that a company which is well known in a given geographical area is known in others. Simply because a company is well known in Indiana gives no assurance that its name will be known to consumers in Utah. Some type of plan to transfer the name from one geographical market to another should be part of a franchise package.

Advertising. Advertising is a second marketing area to consider. How much support will a franchisor give to a franchisee in terms of advertising? This support comes in a variety of forms. If you are going to be doing electronic media advertising, can the franchisor give you spots that are ready for use? Do the spots show the correct agronomic picture, that is, do they show Bermudagrass for the southern parts of the country and bluegrass for others? Are the ornamentals correct for your part of the country? Some companies will say this doesn't matter, but if you are buying a franchise, shouldn't you be getting something that represents your area rather than the home office?

Are print advertising pieces organized in some logical fashion? An underlying question to be asked is whether or not the advertising offered is linked with the overall marketing plan. If there is no marketing plan; the rest of these questions are nonsensical. Make sure you see the marketing plan for your area and be certain you know how you are going to implement it before you start worrying about what your new logo is going to look like. Advertising without a marketing plan is, in most cases, simply a waste of money, for it can be truly effective only if it is integrated into a larger plan.

Is there a common theme running throughout the print advertising pieces? Is the material aimed toward an objective that is realistic and well understood? How is the printing done? What is the cost of the printing? Will you be required to hire a printing firm

or will the home company have the advertising pieces printed at a savings to you? What is the cost per piece? How many pieces do you need to have to effectively begin a franchise? How many different types of materials do you need? Customer letters, mailers, door hangers, estimate cards, pre-payment letters, door stuffers, yellow page layouts, technical updates for customers, off-season mailers and any other marketing pieces needed by a lawn care company should be assessed.

Sales force. How are your sales people going to be trained — by manual, by yourself, by a sales trainer, by an outside sales course? Where will they be trained — on-site, home office site, neutral site?

Even more important, who are your

The issue for the franchisor or franchisee in most cases is how to leverage the image of the company in the new territory.

sales people going to be? Will the franchisor give you help in screening applicants? In many cases your applicators will also be your sales staff. How are you going to integrate the work required for applying and selling? Which is considered more important by the franchisor, selling or applying? Should either be more important? Does the franchisor offer help in setting up time management for sales? Will you have forms that will help you rate the sales time of your personnel? These questions will help give you better control over your sales function.

Marketing data base. Finally, and this may be the most important area of marketing to consider, will the franchisor give you the types of information necessary to begin a marketing data base? What types of information should you collect in order to better plan your next year's season? Do you know your closing ratio for sales as opposed to estimating this ratio? Do you

(continued on page 81)

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FRANCHISING
(continued from page 39)

control. "We do some quality control inspections of lawns to make sure they are actually delivering to the consumer the appropriate lawn care we are after," says Dunham.

Franchisees are also given access to the information gathered from Barefoot's on-going agronomic and marketing research. Barefoot can assist franchisees with accounting practices, filing payroll taxes, monthly tracking and developing a business plan. "That pool of knowledge in our company is a little over 10 years old now and we have made lots of mistakes and we can try to help people avoid making them over again," says Dunham.

The company has 25 branches, half of which are franchise operations. "We do not really franchise in major metropolitan areas," says Dunham. "Those are areas that are opened or will be opened to company locations. Our franchisees are typically in secondary-sized cities like Madison, WI; Rockford, IL; and Lexington, KY." Barefoot must have its franchise system under control because Dunham can claim that his company has never had a franchise go bankrupt or out of business. The company has, however, had to buy

back franchises and convert them into company-owned businesses in cases where Dunham says the franchisees were not "as excited or interested in the business as we like."

Perf-A-Lawn. At Perf-A-Lawn Corporation in New Carlisle, OH, the franchising department can also claim a high success rate for their franchise start-ups — 85 percent. Perf-A-Lawn is 15 years old and started franchising seven years ago. At one time the company had 28 franchises, but now they are down to 22. In addition to the 22 franchises, the company also has 11 company-owned branches. As in the case of Barefoot, some of the six lost franchises were bought back by the company for one reason or another.

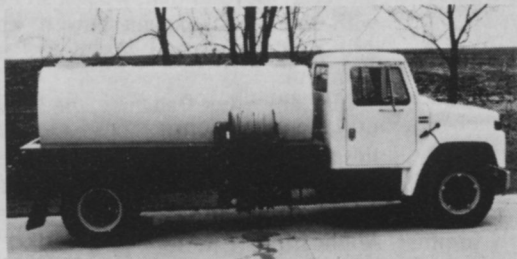
Also like Barefoot, Perf-A-Lawn generally looks outside of the lawn care industry for franchisees if an employee is not interested. An independent lawn care operator who is doing well is not going to be interested in a franchise and one who is not doing well would probably not do any better as a franchisee. "Nine times out of 10," says Ron Wilson, Perf-A-Lawn's vice president of franchising, "the independents are having financial problems or they wouldn't be looking for a franchise." Wilson believes most currently independent operators are simply a bad

franchise risk. On the other hand, service industry people outside the lawn care industry who would like to buy a lawn care franchise might be good prospects, people like nurserymen, landscapers and pest control operators.

When a prospective franchisee approaches Perf-A-Lawn, he can expect to be screened to determine his net worth, personality and aptitude for the job. "We don't worry too much about his background in agronomics because we teach him that," says Wilson. "White collar executives are good prospects because they have business knowledge." Once the prospect has passed the screening process, Perf-A-Lawn determines the area he is interested in franchising and uses a market study to determine if it is even feasible to open there. Wilson says he has to lay it on the line and let the franchisee know up front whether or not he can expect to grow and prosper in his market.

Franchisees pay Perf-A-Lawn an upfront fee based on the number of single dwelling homes in the area he has purchased. Thereafter they pay a 7 percent royalty on their gross receipts. There is no quota set on expected growth, but franchisees are counseled individually. "We look at each person individually and will counsel them as far as whether

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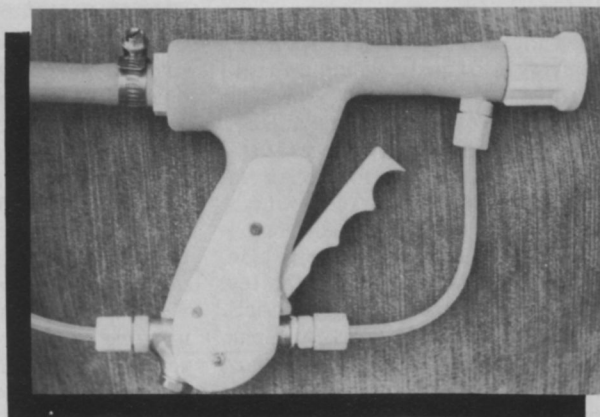
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we think they are growing at the rate we think they should be growing," says Wilson.

On-going communication between franchisee and franchisor at Perf-A-Lawn is rather rigorous. Franchisees are expected to fill out daily reports which record daily sales, production, cash received and receivables outstanding. All invoices must be returned to the company. "The invoices we send them are pre-numbered so they have to account for all the numbers in the sequence," says Wilson. "During the first couple years of business we require them to send back all service call forms so we can see how they are handling the service calls, whether they are answering the problems correctly."

Lawn Medic. At Lawn Medic, Inc. in Bergen, NY, the ties between management and the franchisees are not quite so close, but franchisees do have to report their sales activities to the company on a monthly basis. "We have the right to look at his accounts and records," says Lawn Medic President Don Burton, "that's in our franchise agreement. But as a matter of practice, we are not doing that on a routine basis." Burton feels it is more important that his company keep his franchisees informed of key business developments like changes in insurance poli-

cies, workman's compensation, local regulatory activity and operational techniques.

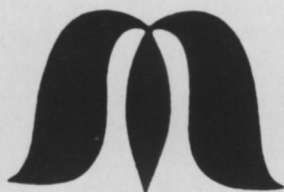
Burton has franchised former independent lawn care operators, largely because they already have fulfilled the essential licensing required by New York state regulatory agencies. "Our thrust has been a low-key effort to convert independent lawn care operations to Lawn Medic," says Burton. "We are not out in the marketplace actively trying to entice folks who have not had any exposure to the lawn care industry." He says employees have become franchisees and he sees this an alternate way of marketing and opening up new territories.

Franchisees pay a relatively low up-front fee and then pay a 5 percent monthly royalty on their gross revenues. But before franchisees are accepted, they must fill out a rather lengthy application form which covers past employment, education, driving habits, health and other points to arrive at a detailed personal profile. Burton also wants to know about a prospect's financial situation. He wants to know his net worth, what he owes, what he owns, how much he has made outside this industry, if there are any liens on him, if he has been through bankruptcy and finally, if he has the financial back-

ing to get along for a year or so without depending on the business.

Conclusions. It should be obvious by now that if you are considering a franchise, you had better be ready to answer some detailed questions about your personal and financial background that will be asked by the several franchisors in the lawn care industry. It is also evident that most franchisors are hesitant in granting franchises to current independent lawn care operators. Not surprisingly, they will be wondering if you are simply seeking the benefits the franchise organization has to offer or you are hoping to mask your poor business skills with the franchise company's help.

If you seek franchise benefits that you do not have as an independent, you will no doubt find many. Franchisors offer sophisticated advertising production at reasonable prices. They provide mass purchasing power that most independents cannot match. Franchisees can be linked to large business computers at the franchisor's headquarters which have functioning lawn care programs already up and running. In short, there are a lot of benefits available to franchisees, but the franchisee had better be willing to trade total independence for some degree of business supervision.



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PRICING IN THE LAWN SERVICE INDUSTRY

BY VIVIAN FOTOS

Money makes the world go around, and it makes the lawn care industry thrive. But how do lawn care professionals decide how much money they

Columbus, OH, when deciding pricing strategy, a company must first determine what position it wants to take in the marketplace. Do they want to be a premium company offering quality service, products, and attention, or do they want to be a "middle-of-the-road" company cornering the volume segment?

Having worked for ChemLawn for five years, first as operations manager

"I think we're going to find that the pricing in the marketplace is generally going to stay very tight to the consumer price index. And as the consumer price index goes up, indicating we have more discretionary income, people will demand lawn care services. They want that valuable time to spend with their families and/or other recreational activities without having to maintain their property themselves." — Ed Wandtke, Advisor Associates, Columbus, OH

need to keep going? Is there a secret formula to success in this business? Does it rely solely on dollars and cents?

American Lawn Applicator talked about pricing with industry operators and consultants to uncover the differences in lawn care services across the nation, the value of those programs, and the general attitude toward pricing in today's marketplace. Although few generalizations can be made about the actual fees commanded by different regions of the country, most lawn care businessmen would agree with the age-old expression, "You get what you pay for."

According to Ed Wandtke, an associate advisor with Advisor Associates in

in the southern zone and then as corporate financial manager, Wandtke is quite familiar with the "price competitiveness is everything" attitude, a la the ChemLawn position. "ChemLawn does not necessarily guarantee a superior product," he explains. "They just say that they offer the best value for the price. They are not catering to the top portions (of the market) that maybe want truly customized lawn care."

"If you're going to go competitive, you hang in there around the ChemLawn prices." If a lawn care operator is after the premium segment of the marketplace, he adds, then he best be including additional services in his

lawn care package.

One of Wandtke's East Coast clients works with ChemLawn in his area. For a season of fertilization treatments on approximately 6,000 square feet of lawn, ChemLawn receives about \$200 to \$220, he says. Given that same property, his customer takes in \$330. "They get roughly a 50 percent superior price for the same square footage," Wandtke notes, but their program includes aeration, seeding, and the application of fungicides, herbicides, and insecticides in addition to fertilization.

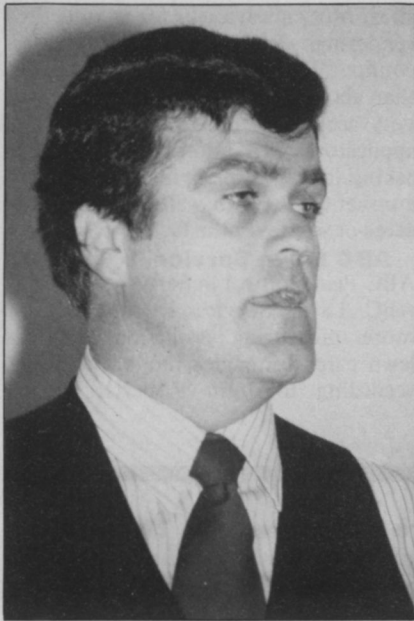
Because labor and rental costs on the East Coast are generally 30 to 40 percent higher than anywhere else in the country, Wandtke says lawn care service is usually priced higher there than in any other region in the United States. For example, one fertilization application on a property of about 4,000 square feet on Long Island in New York costs about \$40, he says. "That same small property in Louisville, Kentucky makes \$20. Go to the South and that same property might automatically pull in about \$30."

Wandtke makes no other generalizations about pricing in the industry, "because pricing is not necessarily geared to the quantity of product used nor the time the person spends out on the property. It's a function of what the customer is willing to pay for the service you have to perform."

However, it is interesting to observe that while per application lawn care prices might be higher in the East, annual lawn care services on the West Coast and in the South usually wind up costing the homeowner the same amount as their Eastern counterparts by the end of the season. Even though these regions have lower per application prices, Wandtke says, they're putting on one or two more applications a season, thus earning about the same annual revenue.

