

Seeding a licensable home improvement?

Can seeding of a home lawn be classified as a "home panies' improvement" and should lawn care businessmen who apply seed as part of their lawn care program be licensed by a state regulatory agency?

At present, the answer to this question in Maryland is "yes." But meetings and discussions being held right now could change that situation in the future.

Thomas Emenizer is executive director of the Maryland Home Improvement Commission. He told LAWN CARE INDUSTRY that in the past the Commission has taken the stance that since seeding adds value to a property, it comes under the jurisdiction of the Commission. And he says that lawn care businessmen who apply seed in that state have to be licensed by the Commission.

He also said that lawn mowing and applications of fertilizer and pesticides does not, in

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MARKETS

\$300-600 million spent on turf maintenance in New York, study shows

As much as \$600 million could be the total maintenance expenditure for turfgrass in New York State, according to a recent study conducted by Cornell University.

Between \$190 million and \$380 million of this total figure is spent on residential properties, the study showed. Figures were released at the Professional Turf and Landscape Conference held recently at the Tappan Zee Inn in Nyack, N. Y.

The study, conducted by J. Gruttadaurio, E. Hardy and A. S. Lieberman of Cornell, showed that there is a total of 1.18 million acres of turfgrass in New York State. More than 763,000 acres of

to page 14

Indiana state fertilizer law could squeeze smaller companies

X-tra copy
James B. Beard
cm

A February 1 notice to Indiana lawn care companies explaining the requirements of that state's Commercial Fertilizer Law stands to increase substantially the paperwork for lawn care companies, and even force some of them out of business.

One of the biggest concerns of lawn care businessmen in that state is the labeling section of the law enacted in 1953. The notice, from the office of the Indiana State Chemist and Seed Commissioner, said:

"The fertilizer law provides that fertilizer may be distributed only when properly labeled with (a) the brand and grade, (b) guaranteed analysis (c) net weight and (d) name and address of registrant. This information must accompany all distribution of fertilizer without exception, whether packaged or bulk, dry or fluid, and be supplied to the purchaser at time of delivery."

According to Dr. Ray Freeborg, a turf professor at Purdue University, West Lafayette,

Ind., the law views lawn care companies as distributors of fertilizers, and customers as purchasers.

The notice went on to say: "Micronutrients and pesticides incorporated into the mixture must be guaranteed and appear within the guaranteed analysis statement. Micronutrient guarantees must be expressed in terms of the element and pesticide additives must be expressed in terms of the active pesticidal ingredient. Accepted common names for pesticide ingredients may be used in lieu of chemical names. Brand or trade names of pesticides are not acceptable unless they coincide

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PURDUE

Starting out in lawn business analyzed at Midwest conference

Probably almost as many people were talked out of the lawn care business as were talked into it after hearing a panel of successful lawn care businessmen discuss their start-up blunders and successes at last month's Midwest Turf Conference at Purdue University, West Lafayette, Ind.

More than 500 turf managers attended the three-day confer-

ence March 12-14, and almost 200 persons packed the seminar room for the all-day lawn care session on the second day of the conference.

Those 200 lawn care businessmen got an earful of what to do and what not to do in the lawn care business from people who have already been through the growing pains of starting up a lawn care business.

As an added bonus, many of the Purdue turf alumni in attendance got a chance to see a victory by that university's basketball team over Dayton in the National Invitational Tournament. Conference coordinator Dr. William Daniel had last-minute tickets for sale and made them available to conference attendees.

Growing fast. Joe Bredeson, Swift Agricultural Chemicals Corp., kicked off the lawn care sessions with facts and figures to back up the industry's average 25 percent growth per year.

"If you check the Yellow Pages," Bredeson said, "every year you see three companies go out of business, but eight new ones coming in. The people who are not professional are the ones falling by the wayside."

Bredeson said that between 20 and 25 percent of the lawn care's businessman's gross is spent on fertilizers and chemicals, and that the businessman

PESTICIDES

EPA orders halt on sale, use of 2,4,5-TP

The federal Environmental Protection Agency (EPA) has declared an immediate halt to most uses of the herbicide 2,4,5-T and 2,4,5-TP (silvex), a chemical used in 275 lawn products.

The agency said that the emergency suspension was necessary because the spring spraying season was scheduled to begin soon, and that an estimated four million people could have been exposed to the herbicide.

Dow Chemical Co., Midland, Mich. a major manufacturer of the herbicide, and 10 other plaintiffs have asked for an injunction to prevent the EPA from enforcing its ban on the sale of the two herbicides.

A federal district court judge in Flint, Mich. agreed to hear a motion for the injunction on April 3, but rejected the companies' request for a temporary stay of the EPA's ban.

EPA deputy administrator Barbara Blum said the agency

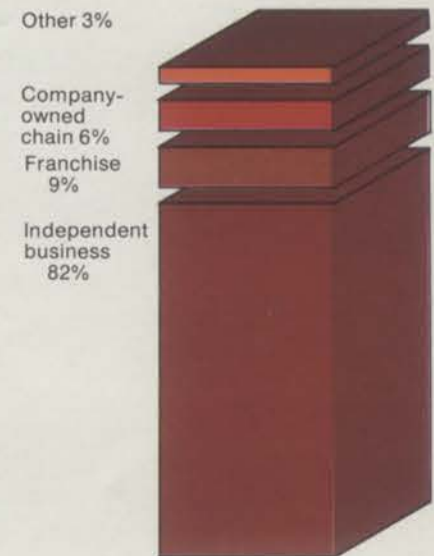
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What is your organizational structure?



For a complete market study of the lawn care industry in San Francisco, see MARKETPLACE, page 22. This is part of a continuing series of indepth looks at regions of the country where the lawn care business thrives. The study includes a profile of the city, potential lawn care customers, lawn care companies that operate there and how they go about getting and keeping customers.



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Heavy nitrogen use in spring can hamper root growth, study says

A critical time lag in production of new roots by both bermudagrass and St. Augustinegrass in the early spring has been discovered by turfgrass research at Texas A & M University.

Leaf growth of these grasses greatly exceeds root production in the first few weeks of "green

Dr. James Beard, agronomist in charge of turfgrass research, and J.M. DiPaola conducted the research study.

"We have discovered," Dr. Beard said, "that both Floratam and Tifgreen turfs in late March produced significant amounts of new green leaves without any outward signs of new root initiation.

"Instead, within one week roots changed color and began to die. There was a three- to four-week delay between old root browning and an individual new

Delaying nitrogen applications beyond spring may be a valuable practice for St. Augustinegrass and bermudagrass.

up." Heavy applications of nitrogen, the fertilizer element that encourages leaf production in plants, can worsen the situation and cause the new growth to starve, the research study showed.

Root systems of Floratam St. Augustinegrass and Tifgreen bermudagrass are now being studied in the Texas A & M University turfgrass rhizotron at facilities in College Station, Texas. The field root facility has rows of root observation boxes with one glass side facing the interior of the rhizotron to permit continuous direct root observation.

root reaching a one-foot depth during the spring of last year.

Dr. Beard said that the lack of a strong root system in the spring increases the susceptibility of these warm-season turfgrasses to injury from low-temperature, pesticides, drying winds, traffic, diseases, insects and iron deficiency.

He said that delaying nitrogen applications beyond this critical period may prove to be a valuable practice for these two turfgrasses. Also, early potassium applications may prove to be beneficial, because potassium fertilization promotes root growth.

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MEMOS

Gas availability and lawn care: Newspaper headlines across the country have been trumpeting news of cutbacks of gas supplies and price increases and lawn care businessmen have been discussing what it will do to the industry whenever they get together. Dick Wood of Morral Chemical Co., Morral, Ohio, a distributor for Ashland Chemical Co., feels that it will mean that homeowners will be staying closer to home and paying more attention to their landscapes. And he feels this will mean more business for the lawn care industry.

Gordon Ober, general manager of Davey Lawnscape Service, a division of Davey Tree Expert Co., Kent, Ohio, says that a price increase of one cent at the gas pump means increased gasoline costs of almost \$50,000 for the Davey fleet of trucks across the country, something to be reckoned with. And John Latting, of Professional Turf Specialties, spray tank truck manufacturer based in Normal, Ill., says that many units in the future will be manufactured with the capability to adapt to diesel fuel if the gas crunch gets any worse.