These warmer climate areas also demand that tree and ornamental care be part of the basic lawn service package. "On the West Coast, tree and ornamentals are the basic program and turf almost becomes the add-on," Wandtke says. Of the average-size lawn in this region, which is usually between 3,500 and 4,000 square feet, he says about 70 percent of the property is dedicated to ornamentals and only 25 to 30 percent to turf.

"Generally you're looking at proba-



Ed Wandtke

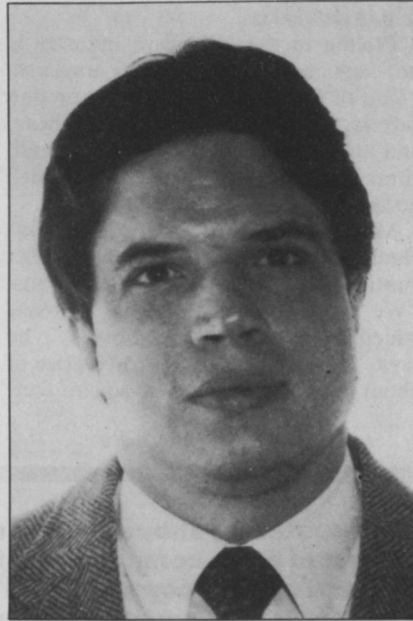
bly a \$50 to \$60 bill per application," he says. "And you're looking at a minimum of five applications; some are even priced at six applications."

"Further, on the West Coast," Wandtke advises, "if you're offering the tree and shrub service, you best be offering a pruning service of some nature to go along with it. It's a rapid growing season in that climate, as well as in Texas and Florida, and people need pruning as much as they need the basic insecticide and fertilization program."

As for pruning prices, if a customer buys the service up front the cost is equivalent to the price of one extra application, Wandtke says. "If you take it as an add-on or you have an unusual piece of property, many times lawn care operators charge a flat rate per hour, like \$12 or \$15, to come in and actually cut back your property. And that's leaving the droppings where they are," he adds. "If you want them to pick them up, they then charge \$20 an hour to take everything away from your property."

As for add-on services around the country, such as herbicides, insecticides, and fungicides, Wandtke notes that many lawn care operators are including limited applications of these chemicals in their basic packages. They are not blanketing the property with the chemical, he explains, but making selective applications on certain areas.

"If operators are basically going to put out four applications, they probably have increased the price roughly 25 percent for the allowance of all the herbicides and fungicides necessary to treat the property," he says. "Generally if you buy them (herbicides, insecticides, and fungicides) on an as-needed basis," he says, "it's considerably more



Joe Motz

expensive."

Additional services are the key for today's lawn care businessman. "People coming into the industry today should make sure they go out and expand their services as the customers are willing to pay for that extra service," stresses Wandtke. Because, he says, "I think we're going to find that the pricing in the marketplace is generally going to stay very tight to the consumer price index. And as the consumer price index goes up, indicating we have more discretionary income, people will demand lawn care services. They want that valuable time to spend with their families and/or other recreational activities without having to maintain their property themselves."

The improved economy is certainly a boost for the lawn care industry. "The positive move in the country's financial position is encouraging lawn care guys to expand and offer more services, rather than trying to be the cost cheapie," Wandtke says. "Cheap is not buying customers in 90 percent of the

little one-upmanship of opportunity that's out there — you do it, because the consumer does not want to do the service himself," Wandtke explains. "If you're willing to do it and offer it at a reasonable price — I don't mean cheap, I mean reasonable — they're willing to spend it."

"The emphasis is really on professionalism," he adds, "showing that you understand what you're doing and then following through because you're consistent and persistent in your service. That's all the customer really wants."

But still some lawn care operators insist they lose accounts because of price, and often because their competition has "undermeasured" a property site to offer lower rates. "If a person believes the customer when he says, 'I bought from Company A instead of Company B because of the measurement,' he's not a good salesperson," Wandtke says. "The customer didn't buy on who can measure the property most accurately. That's just a crutch to assist him with the high volume of quoting that has to go on in the industry. Who cares what you measure on the property? The key thing is to quote the price the customer is willing to pay for the service."

The entire idea of pricing on square footage bothers Wandtke. "One of the things the industry is very hung up on is the concept of pricing at specific intervals, like every 500 feet," he says. "But ChemLawn has set the standard that you measure the lawn and quote it on a piece of paper to a customer. 'You have 7,200 square feet, therefore I'm going to quote you a 7,200-square-foot price.'"

Because labor and rental costs on the East Coast are generally 30 to 40 percent higher than anywhere else in the country, lawn care service is usually priced higher there than in any other region in the United States.

marketplace."

The real sale is based on the lawn care operator's ability to prove that he will listen to customers and react to their problems. "If that means you go and spray closer to beds, you come in and do a little pruning — whatever that

"But what's wrong with another firm coming out and saying, 'You have a medium-size lawn in our operation,' and then quoting whatever price that is per application? If that's \$42, it's \$42. ChemLawn might price theirs out in a

(continued on page 48)

PRICING

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nice fancy formula and come out at \$41, but what's the difference?" he asks. "It's all in the salesmanship and your ability to convince the customer that you will follow through, deliver the service, and perform as you promised."

While ChemLawn has set the standards for many industry practices, which often only cater to the large lawn care services, this year the industry leader has raised its prices — an act that has given hope to smaller lawn care operations.

"ChemLawn is getting off their duff on pricing and raising up. In almost every market that I'm in this year, the people have already received a price increase," Wandtke says. "I think the small fellow who's been worrying about keeping price low is going to be afforded an opportunity to get his price in line with what he needs to maintain profitability."

Overall, Wandtke has seen price increases for 1985 ranging anywhere from 4 to 6.5 percent. "I think by and large people who had held back on increases are now being forced to face the reality of the economy. And that is," he says, "if you're going to pay competitive wages and offer the extra services that the customers are demanding, you ought to exert an appropriate return on the investment and commitment that you make to a customer."

Motz Lawn Care. The new year has not necessitated price increases for all lawn care businesses. Joe Motz, president of Motz Lawn Care Inc. in Cincinnati, OH, hasn't altered his 1984 prices for 1985. However, his firm did have a major increase of 12 percent going from the 1983 to 1984 season, and a 10 percent increase prior to 1983. "Our '85 costs are not over what they were in '84," he says. "In most cases it's on hold and in some areas, like the area of herbicides, the costs have gone down. We are then passing that on to the customer, trying to take advantage

of it in new sales."

Pricing in the lawn care industry is not an easy task, Motz explains. "You're weighing two things — on one side is the price the market will bear, and on the other side is the overall company cost. The final price sheet," he says, "is a combination of the two."

Motz's basic lawn care program includes fertilization and weed and insect control with five annual applications. "We have a graduated cost increase which is based on the footage," he says. "Our fee graduates up at a price of about \$3.00 for each 1,000 square feet,

sites, Motz always asks for architectural renderings from his commercial accounts. "We use a ruler on those rather than actually walking the site and that's very accurate," he explains. "A lot of applicators just don't think about asking for a plot plan, and they can circumvent having to walk that entire 10 acres or whatever the facility might be."

ABC Lawn Service. A division of ABC Pest Control in San Antonio, TX, ABC Lawn Service is running into more measuring problems as more lawn care companies move into town, according to John Roberts, general

"The customer shops around more and more now. There are more and more companies out there. You've got to sell the concept of your company and what you're doing." — Greg Painter, SuperLawns of Bethesda, Chevy Chase, MD

starting at a minimum of 5,000 square feet."

Motz uses a measuring wheel to calculate property sizes and determine customer prices. Although it's the only efficient tool that's really available in the field, he sometimes doubts its true accuracy. "If you put three reputable firms out there together, we're all going to come up with varying figures," he says. "Sometimes it's pretty alarming to see the amount that they do vary when we're all claiming to be giving an honest measurement."

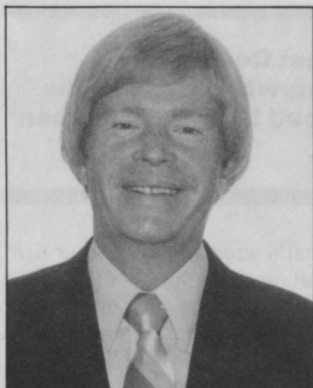
His company uses a wheel that is approximately a foot in diameter. "The small wheels bounce up and down in the deviations," Motz says. "I find that those aren't as accurate as the wheels with a little larger diameter." Ideally, he believes the best way to measure property sizes is by plot plan, which involves studying an architect's actual drawings to see how much of the property was designated for turf.

Perhaps not feasible for residential

manager of the division. Companies are undermeasuring lawns to build up their customer base, he says. But ABC believes honesty, as well as quality, is the best policy.

As far as lawn care goes in San Antonio, Roberts says ABC is priced a little higher than their competition. "Normally we're priced \$3 to \$4 per treatment higher than our competition. But there are things that we do that make up for the extra the customer's going to pay with our service," he explains.

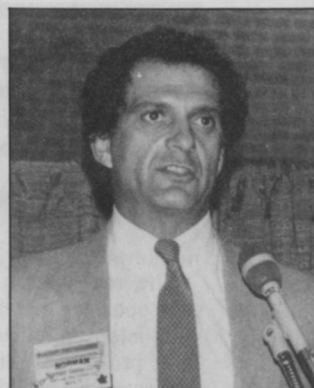
Normally an ABC customer will get five fertilization treatments in a growing season, with applications being spaced about every 60 days. "We also will automatically put insecticide in that application during the mid-summer applications," says Roberts. "We have a lot of problems here with chinch bugs and grubworms. But we guarantee control of those insects in our customers' lawns," he adds. "And we also guarantee control of fungus problems, which is usually a fall type program in San



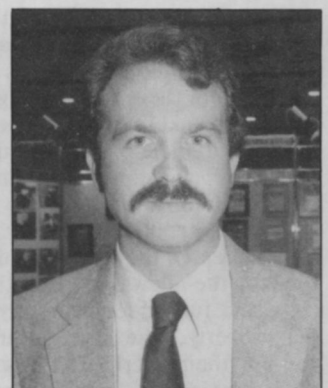
John Roberts



Greg Painter



Norm Goldenberg



Steve Bizon

Antonio.”

The company’s basic service on a per application basis runs anywhere from \$24.50 to about \$35, depending on the size of the property. As for add-ons, ABC offers a dethatching service as well as tree, shrub, and ground cover spraying.

“There’s a lot of work in dethatching a lawn,” Roberts says. That’s why the company charges about \$25 per 1,000 square feet. For tree spraying, the company commands a minimum of \$30. “If a customer has normal-size trees and normal problems, it would be \$30 for the first tree and \$15 for each tree thereafter,” says Roberts. However, depending on the number of trees and their proximity, the company will drop the latter price down accordingly.

In the last few years, ABC Lawn Service has not raised its fees at all. According to Roberts, as more competition came into the market, the company had to watch its rates so it didn’t price itself out of the market. In fact, when lawn care became a major service in the area, the company actually cut back its prices.

SuperLawns of Bethesda. Another lawn care firm that hasn’t raised its prices over the last couple years is SuperLawns of Bethesda in

Chevy Chase, MD. Greg Painter, the franchise’s owner, believes pricing in the industry will remain competitive. However, he is curious to see what effect pesticide laws will have on pricing.

Currently his pricing is based on a

lizes, as well as applies various chemicals for weed, insect, and fungus control. And in late fall, lime, fertilizer, and insecticide are applied as needed.

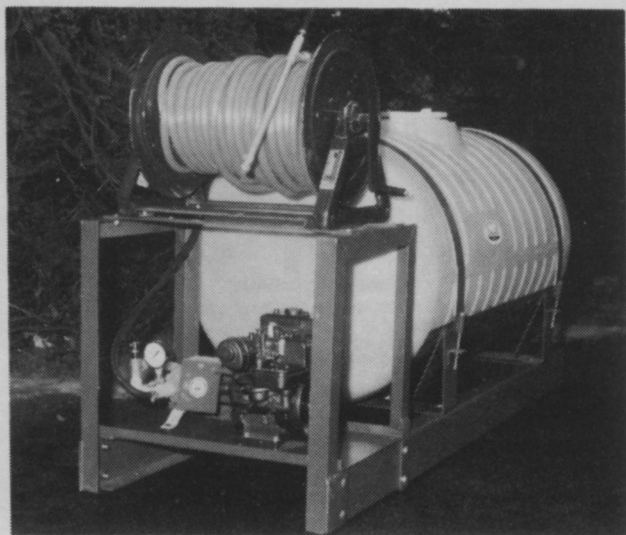
For a comprehensive program such as this, with five annual treatments on a property of about 5,000 square feet,

“I think a lot of operators don’t measure profit and loss. They seek the measurement they have in their checking accounts. They maybe look to see what their labor, chemical, and truck repair costs, but they don’t look at expenses like depreciation, insurance or other items.” – Norm Goldenberg, Alert Lear Pest Control, Miami, FL

full-service program, which includes aerating, seeding, rolling, and controlling weeds, insects, and fungus. In early spring, the company seeds and rolls, then in late spring they apply a preemergent fertilizer and a herbicide for weed control. In the summer the company applies herbicides and insecticides and encourages the customer to mow and water properly. In the fall, the company again seeds, aerates, rolls, and ferti-

Painter charges about \$400 to \$500. Of course, that depends on the initial condition of the lawn, he says. The lawn’s condition, as well as its size and its location in his service area, all play a role in determining Painter’s prices. Naturally, he says, “I can service the fifteenth house on the block for less than the first.”

Like Roberts, Painter believes “if
(continued on page 50)



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PRICING

(continued from page 49)

you're doing more you can charge more." But he also advocates the need to be competitive. "The customer shops around more and more now. There are more and more companies out there," he says. "You've got to sell the concept of your company and what you're doing."

Alert Lear Pest Control. Most lawn care operators agree that selling quality, image, and concept is the only way to combat price cutting in the industry. Norm Goldenberg, president of Alert Lear Pest Control Company in Miami, FL, handles both pest control and lawn care. "We try to sell the fact that we've been in the business for almost 30 years," he says, "and the fact that we have all up-to-date, modern equipment and trained people with ongoing training for our technicians."

Goldenberg is not overly concerned with competition cutting prices or undermeasuring lawns, because he says his business is not effected by it. However, he does believe many operators in the industry suffer from their own mismeasurements of their financial accounts. "I think a lot of operators don't measure profit and loss," he explains.

"They seek the measurement they have in their checking accounts."

These are the companies, he says, that keep their prices very low. "They maybe look to see what their labor, chemical, and truck repair costs, but they don't look at expenses like depreciation, insurance, or other items." According to Goldenberg, "They squeak by and sometimes the proprietor makes good money without building up reserves for the rainy days. They may have to pay the penalty in the future and they may not," he says.

Alert Lear's lawn care program is based on quarterly applications of insecticide only, with a property of 4,000 square feet running about \$30 a quarter. Fungicide and fertilizer treatments are add-ons, Goldenberg says. "We generally charge four times the cost of the chemical (for add-ons) — that's if we're on the property performing other service at the sametime."

Bizon Maintenance Company.

Whereas it may be unusual to price fertilization treatments as add-ons, it's also unique to find lawn service sold by the hour rather than the square foot. But that's the concept of one Pacific Northwest company in Hubbard, OR. Bizon Maintenance Company charges \$23 an hour plus materials for full ser-

vice, and strictly handles commercial accounts.

"We like to go into a contract and emphasize that we take care of everything from the property line to the foundation of the building," says Steve Bizon, owner. Everything from fertilizing and spraying to mowing and edging is included in their lawn care package.

The company started out pricing their service at \$18 an hour five years ago, however, Bizon believes the firm will hold its current \$23 figure for the next couple of years. "We try to keep the prices as stable as we can and just try to be more efficient."

In planning his pricing strategy, Bizon tries to maintain a 23 percent profit margin. "If we can stay at that forever, I'm real happy," he says. "We used to have about a 31 percent profit margin, but as we got bigger that dropped slowly." However, he says, "I think a person has to stay at least at a 20 percent profit margin in order to see any kind of a profit and grow."

And that's the bottom line — profit and growth. The dollar and cents count tremendously in the lawn care industry, as in any business. However, remember that those bills have to be backed by quality service, professionalism, and effective management, too.

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LYNDHURST REGULATORY UPDATE

PESTICIDE ORDINANCE VETOED

One morning local pesticide applicators woke up to find that Lyndhurst, OH had a pesticide ordinance. About a week later those same applicators awoke to find that the mayor of Lyndhurst had overturned the ordinance with a veto. Then city council attempted to revive their ordinance, but could not muster the five votes necessary to sidestep their mayor's veto. As a result, a few councilmen are muttering under their breath and a lot of lawn and ornamental applicators can breathe a sigh of relief.

This may all sound a bit confusing, but if you have been following the high drama revolving around the attempts of the city council in Lyndhurst, OH to adopt a "right-to-know" ordinance, the events described above shouldn't surprise you. Just in case you have forgotten the situation in Lyndhurst, we will review the highlights.

Last September, Lyndhurst City Council proposed an ordinance which would require pesticide applicators to register with the city, pay a \$10 annual licensing fee and register all pesticides used. Local pesticide applicators attended council meetings and told their side of the story. Then, just as it looked as though Lyndhurst was going to pass the ordinance, Councilwoman Joan Klein asked that the proposed ordinance be tabled because she questioned its scope. Klein wanted the council to consider aerial and ground pesticide applications on local golf courses as well as pesticide applications *within* public buildings. The council had previously decided to focus their regulatory activities only upon residential lawn and ornamental pesticide applications.

Suddenly, on December 17, the council voted the once-tabled ordinance into law. This new ordinance was a somewhat muted version of an earlier proposed ordinance in that it did not require posting of signs, but it did require applicators to register annually with the city and disclose the generic names of the chemicals they use. Companies were also required to notify residents who registered with the city when an

application was to take place in their neighborhood. What perhaps incensed local applicators the most about this new ordinance was the fact that it specifically applied to lawn, tree and shrub applicators and not to pest control operators or homeowners applying pesticides.

"We feel it is terribly unfair to put that kind of pressure on businessmen and not respond in kind to homeowners, retail stores, pest control operators and golf courses," said Bob Holt, pesticides coordinator, Davey Tree Expert Company, Kent, OH. "All these people use the same chemicals we use, but in greater concentration. We are probably the least guilty of anyone of the *alleged* problems people are suffering."

Still, all the major lawn and tree care companies in the area agreed that the ordinance could have been much stricter and was one they could live with, at least until something could be done about it. "From where they started in the beginning, to where the ordinance finally ended up are really miles apart," said Gary Chamberlain, regional agronomist, ChemLawn Corporation, Mansfield, OH. "What they are asking us to do isn't terribly unreasonable. That doesn't mean that we don't want to see it changed some time in the future, but as the ordinance stands, I don't think it is particularly unworkable."

As it turned out, local applicators didn't have to fight the ordinance, Lyndhurst Mayor Leonard Creary vetoed it three days after it was passed on December 17. Needless to say, members of the Lyndhurst Council who originally voted for the ordinance were upset. "With one swoop of his pen he undid what took seven months of our work to do," said Vice Mayor Lee Faranda. "It was an issue dear to our hearts. It was a piece of legislation we had hoped would serve as a model for the state and other communities. I think it shows a lack of respect by the mayor for the legislative process."

"From the very start I was going to

veto it," said the mayor. "The big question is, how do you enforce it and control it." The mayor stuck by his decision to veto the ordinance, saying "I feel it is impossible to expect a service company to meet a different standard in each community, especially in a large area like Cuyahoga County." Creary said he felt state and federal laws are the proper forums for such regulation and the Lyndhurst ordinance might have conflicted with existing state law.

Then the council missed its bid to override the mayor's veto when it could not produce the required five votes. Like the mayor, two of the council members were not convinced the ordinance would be enforceable and had in fact been approached by constituents who opposed the ordinance. The question of regulatory action in Lyndhurst is dead for now, but it could be resurrected in the future, if not in Lyndhurst, then perhaps in one of the other nearby Cleveland suburbs that were watching Lyndhurst and constructing their own versions of the ordinance.

Still, some good did come of this whole experience, in that local applicators were given a valuable lesson in local government and found they could present a unified front to oppose regulatory activity. When things heated up in Lyndhurst last fall, two pesticide applicator groups were born in a baptism by fire. One was called STEPS (Society to Educate Pesticide Safety) and was composed of Cleveland area applicators who did business in Lyndhurst and were instrumental in presenting the pesticide user's side of the story to local media. The other was called the Pesticide Task Force and was staffed by pesticide applicators from all over Ohio whose goal was passage of legislation at the state level which would preempt ordinances like the short-lived one in Lyndhurst.

OPARR formed. In recent weeks, a new group has been formed from a fusion of STEPS and the Pesticide Task Force. The new group is called OPARR — Ohio Pesticide Applicators for Responsible Regulation. "We are really not trying to call it a new group as much as the next level for STEPS and PTF," says Lauren Lanphear, vice president of Forest City Tree Protection Company, Cleveland and former executive secretary of STEPS. "The first emphasis will definitely be working toward some preemptive legislation on a state-wide basis."

The group will be aided in their legislative endeavors by their newly elected Executive Director Jim Betts. Betts is currently a state lobbyist for the Ohio Nurseryman's Association. He is also a former Ohio state senator. — *Tim Weidner*

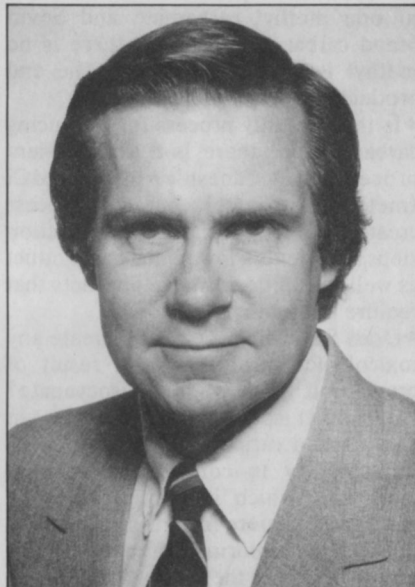
TRAGEDY IN BHOPAL: REPERCUSSIONS FOR THE LAWN CARE INDUSTRY

The press is calling it the worst industrial disaster ever. On December 3, 1984, a tank containing 45 tons of methyl isocyanate began to leak through a faulty valve at the Union Carbide pesticide plant on the outskirts of Bhopal, India. After five days it was estimated that more than 2,500 people were dead, 1,000 more in hospitals were expected to die and some 3,000 remained critically ill.

The enormity of this human tragedy has obscured a couple side effects of this incident which may affect the lawn care industry. The first repercussion could come in the form of a pesticide shortage since methyl isocyanate is an intermediate in the process required to produce carbaryl, a Union Carbide lawn insecticide sold under the trade name Sevin®. Although Carbide executives have tried to reassure the public, some business analysts speculate that the company could collapse under the weight of billions of dollars in potential lawsuits. A little closer to home, some lawn care businessmen may be wondering how the tragedy will affect their supply of Sevin.

The second side effect is even more difficult to anticipate, but it could have far greater impact upon the lawn care industry. The public already has what could be considered a "chemical phobia," so there is reason to fear that this incident will contribute to growing anxieties. Indeed, there is already evidence that local pesticide "right-to-know" proponents have found new ammunition in the Bhopal tragedy.

Plenty of Sevin. First, let's take a look at Sevin availability. "We don't foresee any problems at all, we have a pretty good inventory of product already," says John Durfee, Sevin product manager, Union Carbide Ag Products Company, Inc., Research Triangle Park, NC. However, Durfee is a



Tom Arnold

little surprised he has not had more calls from people wondering if there will be a shortage of Sevin. "Initially I thought we might hear a lot more," says Durfee.

The company's plant in Institute, VA, the only site producing methyl isocyanate in the United States, has been temporarily shut down pending a safety inspection. Nonetheless, Durfee says the plant will be back in production within a month or so.

Even after the plant gets a clean bill of health, the company has to reassure everyone who is even near where methyl isocyanate is produced, transported or formulated. "It isn't the most hazardous chemical in the world," says Durfee. "All of a sudden the public has become aware of something that is very dangerous and is traveling on the highways. We have highly specialized drums built for safety purposes." Durfee predicts that some government

regulations regarding production and transport of hazardous materials may result from this incident.

"We are working on shipping procedures," says Durfee. "We ship product from one of the seaports down to Woodbine, GA. Once people see how we ship the product, I think they are impressed with it. It is only a matter of time before we will be shipping the product. Then it is a matter of how each area feels about having a plant that utilizes a toxic chemical in their area." Most of the company's end-use Sevin material is formulated in St. Louis, MO.

Like Durfee, Carbide's Manager of Specialty Products Tom Arnold was also a little surprised that he didn't get more panicky calls from suppliers. Arnold probed one of his customers, a formulator of home and garden products, to get a feel for how the formulator's distributors are reacting to the incident. "He said he only had one distributor who had reacted adversely and that guy tried to increase his earlier order to anticipate a possible shortage," says Arnold. "You can expect two possible reactions from a distributor. One, he would order more in anticipation of a shortage, or two, he would order less or cancel his order in anticipation of a reaction from the end user." Arnold says he has seen no indications of either of these two extremes.

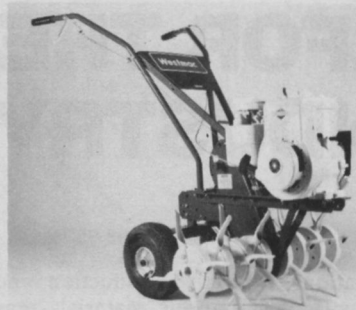
Just in case some distributors are harboring fears over Sevin availability, Arnold is advising them not to panic. "We don't anticipate at this point any shortages at all, in fact, we have cautioned our distributors about heavy ordering and things like that in anticipation of a shortage," says Arnold. "We had a sizeable amount of technical product already produced, probably more than enough to meet our 1985 demands, unless we have an unexpected run or demand on the product."