How to borrow money: We get a lot of calls in the offices of LAWN CARE INDUSTRY from people like David Harvey, owner of Reno Green Landscaping, Reno, Nev., asking for information about how to go to a bank to get a loan to expand their business. Global Enterprises recently announced the publication of a new report — *How to Borrow Money from a Bank: A Banker Reveals Secrets You Need to Know for Successful Borrowing* — that might provide some help for lawn care businessmen. The publication addresses the issues that every borrower needs to be familiar with in order to be assured of receiving a loan. It is available from Global Enterprises, Box 539, Dept. 30A-14G, Baxter Springs, Kan. 66713.

The value of landscaping: A recent research report published by the Nursery Marketing Council says that one benefit in living plants, lawns, related products and services named by 91 percent of the consumers interviewed is "appearance and beauty." Second on the list, mentioned by 41 percent of the consumers is "satisfaction and pride." "Adds property value" was a benefit volunteered by 27 percent of the consumers interviewed. This may give lawn care businessmen a better idea of how to design their promotional copy.

Liquid lawn care competition? A Medina, Ohio firm is beginning what it hopes will be a new trend in lawn care for the homeowner. Heritage House Products Corp., says it has taken the liquid lawn fertilizer commonly used by professional lawn care firms and packaged it for consumer use. Cleveland is the first major area to be tapped for widespread marketing of the product, according to company vice president Carl Fazio, Jr. Name of the product is Liqui-Lawn.

Home building skid: New home construction plunged in February for the second consecutive month to the lowest level in nearly 2½ years, the Commerce Department reports. Housing starts dropped to an annual rate of more than 1.411 million units in February, the lowest since starts of 1.401 million were reported in July 1976. "It's the beginning of the housing recession," a spokesman for the National Association of Home Builders said.

More help for nutsedge control: It was reported last month in LAWN CARE INDUSTRY that BASF Wyandotte Corp., Parsippany, N.J. gained label clearance for its Basagran herbicide for control of yellow nutsedge on turf. Ernest Koch of Stauffer Chemical Co., Westport, Conn. reports that work was started in 1977 and is continuing by his company for a herbicide that will also control yellow nutsedge, which should be good news for the lawn care businessman.

"A ticking time bomb": "Like a ticking time bomb" is the way John McDaniel, University of Delaware extension pesticide specialist refers to poorly stored pesticides. So many accidental things can happen to pesticides left in busy areas, he said. They may be knocked over, the can may be punctured, or the paper container may be torn. Labels may be lost through just falling off, becoming stained or unreadable, or torn.

He says that lawn care businessmen should store pesticides under lock and key in a separate building whenever possible. If it is impossible to do this, use a locked room in an existing building for this purpose. The storage area should have at least one window and should be marked in case of fire. Pesticides should be arranged in the storage area so that herbicides are not near insecticides or fungicides. Since some liquid pesticides are rendered useless by exposures to temperatures of 40°F. or lower, some arrangement should be made to keep the storage area warm.

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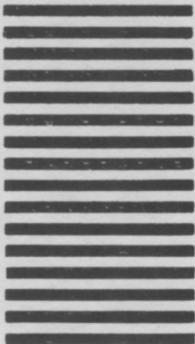
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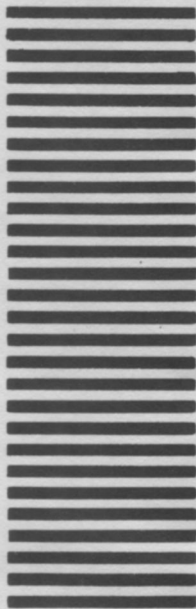
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MEETING DATES

Southern California Turf and Landscape Institute, Convention Center, Anaheim, April 18-19. Contact: Ed McNeill, 1000 Concha St., Altadena, Calif. 91001, 213-798-1715.

Arizona Turfgrass Conference, Tucson, Ariz., May 9-10. Contact: Dr. W. R. Kneebone, Professor of Plant Sciences, University of Arizona, Tucson, Ariz. 87521.

Symposium on Turfgrass Diseases, sponsored by Ohio State University, Ohio Agricultural Research and Development Center, ChemLawn Corp., University Holiday Inn, Columbus, Ohio, May 15-17. Contact: Dr. P. O. Larsen, 2865 E. Orange Rd., Galena, Ohio 43021, 614-422-6987.

Texas A & M University Turfgrass Research Field Day, TAMU Turfgrass Field Lab, College Station, Texas, May 24. Contact: Dr. Richard Doble or Dr. James Beard, Department of Soil & Crop Sciences, Texas A & M University, College Station, Texas 77843, 713-845-1551.

The Fertilizer Institute Marketing Conference, The Greenbriar, White Sulphur Springs, W. Va., June 10-13. Contact: Doug Culkin, TFI, 1015 18th St., N.W., Washington, D.C. 20036, 202-466-2700.

American Seed Trade Association, Annual Conference, Hyatt Regency Hotel, Washington, D.C., June 24-28. Contact: Association, Executive Building, Suite 964, 1030 15th St., N.W., Washington, D.C. 20005.

Michigan Turfgrass Field Day, Crops Barn, Michigan State University, East Lansing, July 10. Contact: Dr. John K. Kaufmann, 322 Agriculture Hall, MSU, East Lansing, Mich. 48824.

American Sod Producers Association Summer Convention and Field Days, Hilton Inn East, Columbus, Ohio, July 18-20. Contact: Bob Garey, ASPA, Association Building, 9th and Minnesota, Hastings, Neb. 68901, 402-463-5691.

Penn Allied Nursery Trade Show, Hershey Convention Center, July 24-26. Contact: S. Howard Davis, 169 W. High St., Carlisle, Pa. 17013, 717-243-1786.

Massachusetts Turf Field Day, South Deerfield Turf Plots, July 25. Contact: Dr. Joseph Troll, Stockbridge Hall, University of Massachusetts, Amherst, Mass. 01003, 413-545-2353.

Illinois Landscape Contractors Association Annual Summer Field Day, Kankakee Nursery, Aroma Park, Illinois, August 8. Contact: Carole Rachesky, 665 Forest Ave., Glen Ellyn, Ill. 60137, 312-858-8574.

34th Annual National Hardware Show, McCormick Place, Chicago, August 13-16. Contact: Samuel Black, 535 N. 5th St., Reading, Pa. 19601, 215-373-4267.

Iowa Turfgrass Field Day, Iowa State University, Ames, August 14.

Central Plains Turfgrass Foundation, Turfgrass Field Day, Kansas State University Turf & Research Plots, Manhattan, August 15. Contact: Dr. Robert Carrow, Department of Horticulture, Waters Hall, Manhattan, Kan. 66506, 913-532-6170.

Rhode Island Turfgrass Field Day, University of Rhode Island, Kingston, August 22. Contact: Dr. C. R. Skogley, Department of Plant & Soil Science, University of Rhode Island, Kingston, R.I. 022881.

The Fertilizer Institute Trade Fair, Stouffer's Riverfront Towers, Sheraton St. Louis and Mayfair Hotel, St. Louis, Mo., Aug. 22-23. Contact: Doug Culkin, TFI, 1015 18th St., N.W., Washington, D.C. 20036, 202-466-2700.

Illinois Turfgrass Field Day, University of Illinois, Champaign-Urbana, Ill., September 11. Contact: Dr. John Street, 106D Horticulture Field Lab, University of Illinois, Champaign-Urbana, Ill. 61801, 217-333-2123.

Garden Industries of America Conference and Trade Show, Convention and Exposition Center, Cincinnati, Ohio, Sept. 14-16. Contact: Paul Anderson, Box 1092, Minneapolis, Minn. 55440, 612-374-5200.

Northwest Turfgrass Conference, Pope and Talbot Convention Center, Port Ludlow, Wash., Sept. 24-27. Contact: Dr. Roy Goss, Western Washington Research and Extension Center, Puyallup, Wash. 98371, 206-845-6613.

Florida Nursery and Allied Trade Show, Expo Hall, State Fairgrounds, Tampa, Fla., Sept. 28-30. Contact: FNATS, Inc., P.O. Box 16796, Temple Terrace, Fla. 33687, 813-985-8511.