(continued on page 54)

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BHOPAL TRAGEDY

(continued from page 53)

In addition to verbal reassurances, on December 20 the company also sent out letters to its field representatives, contract formulators and distributors from John Kerr, vice president of sales and technical services. The letter featured the four questions that were most likely troubling company clients and the answers to those questions:

•Is methyl isocyanate utilized in the production of Sevin brand carbaryl? Yes, one of the steps in making one naphthal methyl carbamate, which is Sevin brand carbaryl, is to chemically react methyl isocyanate with one naphthal. This is a very efficient process which yields an extremely high quality carbaryl with an average purity of 99.5 percent. Methyl isocyanate is consumed in the production process and converted to one methyl carbamate and Sevin brand carbaryl. Therefore, there is no methyl isocyanate present in the end product.

•Is this the only process for producing carbaryl? No, there is a less efficient process that doesn't utilize MCI (methyl isocyanate), but this process creates the need for additional reaction steps and yields a lower analysis product as well as additional waste products that require treatment or disposal.

•Does Sevin brand carbaryl create any toxicological problems as a result of production with methyl isocyanate? No, methyl isocyanate is not present in Sevin brand carbaryl. A chemical reaction analogy to consider is common table salt, which is sodium chloride. Sodium in its pure form is combustible in water and chlorine is a toxic gas, yet reacted together they form table salt.

•Is methyl isocyanate one of the breakdown products of carbaryl? No, methyl isocyanate is not formed during, or as a result of, the metabolism and breakdown of carbaryl by plants and animals or in the environment as a result of degradation. Carbaryl is readily degraded into non-toxic by-products that do not accumulate in the environment.

Even before Union Carbide could get its letter out, on December 7, four days after the tragedy, the California Department of Food and Agriculture responded to numerous inquiries it had received from concerned consumers. In its newsletter, "News, News, News," the CDFA's Information Officer Gera Curry responded to the public's fears in a manner similar to the Carbide letter. Curry was even more thorough in elaborating on the excellent safety record of carbaryl in over 30 years of use.

Regulatory backlash. Regardless of how thoroughly or often manufacturers and others reassure the public of the safety of products like Sevin, a

residual accumulation of fear will always remain. Therein lies the second side effect of the Bhopal tragedy: Will this incident be exploited by regulatory officials and local legislators to control pesticide use? Dave Dietz, director of the Pesticide Public Policy Foundation (3PF), has already gotten an inkling of things to come.

"We have had quite a bit of feedback already from folks saying the situation in Bhopal is a classic example of why you need community 'right-to-know' legislation and worker 'right-to-know' legislation," says Dietz. He says he has heard from people calling for a change in the toxic torts statutes for compensation to people with toxic chemical injuries. "We have had indication of certain kinds of state legislation, and clearly, some of the legislation that will be considered by congress is going to use that tragedy as a rationale for why we're going to have more regulations," says Dietz.

Lauren Lanphear, vice president of Forest City Tree Protection Company, Cleveland, OH and member of Ohio Pesticide Applicators for Responsible Regulation (OPARR), says local legislators in his area will surely get some political mileage out of the Bhopal tragedy. "You have to differentiate between compassion for what happened in India and feeling that writing tons and tons of laws are going to prevent it," says Lanphear. "I don't think a 'right-to-know' law in India would have prevented that. Just because they knew what was in that tank would not have stopped that accident, yet that is what is implied. It is also implied that by industry being against it (regulatory laws), we are also for 2,000 people dying."

Conclusions. The deaths of thousands in Bhopal will certainly have long-range repercussions for many and certainly no one has been more affected by the tragedy than the families of the dead, but the employees of Union Carbide have also had a weight to bear. Employees of Union Carbide in this country were as surprised as anyone to hear of the accident and certainly none of them caused it in any way, yet they can't help feeling somehow "involved."

"The whole thing has been a horrible tragedy and a tremendously depressing thing to us at Carbide," says John Durfee. "It wasn't a very exciting holiday season for us thinking about it." Durfee says a company investigative team has just returned from Bhopal and will soon be releasing their reports on the accident. "Carbide, of all companies," exclaims Durfee, "if it was some sleazy outfit, you could understand, but we bend over backwards, anything the government tells us to do, we do a little more." — Tim Weidner

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BLUEGRASS NECROTIC RING SPOT

BY GAYLE L. WORF
AND JANA S. STEWART

It was a late summer day in Madison, WI, when we first encountered the problem. The year was 1978, and we were looking at what we thought was Fusarium blight devastating a lawn which only a few days earlier had been the pride and joy of the neighborhood.

Distinct rings of dead and dying spots were clearly evident. However, the lawn had been recently established with cultivar blends of Kentucky bluegrass that were reportedly resistant to Fusarium blight. We also considered the possibility of yellow patch disease, caused by the fungus *Rhizoctonia cerealis*, especially since the weather had cooled down, and there was a fungus associated with the crowns that resembled *Rhizoctonia*. This fungus was darker, though, and could not be isolated by routine methods useful for confirming *Rhizoctonia*.

The following spring we established a fungicide trial to examine the new sterol inhibitors, which were reportedly very effective against Fusarium blight. To our chagrin — and to the disgust of the lawn owner — the chemicals not only failed, but they created more intense symptoms! We'll discuss fungicides later, but the experience was enough to tell us that we were dealing with a different and more serious problem than we had expected.

Today, many lawns in the midwest and elsewhere are being plagued by this disease, whose cause has only recently been established and a common name accepted for the problem. It is called "necrotic ring spot." We have been work-



Rose Kachadoorian examines NRS-infected lawn.



ing with the disease for five years in Wisconsin. In this report, we will share with you some of our observations, research and experiences during that time.

General symptoms. Dead rings were the dominant symptom observed initially, so we suggested the name "necrotic ring spot" — meaning "dead spots occurring in rings" — to distinguish it from other problems. The rings often expand slowly over the season, with marginal plants gradually losing vigor, changing color and usually dying. When weather patterns change, the turf may recover, only to repeat symptoms in the same and more locations next year.

Other symptoms also occur. Particularly during the first year, patches of dead turf often occur without living centers. In those spots, the underlying thatch often decomposes rapidly, leaving depressions or "craters" in the lawn. More subtle symptoms are sometimes observed. Irregular patches resembling drought or chinch bug injury contain living plants scattered among dead or very weak ones. Such turf is often stunted and discolored — red, yellow or tan, but without distinct spots or rings.

Such a range of symptoms could indicate the involvement of more than one disease-causing organism. This possibility has not been ruled out in all instances. However, upon examination of these crown areas we have always found dark brown to black discoloration of roots, lower stems and nodes, along with various stages of decay. Also, an identical-appearing dark fungus hugs the diseased root and crown tissue — mycologists call this an "ectotrophic" habit of



The greenhouse pots at left illustrate how pathogenicity of the NRS fungus was confirmed by inoculating turf plugs and reproducing the symptoms. The turf (below) often dies in patches without rings.



(Above) NRS root/crown decay. (Below) non-infected plant.



growth. It looked a lot like *Gaeumannomyces*, the incitant of "take-all patch," a disease not known to affect bluegrass, but which attacks other grasses. This possibility has since been ruled out.

Confirming pathogenicity

and identifying the fungus. Before a fungus (or other organism) can be confirmed as the cause of a disease, symptoms must be reproduced by inoculating healthy plants and subsequently re-isolating the suspect pathogen from the experimentally diseased plants. Was the fungus we were seeing a pathogen, or only a saprophyte? And before the pathogenicity tests could be conducted, the fungus had to be isolated in pure culture.

It didn't isolate easily! In fact, this obstacle was primarily responsible for the slow, frustrating work that marked the early stages of the research. Robert Avenius, now with the Illinois turf disease research program, spent half of the summer of 1980 isolating the fungus and comparing the fungus in culture with that which we were seeing on the plants. But once isolation techniques were developed, and the fungal characteristics identified, we could verify its presence through routine laboratory procedures, and have had opportunity to examine its disease-causing potential.

We chose to work with well-established sod plugs for most of our disease-confirming studies, since the disease has only been observed on mature turf. We were concerned that producing symptoms on seedlings might lead us to a false conclusion, unless first demonstrated on mature

(continued)

NECROTIC RING SPOT

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turf. By growing the fungus on grain seeds, which were placed in the crown area of mature turf, we commonly reproduced symptoms similar to those observed in the field, beginning from three to six weeks after inoculation.

Environmental conditions directly affected disease development and symptom severity. For instance, at 68 degrees Fahrenheit, few symptoms developed, unless plants received periodic exposures to high humidity. But at 82 degrees, symptoms developed at both high and low humidity levels. We've repeated the trials a number of times. In most instances the results have been the same, but occasionally no disease develops. When we examined the fungal inoculum, we found the fungus had not become established in those trials. This has been puzzling, but perhaps other organisms in the established sod prevent adequate growth of the fungus to cause disease. Of course, there also may be any of several physiological reasons.

In more recent inoculations, symptoms have been easily reproduced on seedlings growing in sand. In fact, fungal fruiting structures (pseu-

dothecia) that are identical to those recently described by Dr. Richard Smiley at Cornell University have been found on oats, wheat, red fescue and ryegrass growing in the infested sand. The fungus is not *Gaeumannomyces*, as originally hypothesized, but *Leptosphaeria korrae*, a closely-related fungus with a number of similar characteristics. It had no known role in turf pathology until recently, but researchers are presently finding it in many locations and disease situations, including an association with spring dead spot of Bermudagrass in some places. Its importance is now becoming clear.

Leptosphaeria korrae is the cause of necrotic ring spot. Turf pathologists recently agreed to that common name for the disease.

It is important to note that summer patch disease, caused by *Phialophora graminicola* and some other diseases can be confused with NRS! Diagnosis in your particular area may require laboratory assistance to distinguish between look-alike disorders.

A survey of lawns. While attempting to establish causation in 1980, we also undertook a survey of some 34 home lawns in the Madison area, looking at the influence of soil and lawn maintenance patterns on the disease. A local lawn care maintenance firm cooperated in this effort to determine whether factors such as soil type, age of turf, sodding versus seeding, thatch levels, broadleaf weed control, crabgrass control, fertilizer applications and other characteristics play a role in disease development or severity.

The cooperation of the company was very useful. First, they had excellent records of treatments applied to these lawns in recent years, and second, they had offered a variety of treatment options to their customers. There were not enough lawns of certain treatment patterns for us to draw conclusions in a few instances. For example, only six of the lawns had been established by seed, while 28 had been established by sodding, and all of the seeded lawns had been established at least 10 years prior to the survey. Nonetheless, the results were still interesting and helpful. Some of the results are presented in accompanying tables. The following summarizes our general observations:

- Older lawns are less often affected, and with less severity. None of the lawns over 10 years old were affected.
- The more dense the lawn, the greater the likelihood of encroachment by NRS.
- The relationship of thatch to NRS was not clear, but from these (and other) observations, it was evident that heavy thatch levels were not necessary for a serious NRS problem to develop.
- Excellent soil profile characteristics (e.g., good drainage and good soil depth without soil layering) offer no security against severe NRS development.
- Neither broadleaf weed control (2,4-D plus MCP) nor crabgrass weed control (Balan[®]) influenced disease development.
- Symptoms may occur from June through October. However, they are more common, and usually more severe in July and August.

Most of these observations have been substantiated through other experiences since that time.

Disease disappearance. On many occasions, the disease has disappeared in lawns after

(continued on page 62)

Table 1. Disease prevalence by age groups in 34 lawns surveyed in 1980.

Lawn age (years)	Diseased	Not Diseased
10 or more	0	16(a)
7	0	1
6	3	0
5	1	1
4	3	1
3	1	1
2	2	1
1	2	2

(a) Six of these lawns were established from seed. All others in the survey were sodded.

(NRS is more commonly associated with lawns less than ten years of age.)

Table 2. NRS prevalence in lawns according to turf density observed in the 1980 survey.

	Density and number of lawns		
	"thin"	"moderate"	"dense"
Not diseased	10	10	1
Diseased	2	10	1

(Thin lawns are apparently not good candidates for NRS)

Table 3. NRS severity in relation to herbicide applications in the 1980 survey.

Herbicide use	Diseased lawn	No disease
None	6	1
2,4-D + MCP (broadleaf)	2	1
Balan (crabgrass)	2	2
Both herbicides	2	2

(Herbicides apparently don't influence NRS development)

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NECROTIC RING SPOT

(continued from page 60)

devastating them for several years. This became painfully evident to us after establishing a large fungicide-fertilizer interaction study, involving 33 treatments and many replications. Dave Reit, Sentry Insurance grounds manager at Stevens Point, WI, was our cooperator. The Merion bluegrass lawn at Sentry Insurance had been established in 1976, the disease became active in 1977 and continued through 1980, leaving many "disease scars."

In the spring of 1981, these spots were counted to provide background information for the start

Table 4. Relation of NRS severity to top soil depth in lawns in the 1982 survey.

Disease Level	Top Soil depth (inches) and No. of lawns		
	>3	3 - 5	<5
None	1	1	0
Low	4	4	1
Moderate	1	2	3
Severe	2	0	1

(NRS has been observed in lawns with poor as well as excellent soil profile. Chances for recovery might be better with good soil conditions.)

Table 5. NRS severity and thatch levels observed in the 1982 survey.

Disease level	Thatch depth (inches) and No. of lawns		
	0 - 1/2	1/2 - 1	< 1
None	1	1	0
Low	3	2	2
Moderate	2	4	2
Severe	1	1	1

(Thatch depth doesn't appear to influence NRS potential. Of incidental interest, thatch levels didn't change from 1980-1982.)