Central Plains Turfgrass Foundation Annual Meeting, K-State Union, Kansas State University, Manhattan, Oct. 3-5. Contact: Dr. Robert Carrow, Waters Hall, Manhattan, Kan. 66506, 913-532-6170.

Florida Turfgrass Association Annual Meeting, Holiday Inn Central/Curtis Hixon Hall, Tampa, Fla., Oct. 14-17. Contact: David DeBra, 1520 Edgewater Dr., Suite E, Orlando, Fla., 32804, 305-425-1581.

19th Annual Southern California Turfgrass/Landscape Materials and Equipment Educational Exposition,

Orange County Fairgrounds, Costa Mesa, Calif., Oct. 17-18. Contact: Ed McNeill, SCTC, 1000 Concha St., Altadena, Calif. 91001, 213-798-1715.

Southern Turfgrass Conference, New Mexico State University, Las Cruces, Oct. 18-19. Contact: Dr. Arden Baltensperger, Department of Agronomy, Box 3Q, NMSU, Las Cruces, N.M. 88003.

Professional Grounds Maintenance Society Annual Meeting, Baltimore Hilton, Oct. 21-24. Contact: Allan Shulder, 19 Hawthorne Ave., Pikesville, Md. 212068, 301-853-2742.

National Institute of Parks and Grounds Management, Opryland Hotel, Nashville, Tenn. Oct. 28-Nov. 2. Contact: Erik Madisen, P.O. Box 1936, Appleton, Wis. 54910, 414-733-2301.

Atlantic Seedsmen's Association Annual Meeting, Belmont Hotel Golf Beach Club, Warwick, Bermuda, Oct. 29-Nov. 2. Contact: Margaret Herbst, 101 Park Ave., New York, N.Y., 10017, 212-685-5917.

South Carolina Turf Conference, Clemson University, Nov. 13-14. Contact: Dr. Landon Miller, Department of Horticulture, Clemson University, Clemson, S.C. 29631.

New York State Turfgrass Conference and Trade Show, War Memorial Stadium, Syracuse, N.Y., Nov. 13-15. Contact: Ann Reilly, 210 Cartwright Blvd., Massapequa Park, N.Y. 11762, 516-541-9034.

Texas Turfgrass Conference, Texas A & M Conference Center, College Station, Texas, Dec. 3-5. Contact: Dr. Richard Doble, Department of Soil and Crop Science, Texas A & M University, College Station, Texas 77843, 713-845-1551.

Delaware Turfgrass Association Annual Meeting, Hercules Country Club, Dec. 4. Contact: Dr. William Mitchell, Agriculture Hall, University of Delaware, Newark, Del. 19711.

Ohio Turfgrass Conference, Cincinnati Convention Exposition Center, Dec. 4-6. Contact: Dr. David Martin, 1827 Neil Ave., Columbus, Ohio 43210, 614-422-2592.

Oklahoma Turfgrass Research Foundation Annual Meeting, Lincoln Plaza, Oklahoma City, Okla., Dec. 6-8. Contact: Dr. R. V. Sturgeon, 115 Life Science East, Oklahoma State University, Stillwater, Okla. 74074.

Illinois Turfgrass Conference, Ramada Inn Convention Center, Champaign, Ill., Dec. 11-13. Contact: Dr. John Street, 106D Horticulture Field Lab, University of Illinois, Champaign-Urbana, Ill. 61801, 217-333-2123.

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Orland • Coastal Ag Chemicals

Santa Ana • Moyer Chemical Company
Santa Barbara
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Santa Clara
• Eagle Chemical Company

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• Purity Chemical Products Co.

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• Los Angeles Chemical Co.

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Colorado Springs • Gorbey, Inc.
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• Old Fox Chemical, Inc.
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Trimec is not a herbicide newcomer; it has been a leader for years. Repeated tests have proved it's the most effective, most cost-efficient, widest-spectrum broadleaf herbicide on the market. Yet it contains absolutely no Silvex. It never did.

Trimec is a unique, patented formulation of 2,4-D, Mecoprop and



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Liquid/dry: Pros/cons

Until recently, most of the fertilizers used in turfgrass management were in a granular formulation. Due in large part to the emergence of the lawn care industry, liquid and powdered materials are now widely promoted and utilized.

According to Dr. Robert N. Carrow, turfgrass specialist at Kansas State University, each formulation offers unique advantages under certain circumstances, but may not be the best materials under other conditions. If the lawn care businessman is to select the proper formulation, he should understand the pros and cons of each type.

Granular formulations. Many different types of nitrogen carriers are available in the

granular form. In addition to many common granular nitrogen carriers, many mixed fertilizers are available which contain two or more different carriers mixed together. For example, he said, a mixed fertilizer may contain 50 percent of its nitrogen from ammonium nitrate and the remainder from ureaformaldehyde.

Turfgrass response to a particular granular fertilizer depends upon its characteristics (i.e., slow-release, fast-release, long-residual, short-residual, etc.)

Careful selection of a solid fertilizer can allow nitrogen availability to closely match the plants' needs. In spring and fall a higher proportion of nitrogen could be of the fast-release type for cool-season turf, while slow-

release forms are appropriate for summer. The ability to release nitrogen over an extended period is an advantage for many granular products.

Dr. Carrow said that granular materials have some disadvantages if not used properly. Physiological drought, leaching and excessive stimulation of growth can occur if water-soluble materials are applied at too high of rates. Volatilization and foliar burn are likely to result if water-soluble forms are not adequately watered into the soil.

Liquid formulations. In granular materials, the nutrient carrier is a solid, while in liquid fertilizers the carrier is water. Since the nutrients are dissolved in water, absorption can occur immediately upon contact with leaf surfaces or roots.

Most liquid fertilizers are combinations of salt fertilizers.

Many different analyses can be produced by various com-

binations. In addition to the three major nutrients — nitrogen, phosphorus and potassium — other ingredients can be claimed such as calcium, magnesium, iron, manganese, boron, copper, zinc, molybdenum, sulfur, vitamins, wetting agents, growth stimulants and chlorophyll.

Liquid fertilizers can be applied by soil drench or foliar feeding.

Soil drench. This involves application of nutrients in sufficient water so that a majority of the nutrients are washed into the soil. Absorption of the nutrients by the plant is predominantly through the root system. This is the method used by lawn care businessmen that have spray operations.

Advantages of applying liquid fertilizers as a soil drench are:

- Ease and efficiency of application are major advantages. On small sites such as a home lawn a soil drench can be applied quickly and uniformly with a sprayer on a hose connected to a spray tank. Application time can often be reduced to one-half the time it takes to apply granularly.

- Other chemicals can often be mixed into the tank and therefore further reduce application time.

- Nutrients are readily available to the plant. However, some nutrients such as phosphorus and iron can be quickly absorbed by the soil particles and become available.

Dr. Carrow says that precautions and disadvantages of a soil drench are:

- Large volumes of water are required. If less than 25 gallons of water per 1,000 square feet is used, then nitrogen should be restricted to one-half pound of nitrogen or less per application. Applications of over 1.5 pounds of nitrogen per 1,000 square feet should not be attempted even with large quantities of water.

- Since the nutrients are water-soluble salts, they have all the disadvantages of water-soluble granular materials. Leaching can occur from excessive irrigation or precipitation. Foliar burn may result if too little water is applied. It is a good practice to irrigate after a soil drench. Nitrogen residual is usually only two to four weeks. If higher rates of nitrogen are used, excessive stimulation of turf can occur.

- Excessive thatch can inhibit nutrient penetration. This is especially a problem during hot, dry periods where salts may accumulate in the thatch layer and cause salt injury.

- Liquid fertilizers generally have a marked effect on soil pH. Some materials increase pH, but most reduce pH, especially urea and ammonia forms of nitrogen. Check the pH periodically and apply limestone if necessary.

- If a complete (has N,P and K) liquid fertilizer is consistently used, phosphorus and potassium levels may become excessive. This could result in *Poa annua* or clover encroachment. Also, liquid fertilizers containing micronutrients should not be applied unless a specific deficiency is evident.

- Frequent, light fertilization

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We are totally committed to product development and field assistance. Your Trimec distributor also has a complete family of products for fungus control, soil problems, and more. A specialist himself,

he has a direct line to our Technical Department, our Lawn Care Division and its field manager.

Even if yours is a one- or two-man lawn service, your Trimec Distributor wants to help you. For starters, he'll sell you as little as a gallon of Trimec to test. And include a complimentary supply of Trimec door-hangers with important weed-kill information for your customers. Many lawn care operators have told us that this literature stops many complaints and call-backs, while enhancing their own image as a first-class service.

Make Your Move Today

Now that Silvex is suspended, this is the perfect time to make the switch to Trimec; to discover the many other superior products and the technical assistance available at your Gordon distributor. Give him a call . . . let him help you grow.

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- NEVADA: Las Vegas: Clark County Whol. Merc. Co., North Las Vegas: Las Vegas Fertilizer Co., Inc.
- NEW HAMPSHIRE: Hooksett: Turf Specialty, Inc.
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- NORTH CAROLINA: Charlotte: Seedmen, Inc., E. J. Smith & Sons, Fayetteville: Eastern Turf, Shelby: Porter Brothers, Inc., Winston Salem: Goltra, Inc.
- NORTH DAKOTA: Fargo: Tessman Chemical Northwest
- OHIO: Canton: Letherman Seed Company, Cincinnati: Century Toro Dist., Inc., Thornton-Wilson, Inc., Cleveland: Sidney L. Dryloos Company, U. S. Garden Sales, Inc., Columbus: Century Toro Dist., Inc., W. R. Grace & Company, Dayton: Century Toro Dist., Inc., Elyria: Lakeshore Equipment & Supply Co., Findlay: Desco Chemical, Inc., Mantua: John R. Skinner Company, Piqua: Midwest Burlap & Grower's Supply Co., Tiffin: Earl J. Crane, Inc., Toledo: Century Toro Dist., Inc.
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- UTAH: Salt Lake City: Morgro Chemical Corp.
- VIRGINIA: Chesapeake: Turf & Garden Div., Harrisonburg: Wetsel Seed Company, Richmond: Wilson Feed Company, Inc., Roanoke: Agri-Turf Products Co., Inc., Miller Chemical & Fertilizer
- WASHINGTON: Pasco: Western Farmers Association, Renton: Pacific Agro Company, Seattle: The Charles H. Lilly Co., Western Farmers Association, Tacoma: NuLife Fertilizer
- WASHINGTON, D.C.: Lea's Green Meadows, Inc.
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- RHODE ISLAND: E. Providence: Old Fox Chemical, Inc.
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NEWSMAKERS

Three key management changes have been made in the **Davey Lawnscape Division** of the Davey Tree Expert Co., Kent, Ohio, according to company president Jack W. Joy.

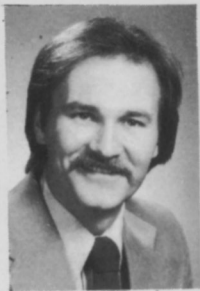
Gordon Ober was named division general manager, Richard M. Foote was promoted to production manager, and John L. Reeves became sales coordinator.



Ober



Foote



Reeves



Babroski

Davey also recently announced new Lawnscape district manager appointments. New district managers and cities are: Mark Morgan, Pittsburgh; Jim Foote, Buffalo; Dan Babroski, west Cleveland; Robert Cline, east Cleveland; Mark Van Netten, south Detroit; Dan Prospal, north Detroit; Eric Van Horn, Milwaukee; Maurice Peoples,

Rochester, N.Y. Alex Moir continues as district manager in Akron, Ohio, and Kim Schaefer continues as district manager in Philadelphia.

Dr. Robert M. Barry, technical director for **R. W. Collins, Inc.**, a Florida-based company with chemical lawn care and pest control divisions, has announced the following promotions:

Jody Schaaf has been named manager of the Raleigh, N.C. branch office; Joe O'Donnell has been named manager of the Atlanta branch office; Mark Paschal and Bruce Volpe have been named assistant managers in the Atlanta branch office; and Mike Steel has been named manager of the Fort Myers Fla. branch office.

Ken Jones has been named manager and Jim King assistant manager of the **Barefoot Grass Lawn Service** outlet in Beachwood, Ohio a suburb of Cleveland. Greg Johnson is territory manager. Barefoot is based in Columbus, and the company has been utilizing heavy advertising on both local Cleveland television stations and

Ashland Chemical Co. recently held a meeting in its Columbus offices to introduce its new distributors to the company's marketing plan for the year. Distributors present at the meeting were Ed Karr, **Liquid Plant Supply** division of **Gildersleeve Fertilizer Co.**, Hudson,



Dittoe



Beatty

Ill.; Sandra J. Nelson, president of **Liqui-Lawn, Inc.**, Niles, Mich.; Robert W. Freske, **Great Plains Chemical, Inc.**, Niles, Mich.; Richard D. Wood, **Morrall Chemical Co.**, Morrall, Ohio.

Don Kingsley is owner of a new lawn care company in the Houston area named **Dr. Don's Lawn Care**. It is affiliated with **Great Plains Chemicals, Inc.**, Houston.

James and Donna Mau have started **Lawn Pride** in Hudson, Ohio a suburb of Cleveland. Primary services will be both dry and liquid applications of fertilizer and herbicides. Mau has a B.S. in agriculture from **Michigan State University** and has worked as a golf superintendent for 30 years. Scott Mau and Tom Jagusch will be lawn applicators and Wendy Mau will be working in the office.

Edward Cofa is vice president, finance for **Lawnmark Associates**, Peninsula, Ohio. Also, H. Michael Fliger is secretary. Mark E. Laube has also joined the company as a branch manager, according to company president J. Martin Erbaugh.

John Horton, president and general manager of **Horton Nursery Sales** in Cleveland, Ohio has been selected president of **Garden Centers of America**. The Horton Nursery operations will be opening two chemical lawn care branches in the Cleveland area this lawn care season, affiliated with **Sears, Roebuck & Co.**, Chicago. The company also operates two garden centers, seven Sears garden shops, a 200-acre wholesale division, and a 550-acre Christmas tree and timber farm.

Stephen Brown and Allan Nielson, both seniors in turf management at **Michigan State University** have received 1979 turf scholarships from **TUCO Div. of Upjohn Co.**, Kalamazoo, Mich.

David Murray has been named executive vice president of the **National Fertilizer Solutions Association**, Peoria, Ill. He previously had been acting executive vice president.

Ken Kubik has started **Grass Roots Turf Products, Inc.**, Mount Freedom, N.J., a turf dealer/distributor to lawn care businessmen and other turf managers.

Richard J. Dittoe has been named vice president of marketing of the **Jacobsen Division of Textron, Inc.**, Racine, Wis. Also, Roy L. Beatty has been appointed manager of communications of the company.

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Economic indicators for 1979: What lawn care businessmen think

The following report will be helpful to you because it was the result of the comprehensive survey of lawn care businessmen.

Specific forecasts of business activity are given for each month and each quarter. Forecasting is based on the information available to ENR as of this date.

Information used in preparing this report has been obtained from a survey of lawn care businessmen.

For more information on this report, contact ENR at 1200 K Street, N.W., Washington, D.C. 20004.

1979-1980

Businessmen expect the lawn care market to decline

The publication of a national economic program that the business cycle is a recession has led to a pessimistic outlook for the lawn care industry and other parts of the service sector.

According to a survey of lawn care businessmen, 60% of them expect a decline in lawn care business in 1979.

1979-1980

CPSC asks comment on insect safety standard

The Federal Consumer Product Safety Commission (CPSC) received more than 200 comments— including more than 100 from lawn care businessmen—on the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) in 1979. The CPSC is now preparing a final rule on the use of insecticides in lawn care.

For more information on this report, contact ENR at 1200 K Street, N.W., Washington, D.C. 20004.

These reports are the product of a survey of lawn care businessmen. The survey was conducted by ENR in 1979.

To obtain a complete report on the survey, contact ENR at 1200 K Street, N.W., Washington, D.C. 20004.

For more information on this report, contact ENR at 1200 K Street, N.W., Washington, D.C. 20004.

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Major metropolitan areas: Boston, New York, Philadelphia, Chicago, Detroit, Dallas, Los Angeles, San Francisco, Seattle, Denver, Chicago and Detroit.

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For more information on this report, contact ENR at 1200 K Street, N.W., Washington, D.C. 20004.

1979-1980

Survey shows soft, heavy work season

More than 50% of lawn care businessmen expect a soft work season in 1979. The survey was conducted by ENR in 1979.