Table 6. Changes in NRS severity in twenty diseased lawns that were re-examined two years later.

Disease level	1980	1982
No disease	0	1
Very slight	0	4
Light	3	6
Moderate	5	6
Severe	12	3

(Fifteen of the twenty lawns improved over the two year period.)

Table 7. Results of soil tests in five severely NRS-infected lawns that were used as research sites in 1981-82.

Site	pH	organic matter, T/A	P	K
1	6.5	60	77	220
2	6.1	125	170	440
3	7.3	59	17	255
4	7.3	125	120	570
5	5.7	125	280	365

(The disease occurred over a wide range of pH, and organic matter.)

of the trials. We were determined to gain an understanding of the influence of various nitrogen sources and rates, as well as different fungicides, rates and wetting agents, acting alone and in various combinations. We spent over 200 hours and traveled more than 2,000 miles during 11 trips there to apply chemicals and observe results. To our amazement, no disease developed *anywhere* in the plot, even with the history of disease and the continued activity in nearby lawns! It has not recurred since that time, due in part we believe, to the excellent care administered to the turf. But was recovery an important component of the NRS syndrome?

When Rose Kachadoorian joined our group for a turf IPM project in 1982, we decided to re-examine 20 Madison area lawns on which we had records of disease history, including those lawns in the 1980 survey that were infected. The lawns were checked in late spring, summer and fall to be confident of our observations. We found that symptoms had virtually disappeared in half of the lawns, and another five were moderately improved. Only three of the lawns had become more severely diseased, while two remained unchanged.

This pattern of general, but unpredictable improvement of diseased lawns has been observed for many years in Wisconsin. Lawns typically are afflicted for about two to five years. More often than not, it is a new community of homes that is plagued with the problem. Then after a few years, if they are well-maintained, those lawns are again attractive and a new group of lawns will be in trouble.

But there are exceptions! In some lawns the disease has persisted for years, though with decreasing severity over time. And contrary to the usual rule, occasional older lawns with no known history of the problem will suddenly break out with the disease. In such lawns, the symptoms are usually less dramatic. The grass in affected rings or spots may remain alive, becoming thin and stunted, and in fact may be overlooked by casual observation.

Fertilizer trials. How do nitrogen carriers and levels influence NRS? After the large 1981 trial, we conducted 10 smaller fertilizer trials with primary emphasis upon nitrogen. We also examined sulfur and micronutrient applications, too. Potassium and phosphorus levels were not included, however, since soil tests indicated high levels of both at our trial sites.

No fertilizer that we have tested has controlled NRS. Those fertilizers that contain micronutrients and quickly available nitrogen have sometimes provided a darker color, masking light infections, but severe NRS infestations have remained active in spite of any fertilizer treatments.

While nitrogen does not stop the disease, our experiences indicate the importance of good fertility in effecting recovery after disease activity has ceased, and consequently in saving a lawn from ultimate destruction. The idea has evolved in some circles that *Fusarium* blight severity is increased with "high" fertility. That certainly does not appear to be the case with NRS. The number and size of rings or spots frequently decreases and turf almost always recovers more rapidly where adequate fertility has been main-

(continued on page 66)



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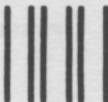
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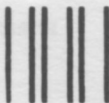
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NECROTIC RING SPOT

(continued from page 62)

tained. However, any rings that do appear are often considerably more visible in such lawns!

Dry summer conditions have also affected recovery in our field research. Irrigation was not available in many of our locations. Adequate soil moisture is essential for either fertilizers or fungicides to have any benefit in reducing NRS severity. In our experience, keeping lawns well irrigated during dry periods is absolutely necessary for the survival and improvement of NRS-infected lawns. Water, plus adequate fertilization, are the most important and consistent treatments for NRS-diseased lawns that we have found to date.

Sulfur treatments have also given variable results in limited trials to date. Sometimes we have received encouraging responses, but we have also severely damaged lawns with as little as one pound of "turf-formulated sulfur." The soil pH in diseased lawns has been routinely examined, and have been found to range from 5.6 to 7.6.

What about fungicides? We mentioned in our introductory remarks that we had been disappointed with the effects of triademefon (Bayleton®) and other sterol inhibitors during our first year of investigations. We were excited about the excellent response that came with iprodione (Chipco 26019®), however, and to a lesser extent by benomyl (Tersan 1991®). After we isolated the organism, we conducted a bioassay test, and found iprodione inhibitory to the pathogen in the laboratory.

In 1980 we elected to lay down several strips of iprodione in six diseased lawns in Madison. Five of the lawns responded beautifully! Several lawn care applicators tried iprodione and were also excited about the results. It looked as though we were not only close to an understand-

ing of the causation of NRS, but we had a satisfactory treatment in hand. Unfortunately, the sixth lawn did not respond to treatment at all, nor to any other of many treatments tried in subsequent years, until it ceased to be active on its own in 1983!

Since 1979 we have conducted two or more replicated fungicide trials each year, along with several demonstration plots. Very few chemicals have offered any encouragement for additional testing in our trials, other than iprodione and benomyl. Some lawns have responded to both, others to only one, but in most situations of late, results have been disappointing with both. We had hoped there would be a more dependable treatment available for the lawn care industry by this time.

We currently suggest four ounces of iprodione or six ounces of benomyl (drenched in as for Fusarium blight) per 1,000 square feet, applied in late May or early June, and repeated once or twice during the growing season at two to three week intervals, as the best fungicide possibilities for NRS in our area. Good irrigation and fertility must be maintained for a successful treatment. If possible, leave an inconspicuous area untreated to determine effectiveness and guide future treatments.

Necrotic ring spot is under investigation at several research centers now. That's good, for there are many unanswered questions to a problem that is so important to the lawn care industry.

Gayle L. Worf is professor of plant pathology, College of Agricultural and Life Sciences, University of Wisconsin-Madison. Jana S. Stewart is a horticulture specialist, Cooperative Extension Service, University of Wisconsin-Madison.

Table 8. Selected examples of NRS response to several fertilizer treatments.

Fertilizer	Location, year and NRS severity (a)				
	A		B	C	
	1981	1982	1982	1981	1982
Scott's 23-7-7	3.0	0.9	1.0	3.7	3.0
Scott's + "microgreen"	3.6	0.9	0.2	—	—
"Twenty Plus"	—	—	0.5	2.1	—
"Micromunch"	—	—	1.1	2.5	2.5
Par Ex	1.8	2.6	—	—	—
No Fertilizer	3.1	1.3	3.1	—	—

(a) NRS severity index: 0 = no symptoms, to 5 = 100% diseased.

(Fertilizer responses varied substantially among locations and years. Areas without fertilizer usually recovered poorly.)

Table 9. Selected examples of NRS response to several fungicide treatments.

Chemical	Location, year and NRS severity (a)						
	A	B	C		D		E
	1979	1980	1981	1982	1982	1983	1983
Bayleton	3.5	3.2	2.6	—	2.3	—	2.0
Chipco 26019	1.0	1.0	1.3	0.7	2.0	1.5	2.2
Tersan 1991	2.0	3.5	—	—	—	0.8	0.3
No Treatment	3.0	2.7	2.2	0.9	3.7	2.5	2.5

(a) NRS severity index: 0 = no disease, to 5 = 100% infected.

(Chipco 26019 and Tersan 1991 sometimes suppress NRS symptoms.)

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VARIATIONS IN RESPONSE OF COOL-SEASON TURFGRASSES TO GROWTH RETARDANTS

BY NICK E. CHRISTIANS
AND JAMES NAU

Experimental work with growth-retarding chemicals on turfgrasses has been conducted for more than two decades. The basic goal of this work has always been the same: to inhibit the growth of grasses and thereby to reduce mowing and maintenance costs without significantly reducing aesthetic quality. Many products have achieved the first part of this goal by inhibiting growth. However, few have come close to achieving the second part, and none have consistently reduced growth without reducing turf quality.

Two chemicals, mefluidide (Embark®) and maleic hydrazide, have been used commercially in the turfgrass market as growth retardants. (A product called Sustar from 3M received a turf label in the mid 1970's, but was replaced by mefluidide before it was actively marketed.) These two materials are very effective in inhibiting seed-head development and have been used successfully to reduce mowing on low-maintenance areas such as roadsides. Neither have been used extensively on lawns, or other higher-maintenance turfgrass areas, because of the reduction in aesthetic quality that generally accompanies their use. More recently, mefluidide has been used at very low rates to inhibit seed-head development of annual bluegrass (*Poa annua*) on golf course fairways, but it still is not widely recommended for use on lawns.

Limit®, a new growth retardant from Monsanto Company, has recently made its debut in the turf market. This chemical, which has been widely tested under the experimental number MON 4621, has potential for use on higher-maintenance turf such as home lawns, but is yet to be widely tested by commercial applicators under the variety of conditions that often confront them. It is being marketed initially for use on low-maintenance areas.

The increase of commercial lawn application and the growth of the professional lawn care industry over the past 15 years has sparked new interest in the development of growth retarding compounds that can be effectively used on lawn areas. Several experimental, numbered, compounds are now being tested by universities and private firms around the country.

With this switch in emphasis from roadsides and other low-maintenance areas to lawns, an old problem arises. All these materials are quite specific in the way in which they act upon the grasses. It is not unusual for them to be very effective on one species and to have little effect upon another species.

Rarely does a customer's lawn consist of a monostand, a uniform stand of a single grass. Even the best of lawns often will be infested with other types of perennial grasses; i.e., tall fescue and brome grass in a Kentucky bluegrass lawn. Also, perennial grasses often are intentionally mixed, as for a shade mixture containing fine fescues and Kentucky bluegrass.

To test these species' differences, studies were conducted at Iowa State University in the greenhouse by using three growth retardants and three cool-season turfgrass species. The three species used were 'Baron' Kentucky bluegrass, 'Kentucky' 31 tall fescue and 'Reliant' hard fescue. Four-inch plugs of each species were removed from field-plot areas and established in pots measuring 6.3 inches in diameter and seven inches deep. They were then allowed to acclimate in the greenhouse before the initiation of treatments.

The growth retardants used were mefluidide (Embark), BAS 106 00 W (an experimental growth retardant from BASF Wyandotte) and ethephon from Union Carbide (a growth regulating compound marketed under the trade name Ethrel®, presently not labeled for use on turf). Table 1 contains a list of treatments with rates in metric and English units.

Growth Retardant	Kilograms (kg)/ Hectare (ha)	Pounds/ Acre
Mefluidide	0.28*	0.25
	0.56	0.50
	1.68	1.50
BAS 106 00 W	3.36	3.00
	5.04	4.50
	2.24	2.00
Ethephon	4.48	4.00
	6.72	6.00

*All treatments are listed as rates of active ingredient (ai).

Table 1. Growth retardant treatments applied to Kentucky bluegrass, tall fescue and hard fescue.

The mefluidide and ethephon were applied as liquids in 2 milliliters of water per treatment. The BAS 106 00 W was applied as a granule to moistened tissue. The chemicals were allowed to remain on the tissue for 24 hours before being watered in. Data on clipping yield and turfgrass quality were collected for six weeks after visible response began. Root organic matter production and rhizome length were measured at termination of the study.

The study was repeated six months later, using the same chemicals and rates with turf samples from the same field-plot areas. The results from the two studies were analyzed statistically, and, where no significant differences existed between them, they were combined for further analysis. The results presented are from the combined studies.

The results of clipping yield measurements for the two studies are shown in Figure 1. The 0 line on the graph represents the control (plants of each species that received no chemical treatment). Response bars extending above and below the line represent a percentage increase and reduction, respectively, in clipping yield as compared with the untreated control.

Kentucky bluegrass and hard fescue responded similarly to each of the retardants. Mefluidide reduced clipping yield from 17 to 39 percent for these two grasses. BAS 106 00 W reduced yield

Experimental work with growth-retarding chemicals on turfgrasses has been conducted for more than two decades. Although the results should be new materials with practical uses in the turfgrass industry, work can be very involved and complicated.

from 41 to 47 percent, and ethephon reduced yield from 9 to 28 percent, as compared with the untreated control. Tall fescue clipping yield was reduced by mefluidide and BAS 106 00 W, but not to the same extent as Kentucky bluegrass and hard fescue. Ethephon actually increased tall fescue clipping yield.

Turfgrass quality ratings generally were reduced by each of the retardants for all three species (Figure 2). The only exceptions were the responses observed on Kentucky bluegrass and hard fescue at certain rates. Of special interest, was the response of Kentucky bluegrass to the two pound ai/acre rate of ethephon. At this rate, bluegrass clipping yield was reduced 28 percent, but turf quality was slightly better than that of the control.

These data indicate that shade mixtures of Kentucky bluegrass and hard fescue could be expected to respond similarly to the retardants used in this study. However, where tall fescue is a part of the turfgrass community, it would be affected to a lesser extent, which would lead to further disruption of uniformity in the stand.

(continued on page 70)

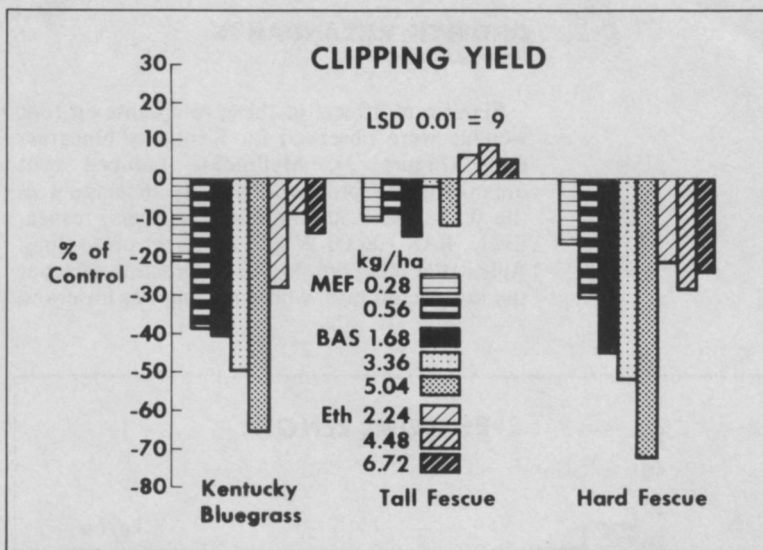


Figure 1. Effects of mefluidide, BAS 106 00 W, and ethephon on average clipping yield of Kentucky bluegrass, tall fescue and hard fescue. The 0 line represents the control.

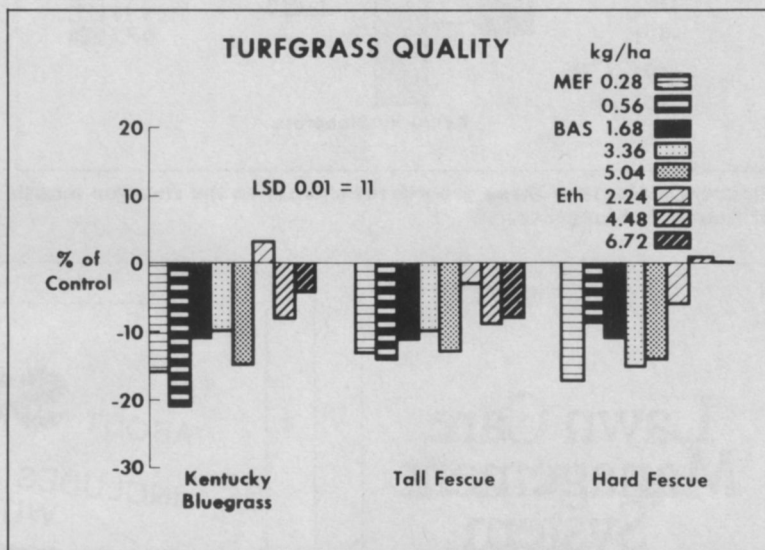


Figure 2. Turfgrass quality for Kentucky bluegrass, tall fescue and hard fescue treated with the three growth retardants.

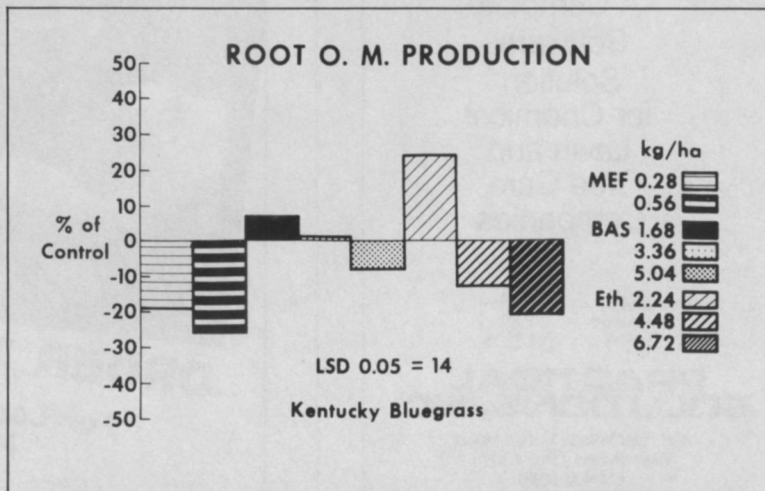


Figure 3. Kentucky bluegrass root organic matter production at termination of the study as affected by the three growth retardants.

GROWTH RETARDANTS

(continued from page 69)

Significant effects of these retardants on root weights were observed for Kentucky bluegrass only (Figure 3). Mefluidide reduced root organic-matter production 19 to 26 percent at the 0.25- and 0.50-pound ai/acre rates, respectively. BAS 106 00 W had no effect on rooting. Again, the ethephon had an interesting effect at the two-pound rate, where rooting was observed

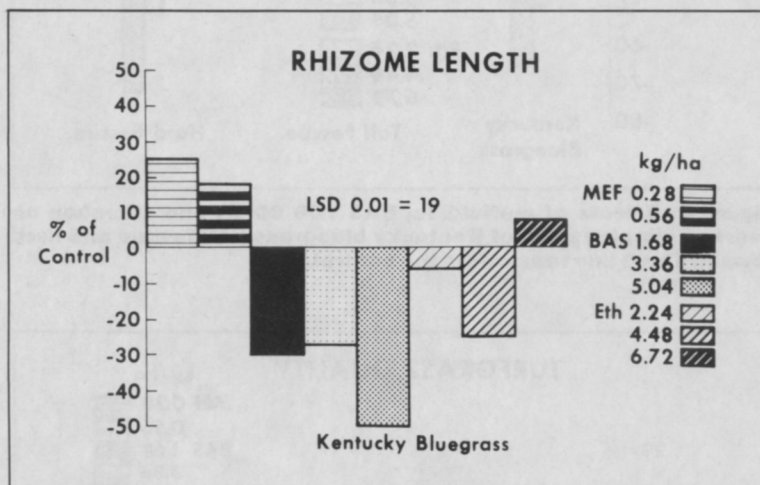


Figure 4. Effects of three growth retardants on the rhizome length of Kentucky bluegrass.

to increase 24 percent above the control. Higher rates of ethephon reduced rooting of Kentucky bluegrass.

Those who work with growth regulating compounds often find that they can have some very unusual effects upon the plant. That was true in this study when rhizome length of Kentucky bluegrass was measured (Figure 4). Mefluidide increased rhizome length by 25 and 19 percent at the 0.25- and 0.50-pound ai rate, respectively. Rhizomes as long as 13.8 inches were observed on some Kentucky bluegrass plants treated with this material.

Conclusions. There is much to be learned about growth-retarding compounds. That mefluidide and the two experimental chemicals were consistent in their activity on Kentucky bluegrass and hard fescue is encouraging, but there are other species and combinations of species that must be considered. There may even be response differences among cultivars within a species that have not been dealt with.

These materials may have certain effects on plant growth and uses that we know nothing about at this time. The stimulation of Kentucky bluegrass rhizome growth by mefluidide and the positive effect of ethephon on quality and rooting at the two-pound ai/acre rate have potential for practical use once they are thoroughly understood. Research on growth retardants will continue. The result should be new materials with very practical uses in the turfgrass industry. But this work can be very involved and complicated, and progress will be slow.

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APRIL

Industrial Lawn Service: is this a growing segment within the larger turf care market nationally? We will investigate its significance in the lawn service industry.

Chemical Spills: This is a helpful how-to article describing the steps to take in correcting a spill or misapplication.

Regulatory "Hot Spots" Revisited: Regulatory brush fires continue to arise around the country. ALA editors will analyze their impact on business activity and speculate on future activities of anti-pesticide activists.

Technical Features throughout the year will focus on the most up-to-date research involving turf and ornamentals, as well as the most timely coverage.

MAY

Biological Control Methods: Is "biological" insect control a viable alternative to pesticides? Is "non-chemical" lawn service a sound business concept for service professionals? Our editors will probe these questions.

Treating Ectoparasites Outdoors: This market has long been a staple in the South, but could be just as viable in the North. We will explore treatment methods for fleas and mosquitoes, and how these services can be used to increase the lawn care professional's profit picture.

Turfseed Technology Report: Profiles of leading seed growers and their latest proprietary varieties available to the lawn care industry. Harvest yields will be discussed, as well as their effect on 1986 pricing.

JUNE

PLCAA: Is It Living Up to its Founders' Visions?: Do Washington legislators know the organization exists, or even care? Does the PLCAA need to grow dramatically to meet its market needs and responsibilities?

Insurance: Are We Covered?: What is needed, wanted and available to lawn service businesses?

Industrial Weed Control: How big is the market? How profitable is it? How does it fit in with other lawn care services? Find out in this article.

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ALA PRODUCTS

Devrinol® is a long-lasting, wide spectrum selective herbicide now available in three formulations for convenient use in weed control for ornamental plants from **Stauffer Chemical Company**. The product is formulated in a wettable powder Devrinol 50-WP and granular Devrinol 2-G or 5-G. Devrinol provides long-lasting control of weeds because it stays in the top few inches of soil — the weed sprouting zone, according to the company. It is easy to incorporate mechanically or spray on the surface and incorporate it by rain or irrigation. Devrinol attaches itself tightly to the soil particles so it resists leaching even through heavy rains or irrigation.

The product controls weeds in 14 kinds of deciduous and evergreen trees and shrubs, 17 kinds of container stock and five kinds of ground covers. It controls many annual grass weeds, including annual bluegrass, barnyardgrass, bristly foxtail, large crabgrass, rigput brome, southwestern cupgrass, wild barley and wild oats. Devrinol also controls annual broadleaf weeds, such as cheeseweed, chickweed, fiddleneck, knotweed, purslane, sowthistle, filaree, groundsel, lambsquarters, pineappleweed, prickly lettuce and redroot pigweed. Devrinol 50-WP and 5-G are now registered for crabgrass and goosegrass control in the following established turfgrasses: bahia, bermudagrass, centipede, St. Augustine and fescue.

Write 101 on reader card

Rhone-Poulenc, Inc., Agricultural Division, has announced that some of the product packaging for the Chipco® line of turf maintenance products has been redesigned for 1985. The products displaying the newly designed packaging are Chipco 26019 fungicide, Chipco Ronstar® G (preemergent crabgrass and goosegrass) herbicide,



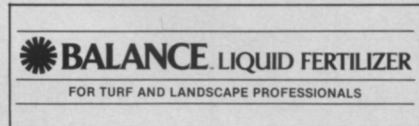
Chipco Turf Kleen (postemergent) herbicide and Chipco Microgreen Liquid (micronutrients).

Dan Stahl, Chipco product manager, says that because the Chipco products are gaining wider acceptance in the green industry, a new packaging image was needed. "We felt that a new non-specific turf package design was needed to reflect the expanded uses of the Chipco line," Stahl says. Two additional products, Bucril® herbicide and Mocap® nematicide-insecticide are scheduled for package redesign in 1986. They will be available in the company's agricultural package design for 1985.

Write 102 on reader card

Na-Churs Plant Food Company is introducing a line of liquid fertilizers for the turf and landscape professional. Balance® liquid fertilizer will be available in two formulations for turf: 16-2-2 and 15-3-3. A 15-5-5 formulation for root feeding of trees and shrubs will also be available.

The Balance line of fertilizers feature a low salt index for greatly reduced risk of burning. The products are true solutions, not suspensions, and will store easily without agitation. The near neutral pH of the Balance line of fertilizers minimizes corrosion of metal parts, pump systems and storage tanks, which extends the life of equipment.



Also, since it is a true solution, dry particles are not in suspension to wear away the equipment, tanks and pumps. Balance is available in truckload quantities at Merion, OH and Red Oak, IA.

Write 103 on reader card

Astro-Teck Products, a division of Brewer Chemical Company, Inc., has introduced an 11-ounce aerosol can version of their Mo-Deck, mower polymer treatment. The cans are packaged 12 cans per case, which completes the line of Mo-Deck from spray cans to 55 gallon drums.

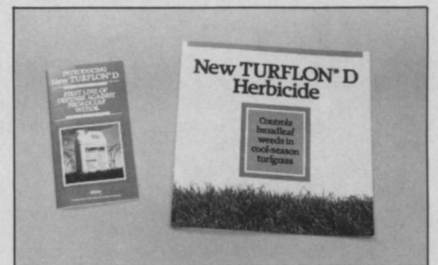
The product is formulated for spraying on undersurfaces of all types of mowers to help prevent grass buildup and clogging. Mo-Deck also makes routine deck cleaning a breeze by actually reducing adhesion of grass to the mower undersurface, rollers and guide wheels. The application of the product has proven to reduce grass



deposits by 65 to 85 percent depending on conditions, according to the company.

Write 104 on reader card

Two product literature pieces are now available on new Turflon® D herbicide from the **Dow Chemical Company**. Both are targeted to professional turf and lawn care operators, with details on product



performance in post-emergent application to control a variety of broadleaf weeds.

"Introducing New Turflon D" (form 135-0144-84) offers a brief overview of product features and benefits. The low volatile ester formulation combining triclopyr and 2,4-D as the active ingredients is effective against such hard-to-control species as ground ivy, oxalis, spurge, wild violet and veronica. The product is particularly well-suited to cool season turf grasses such as tall fescue, bluegrass and perennial ryegrass, according to the company.

A brochure, "New Turflon D Herbicide" (form 135-0143-84), provides a more in-depth look at the product, including recommended rates and application timing, weed species controlled and treatment cost-effectiveness. Also included is a summary of efficacy data generated by universities and Dow-sponsored trials conducted under an extensive experimental use permit program throughout the "bluegrass belt." Supplies of these literature pieces are available through distributors or can be obtained from Dow Chemical.