To obtain a complete report on the survey, contact ENR at 1200 K Street, N.W., Washington, D.C. 20004.

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Survey conducted in 1979. For more information on this report, contact ENR at 1200 K Street, N.W., Washington, D.C. 20004.

1979-1980

Lawn care businessmen predict industry growth of 20% next year

In a recent survey, the majority of lawn care businessmen predicted that their gross revenues will grow 20% in 1980.

The survey was conducted by ENR in 1979. The majority of lawn care businessmen predicted that their gross revenues will grow 20% in 1980.

To obtain a complete report on the survey, contact ENR at 1200 K Street, N.W., Washington, D.C. 20004.

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QUICK STARTS

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For a complete survey report of the lawn care industry, contact ENR at 1200 K Street, N.W., Washington, D.C. 20004.



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Toro earnings double for second quarter

With record performances in all product categories, Toro Co., Minneapolis, has reported a 106.1 percent increase in net earnings for its second quarter.

During the same period, sales increased 72.4 percent to \$84.7 million from \$49.1 million in the second quarter a year ago.

Net earnings for the quarter improved to \$5.1 million from \$2.5 million.

While declining to project sales and earnings for the entire year, Toro chairman David T. McLaughlin said he is confident sales for the year will be in excess of \$300 million.

The company's irrigation division, which manufactures and markets automatic underground irrigation systems for residential, commercial and other markets, continued its vigorous growth, with sales in the second quarter up 51.4 percent over a year ago.

McLaughlin said current orders for walk power mowers are 20 percent higher than a year ago.

LIQUID/DRY *from page 7*

is often necessary with a soil drench since soluble fertilizers have a short residual. In mid-summer, crabgrass, foxtail and goosegrass may respond more to such frequent, light fertilization than will cool-season grasses.

- Care should be taken not to over-stimulate the lawn by too frequent fertilizations. A soft, succulent turf will result which will be less tolerant to heat, cold, drought, wear and disease stresses.

- Spray drift has often been a problem with soil drench

This article is excerpted from a speech given by Dr. Robert N. Carrow at a recent Nebraska Turfgrass Conference.

applications. However, careful selection of nozzles and good technique will eliminate this potential problem.

Foliar feeding. This is the application of small amounts of nutrients in a limited volume of water so that nutrients are absorbed through the shoot tissues. Foliar feeding has not been extensively used in lawn care or other turf management areas.

However, application of iron, magnesium, manganese and small quantities of nitrogen can be effectively applied in this manner.

The major advantage of foliar fertilization is that certain nutrients such as nitrogen, iron, magnesium and manganese can be quickly absorbed through the leaves and result in rapid color and growth responses. When conditions restrict root uptake (waterlogged soils, compaction, nutrient fixation by soils), foliar

feeding will correct nutrient deficiencies, while soil applications would be of little benefit.

A second advantage of foliar feeding is that it can often be incorporated with pesticide applications. No more than one-half gallon of water per 1,000 square feet should be used and care should be taken to insure compatibility of chemicals. A third advantage is that nutrient leaching losses are greatly reduced since only small quantities are applied at any one time.

Dr. Carrow says that disadvantages of foliar nutrient applications include:

- Only small quantities of nutrients can be safely applied at any one time. For example, nitrogen is generally applied at 0.05 to 0.125 pounds per 1,000 square feet. High rates could easily result in foliar burn for salts or phytotoxic levels for micronutrients.

to page 35

Lawns: A concept proven

by Dr. Robert W. Schery
Director
The Lawn Institute
Marysville, Ohio

One certainly would not quarrel with the botanically minded who admire kaleidoscope change in vegetation as the seasons progress, appreciating the "weeds" as well as the flowers.

The rhythm of natural events and awareness of ecological forces are sorely missing in our modern-day, largely urbanized style of existence.

That is precisely the point — most of us live in fairly confined quarters, on what is now highly disturbed habitat. By virtue of interest and training, few people are equipped to understand or enjoy nature untamed.

Thus lawns.

Lawns are an accomodative formalization of the nearby environment. They fill a niche in the evolving American lifestyle, as extravagant of space as they may seem to peoples of more populated lands.

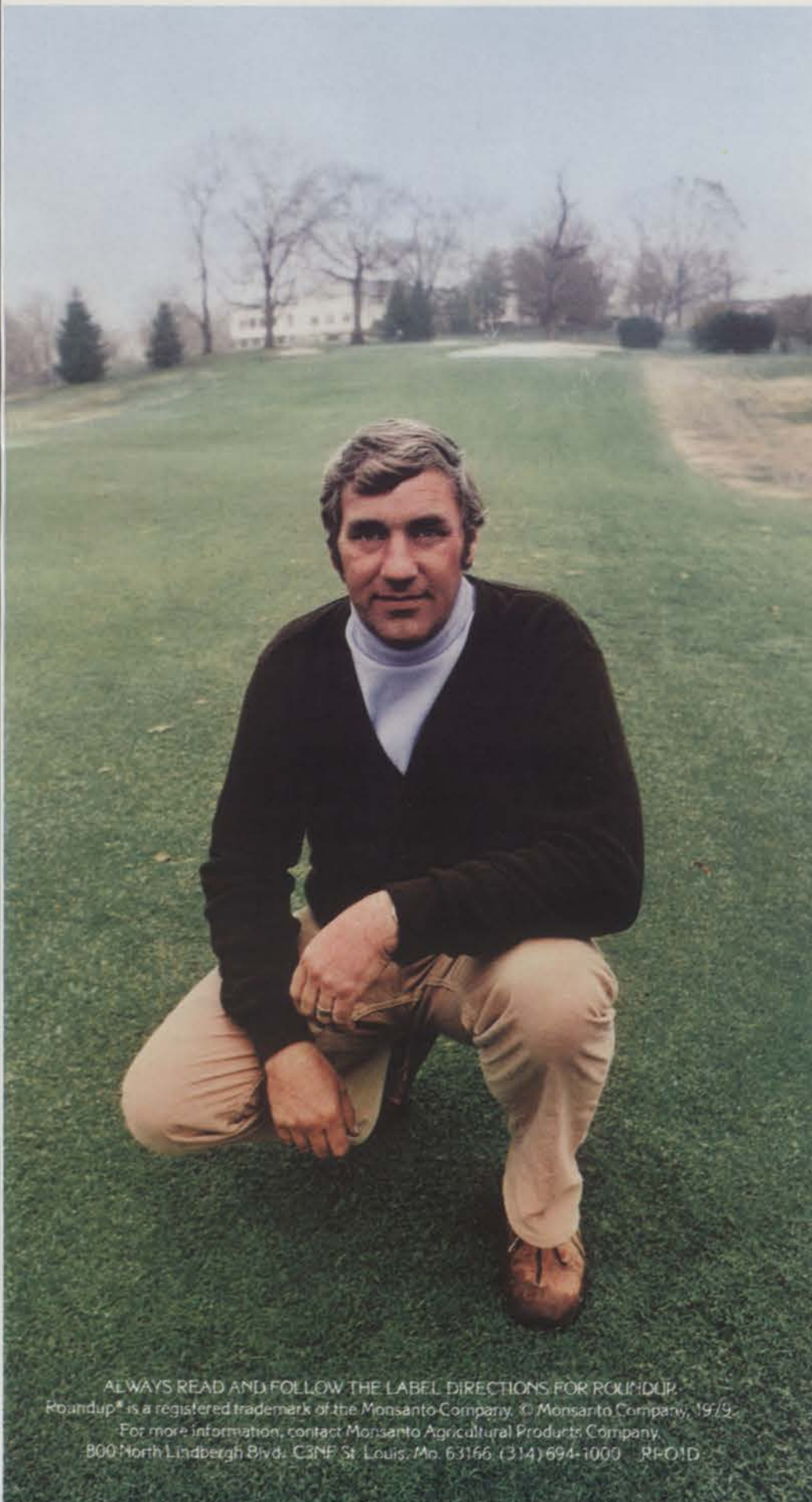
Lawns in America are a logical outgrowth of prevailing conditions, a concept of proven worth.

Questioning occurs

Yet, we hear condemnation of lawns by a vocal minority. Of course ours is an era where

to page 10

How Roundup® helped Jim Siegfried renovate this fairway in days, without closing it for one minute.



Take a good look at this good-looking fairway.

Last fall, Jim Siegfried found a way to clean it up, without tearing it up — at the height of his club's busy season. With Roundup® herbicide by Monsanto.

Jim is the Greens Superintendent at Losantiville Country Club, Cincinnati, where bermudagrass had become a serious problem on the 18th fairway. To control it, Jim applied Roundup once — while the weeds were still actively growing — right at the start of the Labor Day weekend.

"That's really 'prime time' here," Jim told us. "But after we applied Roundup, we kept the fairway in play the whole weekend, and after. The members played right over it, with no problem."

Since Roundup has no residual soil activity, and won't wash or leach out of treated areas to injure desirable plants, Jim simply took normal precautions against spray drift — and didn't worry about damaging desirable vegetation along the fairway.

Even better, he was able to re-seed right into the dying bermudagrass only 7 days after applying Roundup — without loss of playing time or inconvenience to the membership.

Reinfestation won't be a big problem for Jim, either. He knows that Roundup destroyed the rhizomes of the treated weeds, helping prevent their regrowth.

Jim thinks he'll use Roundup again this year — and apparently some club members hope so, too. "As soon as they saw how good this fairway looks, some of the members started asking when I'm going to do the same for #10, where we have some more bermuda. I'll probably tackle that with Roundup this fall."

If controlling many tough emerged weeds and grasses is a problem for you, see your local Monsanto representative or chemical dealer soon for your supply of Roundup.

Roundup. It worked for Jim Siegfried. It can work for you.



There's never been a herbicide like this before.

Circle 136 on free information card

ALWAYS READ AND FOLLOW THE LABEL DIRECTIONS FOR ROUNDUP.
Roundup® is a registered trademark of the Monsanto Company. © Monsanto Company, 1979.
For more information, contact Monsanto Agricultural Products Company,
800 North Lindbergh Blvd., C3NF, St. Louis, Mo. 63166 (314) 694-1000 RFOID

questioning is commonplace, and we would not have it otherwise.

Protest and "protectionism" run rampant. The motives have virtue, but often suffer exaggeration, until, indeed, what seems almost necessary to the dedicated proves cumbersome, costly and inconvenient for the public at large. How far should we go, for example, with safety devices on lawn mowers, to keep a few dunderheads out of harm's reach? Is it fair to make the machines doubly costly, inefficient to repair, and not facile to manipulate, for the sake of marginal safeguards?

Unbalanced views are accepted, similarly, in the environmental cause. Integrated pest management (IPM) is certainly not a new idea (various techniques for fighting pests have been integrated since time immemorial), but IPM has been distorted by many to have a "no pesticides" slant. Basic biological controls have merit; but pesticides are needed also for emergencies.

Not long ago, lawn and garden fertilization in the United States was condemned because "famine runs rampant in Bangladesh". One can sympathize with the concern, yet recognize that cessation of lawn fertilization in the United States would have no bearing on food supplies in distant parts of the world, the lack of which is due to many causes, mostly socio-economic. In a similar vein, botanical garden people have occasionally mused about the lawn unmowed, suggesting that nature be let take its course (a claim which I have rebutted elsewhere).

Is there substance for such contentions? I think not much. Lawns are no less efficient than other facets of modern living, albeit an overpopulated world is, indeed, exhausting its resources at a pellmell pace. The answer, however, lies with population control, not temporary expedients of little moment. In the context of the times it is quite natural that some power (energy) be exchanged for labor in lawn or grounds management, the same as with other aspects of a technological society. What is overlooked by those who find lawn keeping "wasteful," is that even greater resource exhaustion (as measured by environmental chaos) would accrue if we didn't take advantage of modern, mechanized and sophisticated means of managing our urban surroundings.

Lawn care procedures are not a hodge podge of unrelated activities, but rather an evolved means for managing our surroundings rather economically. The lawn ecosystem, though imposed, is very real. Lawn tending holds the system stable. Our surroundings must be handled in some fashion: What would be ecologically more efficient than the lawn?

Ecological progression

Under natural conditions, before mankind, eastern North America was largely forested, and the plains clothed with

prairie. Hardly a vestige of such virgin cover remains. Thus the original, highly stable ecosystems, for better or worse, have been completely altered by human settlement, exploitation and crop production.

The disturbances introduce many stresses, thermal changes and nutrient losses, for example. Indeed, change has been so profound that untold years would be required to regenerate plant cover similar to the original; in some cases it could not be accomplished. David Glenn-Lewin, Iowa, speaking of grazed prairie in a presentation to the Ecological Society, concludes, "The rate of revegetation is slow; it will take 200-300 years for the grazed area to return to the native conditions, and abandoned grasslands not immediately adjacent to native prairie probably never will develop into true prairie without human intervention."

Can we, then, expect our

lawns to change into something desirable, and reasonably stable, simply by ceasing to tend to them (no more mowing, fertilization, pest controls)? The answer is obviously, "no." The sophistication of lawn tending varies with owner wishes; added effort and extra expense must be incurred to maintain a monoculture. But, on the whole, practical means have been developed — and proven on the firing line — for managing our nearby surroundings conveniently.

Lawn care embraces mechanized and simplified techniques for coping with the monumental disturbances that human occupation of the land has brought about!

Measures for managing

Let's dwell for a minute upon the influences unleashed in keeping lawn.

Take lawn mowing first. Mowing is the most time-

consuming operation. Livestock no longer handles the job as it once did, but mowing need not be unduly burdensome if advantage is taken of today's excellent equipment. The job can be done quickly and easily. Most lawn keepers no doubt assume they mow to maintain attractive, carpet-like cover and usable space.

If you didn't barber your turf it would become a tangle of growth — first herbaceous weeds, then brush, then eventually trees. Thus, long range, the influence of mowing on the lawn ecosystem is mainly a matter of weed control (a weed being defined as any unwanted plant).

Now if you are going to impose vegetation control by regular mowing, ground hugging plants adapted to this sort of regime should be sought. And, indeed, they have been — the various lawngrass species. Not only do we have the Kentucky bluegrasses, the perennial rye-



grasses, the fine fescues, the bentgrasses, bermudagrasses, but intensive breeding programs yield cultivars tailored specifically for lawn conditions.

Thus have come on the market Adelphi, Arboretum, Baron, Birka, Bonnieblue, Enmundi, Fylking, Glade, Majestic, Merion, Nugget, Plush, Ram I, Sydsport and Touchdown Kentucky bluegrasses; Blazer, Citation, Derby, Diplomat, Fiesta, Manhattan, NK-200, Omega, Pennfine, Regal and Yorktown II perennial ryegrasses; Banner, Highlight, Koket and Ruby fine fescues; and many other cultivars.

Each has been selected for beauty, disease tolerance, and survival under the imposed conditions of a lawn environment.

Most homeowners prefer that the lawn be reasonably like a monoculture, being composed of similar grasses with a minimum of discordant patchiness (weeds). To achieve this requires

both encouragement of the grass and discouragement of weeds. Grass is made more competitive mainly by well-timed fertilization.

Owner interest influences pest containment measures. In most cases a reasonable natural balance can be obtained such that neither disease nor insects get out of hand. But some weeds are almost sure to contest the grass. Fortunately, selective herbicides quite effective at very light rates enable one to keep most weeds within bounds without a lot of trouble. It is much easier to keep weeds out of a mowed, fertilized turf than it is to repress them in an unmowed, unfertilized field (where a constant battle must take place to spot spray the many unwanted or damaging volunteers, some, such as Canada thistle, legally noxious).

Of course many lawn-tending refinements can be undertaken. Irrigation is essential in some

climates, but overdone can cause more problems than it cures. Thatch removal, soil aeration, attempts at growth regulation are other lawn management practices, although not always necessary for the ordinary lawn. Thus, on the whole, not many inputs are needed in order to mold the environs in a publicly acceptable fashion.

Possibly the day may come when a lawn will be an extravagance — when the land it occupies is sorely needed for other purposes. But for the moment lawns seem the most efficient, attractive, useful ecosystem that we can impose upon the disturbed lands where we dwell. Rather than decrying that lawns "contribute nothing to human health or nutrition," which is patently not true in any event, would it not be better to appreciate the many environmental and landscaping benefits that accrue from kept turfs?

FERTILIZER LAW *(from page 1)*

with the common name."