Also from Dow Chemical, the

(continued on page 76)

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TANK-MIXING HERBICIDES FOR WEED CONTROL IN BERMUDAGRASS TURF

BY B.J. JOHNSON

Summer and winter weeds grow abundantly in turfgrasses throughout the southeastern United States. Herbicides are usually necessary to control these weeds. Postemergence herbicides are frequently applied in mid to late winter for postemergence



Figure 1. Tank-mixed Dacthal, at 12.5 lb/A and 2,4-D + MCP + dicamba at 1.0 + 0.5 + 0.1 lb/A on winter weeds. Left: 2,4-D + MCP + dicamba; right: Dacthal and 2,4-D + MCP + dicamba. Picture was made in late April.



Figure 2. Tank-mixed Dacthal at 12.5 lb/A and Roundup at 0.25 lb/A on crabgrass. Left: Dacthal; right: Dacthal and Roundup.

control of emerged winter weeds and preemergence herbicides are applied about the same time of the year for crabgrass (*Digitaria sanguinalis* (L.) Scop.) control. Because the dates of treatment for the preemergence summer weeds and postemergence winter weeds are similar, an experiment was initiated to determine the response of weeds to tank-mixed herbicides when applied as a single spray.

The experiment was conducted on common bermudagrass turf from 1978 through 1980 on fairways at the Griffin-Spalding golf course. Dacthal® at 12.5 lb/A (pounds per acre) and Betasan® at 10.0 lb/A were applied alone and tank-mixed with the postemergence herbicides: paraquat (0.25 and 0.5 lb/A), Roundup® (0.25 and 0.5 lb/A), simazine (1.0 lb/A) and 2,4-D + MCP + dicamba (1.0 + 0.5 + 0.1 lb/A). The postemergence herbicides were also applied alone and the treatments were applied to separate plots each year. All herbicides were based on active ingredient/A.

The population of winter weeds was uniform, but all species were not present each year. Parsley-piert (*Alchemilla microcarpa* Boiss. Reut.) was present in 1978, spur weed (*Soliva* spp.) in 1980 and corn speedwell (*Veronica arvensis* L.) was present during 1978 through 1980. Crabgrass was present during the spring and summer each year.

All herbicides were applied as a spray in 40 gallons of water/A to 5- by 10-foot plots which were replicated four times. A surfactant was added to treatments containing paraquat and 2,4-D + MCP + dicamba at 0.5 percent (v/v).

Winter weed control. A combination of the preemergence and postemergence herbicide treatments resulted in a significant interaction for parsley-piert in 1978, spur weed in 1980 and corn speedwell during each of three years (Table 1). The control of parsley-piert was higher from tank mixtures of 2,4-D + MCP + dicamba and Betasan than when postemergence treatment was applied alone or with Dacthal.

Combination treatments of paraquat at 0.25 lb/A or Roundup at 0.25 lb/A with either Dacthal or Betasan also controlled a higher percentage of the weeds than did either postemergence herbicide applied alone. When the rate for paraquat and Roundup was increased to 0.5 lb/A, there was little or no advantage in parsley-piert control when tank-mixed with the preemergence herbicides.

Tank-mixed paraquat at 0.5 lb/A with Dacthal or Betasan controlled a higher percentage of spur weed than when paraquat was applied alone (Table 1). Paraquat at 0.25 lb/A had poor activity

on the weeds whether applied alone or tank-mixed with the preemergence herbicides. Preemergence herbicides improved the activity of Roundup slightly on spur weed when tank-mixed at 0.25 lb/A rate, but did not when tank-mixed at 0.5 lb/A rate. Tank-mixtures of 2,4-D + MCP + dicamba or simazine with preemergence herbicides did not improve spur weed control when compared with either postemergence herbicide applied alone. The control was excellent when treated with 2,4-D + MCP + dicamba and poor when treated with simazine.

Corn speedwell control was significantly improved when 2,4-D + MCP + dicamba was applied with Dacthal than when it was applied alone as a single treatment (Table 1). In most instances, repeated 2,4-D + MCP + dicamba treatments are required to obtain effective corn speedwell control (Johnson 1977). However, the effective control in the present study from combination of 2,4-D + MCP + dicamba and Dacthal applied as a single application, suggests that Dacthal improved the activity of 2,4-D + MCP + dicamba.

Although Dacthal does partially control corn speedwell when applied alone, the increase in control from the combination treatment may be an additive effect. The control of corn speedwell was not as good when 2,4-D + MCP + dicamba was tank-mixed with Betasan as it was with Dacthal. Improved control from combination treatment is shown in Figure 1.

In two of three years, paraquat at 0.25 lb/A applied as a tank mixture with Betasan controlled a higher percentage of corn speedwell than paraquat applied alone or with Dacthal (Table 1). However, there was no effect from Betasan treatment when the paraquat rate was increased to 0.5 lb/A. In contrast, the activity of Roundup at 0.25 lb/A on corn speedwell was reduced when tank-mixed with Betasan as compared with the activity of Roundup alone. Appleby and Somqbi (1978) have also reported less activity on weeds from tank-mixing Roundup with other herbicides. In the present study, the control of corn speedwell was effective when Roundup was applied at 0.5 lb/A with Betasan or at any rate with Dacthal.

Crabgrass control. Tank mixtures of 2,4-D + MCP + dicamba and Dacthal did not control crabgrass as effectively as Dacthal alone in 1979 and 1980 (Table 2). The activity of Dacthal on crabgrass was also less in 1979 when tank-mixed with Roundup (Figure 2). It is possible that postemergence treatments interfered with bermudagrass cover and reduced competition, allowing crabgrass establishment. The preemergence herbicides controlled crabgrass completely in 1978, regardless of whether they were applied alone or tank-mixed with postemergence herbicides.

Turfgrass tolerance. Bermudagrass treated only with postemergence treatments for winter weed control showed no delay in early spring growth when the chemicals controlled weeds effectively (data not given). Turf cover was slightly lower in 2,4-D + MCP + dicamba-treated plots when compared with turf in plots treated with other postemergence treatments. The reduced cover occurred because 2,4-D + MCP + dicamba did not control all the weeds and the weeds competed with turfgrass and delayed early growth.

Treatments ^a				Weed Control ^b						
Preemergence	Rate lb/A	Postemergence	Rate lb/A	Parsley-	Spur	Corn speedwell				
				plant	weed	1978	1979	1980	Mean	
				%						
Untreated	—	Untreated	—	0	0	0	0	0	0	
			Paraquat	0.25	57	31	43	78	83	68
				0.5	95	77	97	90	97	95
			2,4-D + MCP + dic	1.0 + 0.5 + 0.1	5	96	23	30	13	22
			Simazine	1.0	100	0	90	100	100	97
			Roundup	0.25	71	71	97	90	57	81
			0.5	90	90	100	94	93	96	
Dacthal	12.5	Untreated	—	0	0	0	0	0	0	
			Paraquat	0.25	93	41	20	100	80	67
				0.5	100	89	80	100	100	93
			2,4-D + MCP + dic	1.0 + 0.5 + 0.1	15	97	80	91	100	90
			Simazine	1.0	100	2	100	100	100	100
			Roundup	0.25	94	80	100	100	100	100
			0.5	94	87	100	100	100	100	
Betasan	10.0	Untreated	—	0	0	0	0	0	0	
			Paraquat	0.25	100	60	80	79	103	86
				0.5	100	91	100	98	93	97
			2,4-D + MCP + dic	1.0 + 0.5 + 0.1	74	94	44	51	80	58
			Simazine	1.0	100	0	100	100	80	93
			Roundup	0.25	90	89	80	67	0	49
			0.5	100	87	100	98	100	99	

^aPreemergence herbicides are normally applied before emergence of summer weeds and postemergence herbicides are those applied as postemergence treatments to established winter annual weeds. Treatments were applied in early March as tank mixtures.

^bWeed control ratings were made in late April and based on percent control where 0 = no control and 100 = complete control.

Table 1. Influence of tank-mixed herbicides on winter weed control in bermudagrass turf.

Treatments ^a				Crabgrass control ^b			
Preemergence	Rate lb/A	Postemergence	Rate lb/A	1978	1979	1980	
				%			
Dacthal	12.5	Untreated	—	100	91	71	
			Paraquat	0.25	100	91	65
				0.5	100	85	44
			2,4-D + MCP + dic	1.0 + 0.5 + 0.1	100	76	35
			Simazine	1.0	100	86	73
			Roundup	0.25	100	77	64
			0.5	100	77	75	
Betasan	10.0	Untreated	—	100	96	85	
			Paraquat	0.25	100	97	73
				0.5	100	99	67
			2,4-D + MCP + dic	1.0 + 0.5 + 0.1	100	96	67
			Simazine	1.0	100	95	93
			Roundup	0.25	92	97	65
			0.5	96	100	64	

^aPreemergence herbicides are normally applied before emergence of summer weeds and postemergence herbicides are those applied as postemergence treatments to established winter annual weeds. Treatments were applied in early March as tank mixtures.

^bCrabgrass ratings were made in late August and based on percent control where 0 = no control and 100 = complete control.

Table 2. Influence of tank-mixed herbicides on crabgrass control in bermudagrass turf.

Bermudagrass cover in August was generally the greatest in plots where crabgrass was controlled (data not given). Therefore, to maintain a good quality turf, it was necessary to select a herbicide treatment that controlled all weeds in the turf area.

Summary. Tank-mixing herbicides may increase or decrease the activity of weeds. Therefore, it would be desirable to know the activity of mixed herbicides before they are used in order to obtain consistent effective weed control.

B.J. Johnson is professor of agronomy at the University of Georgia College of Agriculture, Experiment, GA. The study outlined by this article was supported by state and hatch funds allocated to the Georgia Agricultural Experiment Stations.

REFERENCES

- Appleby, A.P. and M. Somqbi. 1978. Antagonistic effect of atrazine and simazine on glyphosate activity. *Weed Sci.* 26:135-139.
- Johnson, B.J. 1977. Controlling winter annuals with herbicides. *Georgia Agric. Res. Bull.* 206. 33pp.

PRODUCTS

(continued from page 72)

Dursban® 50W formulation is a wettable powder especially for professionals who prefer lower phytotoxicity in treating turf, ornamentals and trees. The elimination of chemical solvents makes this possible. The insecticide is labeled for turf applications to control ants, armyworms, chiggers, chinch bugs, clover mites, crickets, cutworms, earwigs, fleas, grasshoppers, sod webworms, ticks, turfgrass weevil, white grubs and bluegrass billbug.

Write 105 on reader card

Bulkkem, bulk suppliers of lawn chemicals, manufactures Big Green Plus®, a nitrogen/iron/sulfur complex. Big Green Plus is designed to promote vigorous growth, dark green color and insure a stronger more healthy plant, capable of resisting disease and insect attack. Rates and frequency of application will vary according to the severity of the iron deficiency, climate and soil type. The product contains 15 percent total nitrogen derived from low biuret urea nitrogen; four percent sulfur and six percent iron, both derived from ferrous sulfate heptahydrate.

Write 106 on reader card

PBI Gordon Corporation has several lawn care chemicals in their "Professional Turf Products" line. Trimec® bentgrass formula is the most effective and most efficient broadleaf herbicide for 2,4-D sensitive bentgrasses. It positively controls the widest spectrum of broadleaf weeds, including hard-to-kill species, usually with only one application, according to the company. Its effectiveness in cool temperatures — even below 50 degrees Fahrenheit — is firmly established when weeds are growing, allowing early spring and early winter use. There is minimum hazard from root absorption to nearby flowers and ornamentals, deciduous and coniferous trees and shrubs. Treated areas may be seeded within two weeks



Super Trimec® is the most effective and cost efficient post-emergent broadleaf herbicide developed specifically for 2,4-D tolerant cool season or northern grasses. This product cannot be applied on warm season or southern grasses such as carpet, dichondra and St. Augustine. Trimec Broadleaf Herbicide Bentgrass Formula is the product of choice for

broadleaf weed control in bentgrass and St. Augustine. Super Trimec controls a wide range of broadleaf weeds, including such tough weeds as spurge, without repeated applications.

Mecomec® 4 turf herbicide controls clover and other broadleaf weeds. This herbicide is offered for those who prefer MCPP for a bentgrass herbicide. Mecomec 4 controls clovers, common and mouse-ear chickweed, plantain, ragweed, lambsquarters, pigweed and ground ivy.

Betamec® 4LF is the premier pre-emergent herbicide applied to control Poa, crabgrass, goosegrass, henbit, lamb's quarters, redroot pigweed and shepherd's purse, according to the company. The new "LF" formulation greatly improves spray tank compatibility with such other lawn care products as Trimec, high nitrogen liquid fertilizers, Atrazine, Dursban and Diazinon. When two or more lawn care products are going to be applied with Betamec 4LF, always run a compatibility test first. Spontaneous emulsification assures easy mixing with water to provide a uniform mixture of Betamec 4LF and thus eliminates problems of spray tank layering — even in those systems with limited agitation, according to the company.