The notice gave as an example of a proper labeling for a tank mix:

2-1-1

Guaranteed analysis

Total nitrogen (N)2.0%
Available phosphoric acid
(P₂O₅)1.0%
Soluble potash (K₂O)1.0%
Iron (Fe)0.1%

Active pesticidal ingredient

Dimethylamine salt
of 2,4-D 0.02%
Diazinon0.5%

*Precaution — Do not permit children or pets to go onto sprayed grass until spray has completely dried.

Net weight delivered — pounds

The notice said that labeling information such as given in the example was the minimum required and must appear upon the invoice or a separate delivery statement provided to the customer.

Dr. Freeborg said: "This is absolutely going to create a hardship for many companies, particularly because some will be at a loss to calculate this kind of information for each tank mix."

Many lawn care businessmen also feel that when the inexperienced homeowner sees the relatively low percentages of fertilizers and pesticides in the material being applied, that they will feel they are being "cheated" by the lawn care businessman.

And of course, the increased paperwork is sure to create a burden on smaller companies and also increase costs for the larger companies. The burden of calculating analysis information will be more difficult for liquid-based companies, because analysis information is more readily available on packaged granular products.

The notice also dealt with registration and reporting to conform with the law. Each grade of each brand is required to be registered with the state chemist's office before distribution. Also, all fertilizer materials used to formulate custom mixtures must be registered.

The notice also included an application form for a permit to report tonnage of fertilizer distributed by a lawn care company. This must be completed and filed along with the registration application.

At the close of each calendar quarter, the holder of a tonnage reporting permit will be furnished two forms for reporting fertilizer tonnage. These reports must be filed with the chemist's office at the end of the month following each quarter, even though no fertilizer might have been distributed during that quarter. An inspection fee of 25 cents per ton must be paid by the lawn care company.

Dr. Robert Rund, fertilizer administrator for the Indiana state Department of Biochemistry, told LAWN CARE INDUSTRY:

"We are simply trying to upgrade the industry. Quite frankly, many lawn care businessmen have been holding themselves up as experts for years, but many of them do not know exactly what they are putting down. We want to get this taken care of before some state legislator comes in and decides he is going to do it. The idea is not to force anybody out of business with paperwork. We are willing to meet anybody halfway on this."

HIRE THE INSECTICIDE THAT LIKES TO WORK OVERTIME.

DURSBAN* brand insecticides provide unsurpassed residual control of cutworms, chinch bugs, sod webworms, and a dozen other turf pests. Both DURSBAN 2E Insecticide and double-strength DURSBAN 4E Insecticide keep working a lot longer than other turf insecticides. This residual action saves you time, trips, and labor. It also saves you money. In fact,



DURSBAN insecticides cost less than most other turf insecticides.

Ask your supplier for the turf insecticide that works overtime for you. Get

DURSBAN 2E Insecticide or double-strength DURSBAN 4E Insecticide. Just be sure to read and follow all label directions and precautions. Agricultural Products Department, Midland, Michigan 48640.



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*Trademark of The Dow Chemical Company



DOW CHEMICAL U.S.A.

STARTING OUT from page 1

must use the best materials available.

"The lady is the mouthpiece for the family, the person you often have to sell the lawn care program to," he said, "don't neglect her. Educating the customer is still one of your biggest jobs. You have to impress upon them that you are the doctor and they are the nurse. Tell them what to do for the lawn until you are able to come around again in your program."

Over the hump. Chris and Randy Bellinger explained the thought process they went through before starting Bellinger's Professional Grounds Maintenance Co., Lafayette, Ind.

"We want to do all that we can to give you the encouragement to 'get over the hump' in your own business," Chris Bellinger said.

First, they said, you have to decide what type of business and what type of services you want to offer. Then you have to decide who your main customers are going to be, where you want to locate, and determine if there is a need for your business there.

"We sold our first two accounts with not one piece of equipment," Randy Bellinger said, "not even a truck." They



and printed 2,000 brochures for \$200. He realized a 1½ percent response on his mailing, and at the end of his first year had 230 accounts.

At the end of the year, he was going to sell his business for a \$7,000 or \$8,000 loss, but then was asked back to his job at the golf course, and worked out a deal where he could handle both jobs at once, hiring an assistant for his lawn spray business.

Blunders and successes. Jerry Faulring, owner of Hydro Lawns, Gaithersburg, Md. said that his first big mistake was promoting

Chris and Randy Bellinger: "We sold our first two accounts with not one piece of equipment to our name, not even a truck. . . . Be sure to include your labor as part of your expenses, don't get caught in the trap of allowing your labor to be your profit. . . ."

his lawn care business to the entire Washington, D.C., area through advertisements in the large *Washington Post*.

"We were servicing an area 100 miles long and 50 miles wide," he told the audience. "Some days we would drive 150 miles to service five or six accounts."

His next big blunder was offering a nine-treatment program for many of his lawns. "It's a great sales tool, but try to do it."

Faulring outlined his advice to any lawn care businessman starting out in 12 points:

• **Accounting** — "Having access to a bright accountant is a necessity," he said. "You need a realistic pro-forma and cash flow



Faulring: "With our batching system, we can buy our fertilizer in its components. . . . it is cheaper, plus it allows us greater flexibility in varying formulas. . . ."

statements to dictate your business decisions."

• **Profits** — "You need them to grow."

• **Expansion** — "Grow slowly, and you have to support it with the proper staffing as you grow."

• **Starting capital** — "You have to have six to seven months of your first year's budgetary needs in hand when starting out. Inadequate financing will catch up with you."

• **Equipment** — "You can't make it with equipment that is going to be in the shop all of the time. Buy spray equipment that will handle a fair amount of in-



Bredeson: "Educating the consumer is still one of your biggest jobs. . . . you have to get across that you are the doctor and they are the nurse. . . ."



McKeown: "The toughest decision I ever had to make was giving up that steady paycheck and going into the lawn care business for myself. . . ."



Myer: "For a cost of about \$450 I formed a corporation, because I didn't want to tie up my own assets in the business. . . . we made the transition and got things going in 60 days from the time I quit my job. . . ."

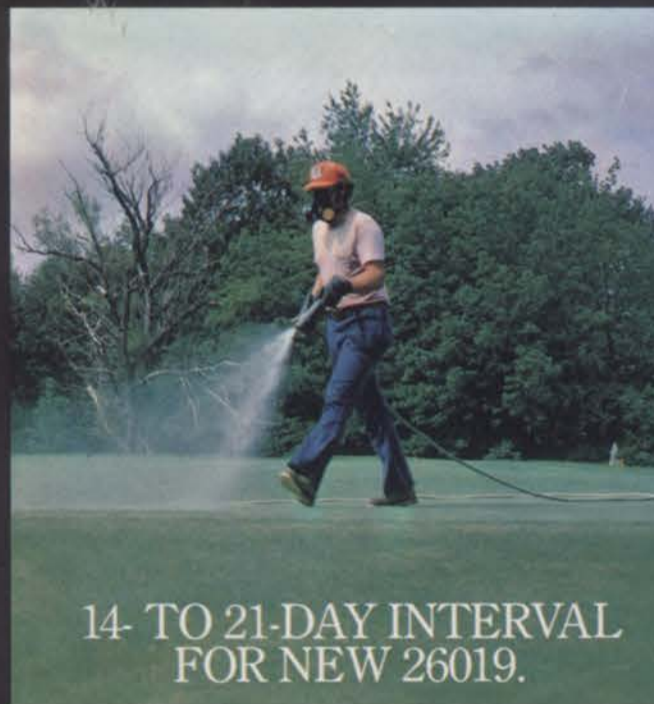
stressed that you have to have a profit to continue in business and to grow in business. "And don't let your labor be the profit," he said.

Give up the steady paycheck? The toughest decision Charles McKeown, owner of McKeown Landscaping & Nursery, Pekin, Ill. said he ever had to make was "giving up that steady paycheck" he had working as a golf superintendent.