Write 107 on reader card

Nice'n Green Plant Foods offers a NG 15-3-6 balanced liquid fertilizer composed of urea, ammonium polyphosphate and muriate of potash, a great economical spring and fall blend. The company also has a NG 15-3-0



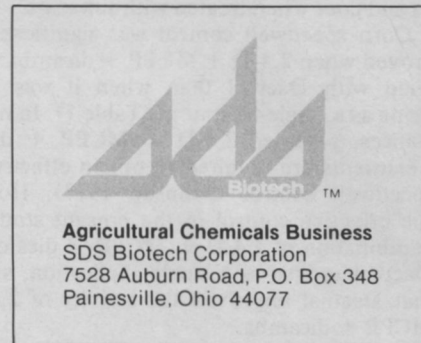
liquid nitrogen solution composed of urea and ammonium polyphosphate. It is designed for use in combination with GSL potassium sulphate (0-0-52-18S) soluble fine. This combination should be used when heat stress begins but is not severe enough to warrant the use of urea formaldehyde solutions.

Nice'n Green also offers a NG 10-10-10 starter fertilizer and tree feeding solution. This balanced product is derived from urea, ammonium polyphosphate and muriate of potash. It is designed for use as a starter fertilizer on seedling turf and also used for deep root feeding trees and ornamentals. NG Micronutrient Solution is designed for use on turf and in combination with 10-10-10 for deep

root feeding trees and ornamentals. This chelated product is composed of the following: 5% iron, 4% sulphur, .5% zinc, .5% magnesium, .25% copper and .25% manganese.

Write 110 on reader card

Dacthal® W-75 preemergence herbicide from **SDS Biotech Corporation** is excellent against crabgrass. What is more, it is the only



preemergence herbicide labeled to control troublesome spurge. The product is just as effective against goosegrass, *Poa annua* and 20 other annual grasses and broadleaf weeds. Weeds are killed as soon as they germinate. Since it is not water soluble, Dacthal W-75 will not leach during wet weather.

Write 111 on reader card

Lebanon Chemical Corporation offers a gamut of products for the lawn care professional. Products like Lebanon 28-6-12 (11 CRN) offer an excellent balance of NPK for today's turf requirements combined with the controlled release features of Sulfur-coated urea. Lebanon 28-6-12 (11 CRN) offers an ideal balance of NPK, according to the company. All the nitrogen (40 percent) from SCU will feed your turf the same year it is applied.

Water soluble 20-20-20, 28-7-14 and 33-0-16 spray grades meet all water soluble fertilizer needs. They dissolve completely in cold water and are compatible with all common spray materials. They can be added to nitrogen for needed phosphate and potash requirements.

Lebanon "Pro" 32-4-8 (12 CRN) is an excellent balance of NPK for today's high quality turf requirements combined with the controlled release features of sulfur coated urea. The product is formulated to give quick response plus extended feeding. "Pro" 28-6-12 features potash at 12 percent, which is the ideal level for improving wear resistance and helping to reduce drought, disease and winter damage. "Pro" 27-3-5 is a unique combination of sulfur coated urea and methylene ureas in a balance with water soluble

(continued on page 79)

Benefin-based products put you time and money ahead.

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Regal Chemical Co.
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CHEMICAL BUYING SURVEY RESULTS

Last month we sent out 300 surveys to a random sampling of our readership to gauge their chemical buying habits. This second annual survey consisted of eight fill-in-the-blank type questions directed specifically toward lawn chemical buying. Last February, the first of our annual buyer's surveys covered a broad scope of general lawn care buying intentions, including answers to questions about purchasing spray rigs, mowers and service vehicles. This year, and in succeeding years, we have opted to narrow our scope to chemical buying habits to get a more detailed picture of this particular aspect of the industry.

Surveys we have sent out in the past have generally produced excellent return rates, but this survey out-pulled all other surveys we have ever mailed. Of the 300 surveys mailed, 121 were filled out and returned — that's more than a 40 percent rate of return! This unusually large sampling allows us to

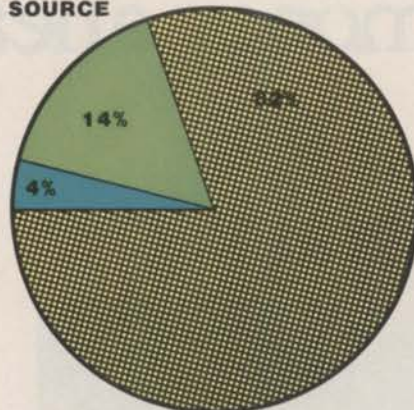
More than anything else, respondents said they wanted herbicides and fungicides with greater treatment longevity, broader spectrum of target pests and improved performance overall.

make some definitive statements about chemical buying habits.

Since the special chemical products section accompanying this survey report has been extended over two months of publication, we will do the same with the survey report. This month we will present the tabulated results of four of the survey questions and next month we will report on the remaining four questions.

In the first question, readers were asked to rank five buying decision variables in the order of their importance. They were instructed to signify the most important variable with a one, the least important with a five and use each number, one through five, only once. The five buying decision variables they were asked to rank were: chemical price, dealer service, location of distributor/supplier, product performance (past performance or reputation) and advertising or trade press product information.

PRIMARY SUPPLY SOURCE

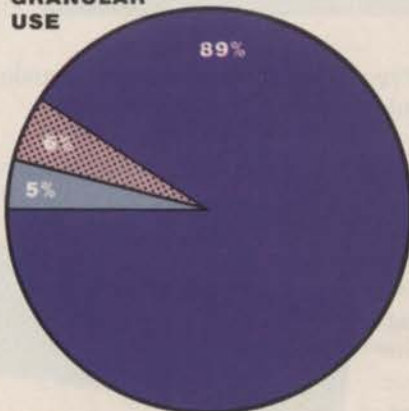


Eighty-two percent of respondents buy primarily from lawn care suppliers, 14 percent buy direct from the manufacturer and four percent buy from outside suppliers.

Last year, survey recipients were asked to make a similar ranking and their responses to this question were nearly identical to the responses we received from this survey. By averaging all the responses to each of the five variables, we arrived at a consensus on the most and least important influences upon a lawn care businessman's chemical buying decision. Most important was product performance (past performance, or reputation), next came chemical price, then dealer service, then location of the supplier and finally, least important, was advertising or trade press product information.

In the second question, we asked our

LIQUID AND GRANULAR USE



Eighty-nine percent of respondents use both liquid and granular, six percent use only granular and five percent use only liquid.

readers approximately how much they spend annually on granular lawn care products and liquid lawn care products. The respondents spent an average of \$27,856 on granular products and \$32,274 on liquid products. By noting the number of returns listing figures for both types of products or only one type of product, we could also calculate the percentage of operators who use both granular and liquid products, only granular products and only liquid products: 89 percent use both granular and liquid, only seven percent use only granular and only six percent use only liquid.

In the third question, respondents were asked to check off their primary source of lawn care chemicals. Not too surprisingly, 82 percent listed distributors/suppliers specializing in lawn care chemicals as their primary source. However, a surprising 14 percent said they buy directly from the manufacturer. Only three percent said they buy from suppliers not specializing in lawn care products and one person said he buys his chemicals from lawn and garden stores.

In the fourth question, we asked respondents to tell us about some improvements they would like to see made in currently available lawn chemicals. Nearly every respondent took the time to jot down a sentence or a paragraph here. More than anything else, respondents said they wanted herbicides and fungicides with greater treatment longevity, broader spectrum of target pests and improved performance overall. Several people said they want less toxic products with less odor so homeowners won't be as concerned.

One person called for a safe disposal and chemical management superfund that lawn care chemical buyers would contribute to at the point of purchase "to show our customers that we are indeed concerned about their interests." Several were upset with the caliber of supplier in their area; they felt they were being taken advantage of or sold products by people who don't know their business. Many want products with better tank-mixing capability and better information on compatibility. High prices was a popular complaint, but several wrote "none," indicating they thought the industry served their chemical needs just fine, thank you.

Well, how have your chemical buying habits compared with our respondents so far? Check back with us next month and compare notes again when we report on the remaining four survey questions! — *Tim Weidner*

PRODUCTS

(continued from page 76)



nitrogen to give quick response with the safety of SCU and UF for longer-sustained feeding.

Write 112 on reader card

Plant Marvel Laboratories, Inc. offers 10-20-30 Potash Special, an excellent late season fertilizer to harden-up turf before winter stress sets in. Alleviates brown patch disease, dollar spot and "melting out." Restores balance to potash-deficient turf, for improved disease-resistance and better fibrous strength. It will help the turf stand up to heavy traffic, stress

and hot, dry weather.

The company's 25-0-25 No Phosphate Special balances soil having excess phosphate. It promotes rapid top growth and extensive root development. Lawn Marvel 28-18-8 is a superior all-purpose feed for fairways and lawns. Excellent on steep slopes where rain causes considerable runoff of dry fertilizers. The company's 13 percent iron chelate is formulated as a turf nutrition supplement; 13 percent iron chelate corrects iron chlorosis in turf.

Write 113 on reader card

Union Carbide Agricultural Products Company, Inc. says Sevin® carbaryl is broadly registered and controls over 25 lawn and turf pests, including some of the most damaging. Sevin carbaryl ranks low in toxicity to people, birds, animals and fish, when compared to other insecticides and it leaves no lingering unpleasant odors.

Water-based Sevin SL is especially good for lawn care specialists because it is easy to handle, saving operators preparation and clean-up time. It is compatible with most fungicides, miticides and insecticides. For mole cricket problems, Sevin 20 percent Bait is an outstanding control choice.

Also from Union Carbide, Weedone DPC turf herbicide gives applicators the weed-killing power of 2,4-D and dichlorprop in a low-volatile ester formulation. Weedone DPC also offers you great flexibility in scheduling your weed control program. From early spring to late fall, apply the product to control broadleaf weeds whenever they are actively growing. It can also be mixed with fertilizers for time-saving "weed and feed" treatments. Weedone DPC controls more than 60 different annual and perennial broadleaf weeds.

Write 109 on reader card

3M Agricultural Products claim a single 1/2-pint per acre application of Embark plant growth regulator arrests *Poa annua* seedhead development deep within the stems. Also, research shows you gain other important advantages as a result of arresting seedhead development. Plant energy, instead of going into stems and seeds, stays down in the roots improving root-to-shoot ratios and resulting in better turf vigor, according to the company. Controlling seedheads will strengthen root systems, enhance summer color, increase summer vigor and minimize early discoloration.

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BURNING QUESTIONS

(continued from page 39)

have some sense of what your budget should be relative to marketing, not just your advertising costs, but also your sales and management costs that should be allocated to marketing?

Some franchising companies will tell you this isn't important in the beginning. If they do, take a long look at them. While it may be more comfortable to get the trucks out and rolling and make some money, in the long run, the companies that are successful are able to find out why they were successful. In addition, they started with a strong strategic marketing plan and worked from it, generating information that helped them in succeeding years. No one is too small to work sloppily if they wish to grow.

The areas of advertising, personal sales and information management should be aided by getting into a franchise situation.

Marketing, in the areas of planning, advertising, personal sales and information management is an area that should be aided by getting into a franchise situation. If this isn't something offered by a potential franchisor, the franchisee should ask himself why he should buy the franchise. Leaving out this type of management control indicates that the franchisor may have some gaps in overall planning which will come back to haunt you later. If the above areas are covered, you should have a much stronger chance for success and be able to explain why you are a success.

Parting questions. Realizing that we have asked a wide range of franchising questions to consider, we should finish with several that are extremely important, but often overlooked in the excitement of going into business for oneself. What are the commitments that you make and the ones that you receive when you sign the franchising agreement? Particularly important is the issue of what sort of things you get after the first few years. In starting up, you may be helped tremendously because you lack expertise in certain areas. The basic question becomes, and it is difficult to assess in the beginning, what sort of things will you be receiving four or five years down the road that will make you want to remain a franchisee?

If most of your help from the franchisor is in the first two or three years, is it worth it to you to give a percentage of

your income to the franchisor for years to come for the help he gave you in the first three years? Answering this question is difficult, but if considered at the beginning of a relationship in franchising, the answer to it should help prepare you for most eventualities.

Franchising is one possible mode of opening a lawn care business, as well as expanding an existing business. The issues posed and questions raised apply to starting your own operation in this industry as well. We hope that by giving you an outline from which to start your evaluation, that you will be

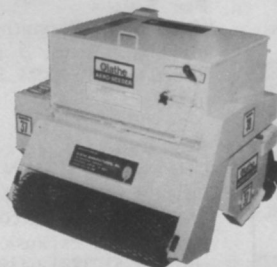
better able to become a professional and profitable company in the lawn care industry.

Ed Wandkte, John Linkhart and Rudd McGary are senior consultants for All-Green Management Associates, consultants specializing in the area of strategic and tactical planning within a diversified range of lawn service and related companies. If you would like more information from this firm, write All-Green Management Associates, 70 North Wall Street, Columbus, OH 43215; or call 614/224-LAWN.

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The March issue of *American Lawn Applicator* magazine will be packed with more timely and informative articles. First we'll take a look at spraying systems, featuring product profiles, specifications and pricing, along with a report on what operators like and dislike about their rigs. We'll also explore the current trends in fertilizing — granular vs. liquid. Who's using what? What are the successes and failures of these chemicals? Which are more cost efficient? Then we'll analyze the pitfalls and opportunities of growth through acquisition — what do lawn service entrepreneurs look for in buy-outs? What do they pay? It's all in next month's issue — look for it!

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