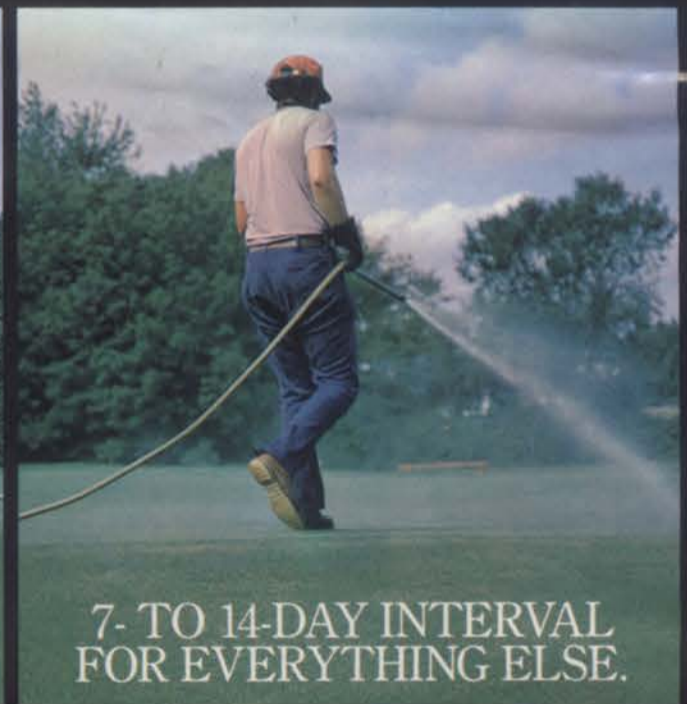
But going into business handling commercial/industrial grounds maintenance accounts has worked out well for him, he grossed \$113,000 the first year in business.

Another golf superintendent, Doug Myers, Crown Point, Ind. left his steady job to go into the lawn spray business. He spent \$17,500 for a lawn spray truck

INTRODUCING CHIPCO[®] 26019 THAT WILL OUTPERFORM WITH ABOUT HALF THE



14- TO 21-DAY INTERVAL
FOR NEW 26019.



7- TO 14-DAY INTERVAL
FOR EVERYTHING ELSE.

Here's a new fungicide that could change your whole way of thinking about broad-spectrum fungus control *and* spray intervals. Because new Chipco 26019 gives more control with fewer sprays than any of the old fungicides you've had to use.

It stops the major turf diseases—dollar spot (including benomyl-resistant dollar spot), brown patch and *Helminthosporium* (leaf spot). And it does it for up to three weeks, at low, economical rates.

It's a nice material to handle, too. It mixes well, with no residual left in the tank. It also presents no problems of phytotoxicity to turf.

Last year was a wet one, with unusually high disease pressure in most areas. Yet, Chipco 26019 performed beautifully in wide-spread tests. This year, you'll have the chance to see how well it can perform for you. So ask your chemicals distributor for this welcome addition to the popular Chipco



Jordan: "Roundup has many uses in a landscape situation..."



Person: "1½ to two cents per square foot is a ballpark figure of what to charge for hydroseeding... We have found that a 5/8-inch hose is better than a 1/2-inch hose for lawn feeding..."



Freeborg: "In a volume lawn care situation, there is more potential for the applicator to get exposure to a pesticide... mixing is often when the worst exposure occurs..."



Derrick: "I don't like a fiberglass lawn care tank, because if you get in an accident or roll it over, you are going to have problems with pesticide leakage... if a steel tank is rolled, it works like a roll bar..."



Perkins: "The EPA will now allow pesticide use against a pest not specified on the label, as long as the pesticide is labeled for control on another pest of that turfgrass. We can't recommend it though..."



Pfleiderer: "Tissue testing and plant analysis is like looking at an X-ray of a plant... it can tell you what that particular turfgrass plant needs, and it can take the guesswork out of fertilization..."



Lefton: "What the lawn care industry really needs is a mower set at a three-inch cutting height, that the homeowner can't reset without a welding torch..."

solubles."

• **Staffing** — "If you can get a better person, don't be afraid to spend a little extra to get him or her. College people are good in sales, and create a high level of professionalism."

• **Pricing of services** — "You

have to be aware of competitive prices, but you must price your services according to your costs of operation. Results rather than price will dominate the customer's buying habits."

• **Research** — "You should try any product a year in ad-

vance before you put it on too many customer lawns."

• **Service area** — "Limit your service area to the smallest market segment that can support your sales goals."

• **Market potential** — "Research your market's poten-

tial, you can't go in with a 'sky-is-the-limit' concept."

Other speakers on the program included: Dr. Donald Pfleiderer, Lebanon Chemical Co., Danville, Ill.; Jeff Lefton, agronomist for ChemLawn Corp., based in Fishers, Ind.; Dr. Ray P. Freeborg, Purdue University; Robert Person, marketing manager for Finn Equipment Co., Cincinnati, Ohio; Ed Jordan, Monsanto Agricultural Products Co., Indianapolis; Steve Derrick and John Latting, Professional Turf Specialties and Lawn Groomer, Bloomington, Ill.; and Bob Earley, editor of LAWN CARE INDUSTRY.

26019. A TURF FUNGICIDE ANYTHING ELSE YOU CAN USE, THE NUMBER OF SPRAYS.

line of turf fungicides and herbicides. It will outperform anything else you can use, with about half the number of sprays.

"YOU FOLKS HAVE SOMETHING GOOD HERE."

"The main reason I'll use Chipco 26019 is to control dollar spot. Picking up brown patch and the others is gravy, as far as I'm concerned. This is a real good new chemical."

—Bob Dickison, golf course superintendent
Upper Montclair Country Club, Clifton, N.J.

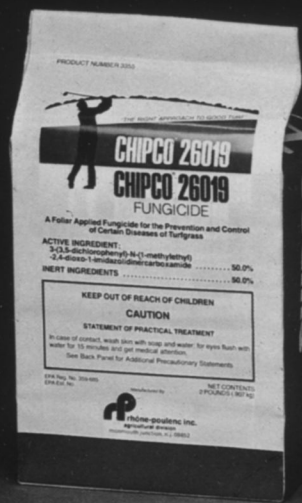
"I feel very good about this product. We tested it during one of the roughest summers in my memory. I think, over a 14-day period in August, we had very close to 10 inches of rain. It was an acid test for the material. These chemicals come and go, and some of them are short-lived. But you folks have something good here. The sprayability of Chipco 26019 is very impressive. And you only need six to 10 hours of drying time, which helps a lot during rainy periods. Some other materials require at least 12 hours."

—Paul Boizelle, golf course superintendent,
and John Fenwick, foreman,
Fiddler's Elbow Country Club, Far Hills, N.J.

"We started using Chipco 26019 in June of 1977. Before we started using it, we had very little luck with our other contact and systemic fungicides in certain areas. We were applying some contact fungicides at preventative and curative rates, and still only getting two or three days control, with the usual cold fronts coming through, followed by large outbreaks of dollar spot. Since we started using Chipco 26019, we haven't found dollar spots in these areas at all."

—Randy Wahler, golf course superintendent
Glen Flora Golf Course, Waukegan, Ill.

Rhône-Poulenc Inc. Agricultural Division,
Monmouth Junction, New Jersey 08852.



Please read labels carefully, and use only as directed.

ALCA

Maintenance report is now available

The Associated Landscape Contractors of America (ALCA) has released its new *Landscape Maintenance Report 1978*, based on some of the papers presented at its recent Maintenance Symposium in San Jose, Calif.

The 64-page book includes five papers presented, plus a sixth in the form of an insert. Papers include:

• "Tricks of the Maintenance Trade," by Herman Carruth, AAA Lawn Industries, Inc., Atlanta.

• "Management Planning and Organization Development," by Rodney Bailey, Evergreen Services Corp., Bellevue, Wash.

• "Choosing the Right Herbicide for the Job," by David Hanson, University of California.

• "Marketing and Promoting Maintenance Services," by Roger Harris, Roger Harris Associates.

• "Cost Control and Financial Management," by E. Gray Payne, Ross-Payne Associates, Chicago.

• "Problems to Avoid," by Douglas Hamilton, University of California.

The book is being published as a service to the industry, and is designed to be self-liquidating. Copies are available to ALCA members for \$5 and to non-members for \$12. Order from: ALCA Publications, 1750 Old Meadow Rd., McLean, Va. 22102.



"This coffee tastes like mud."

◆ Circle 150 on free information card

the view of the Commission, add value to property. Thus, lawn care businessmen who provide these services to the homeowner do not have to be licensed by the Commission.

"This issue is receiving a great deal of our time at present," Emenizer said. "We are attempting to define what lawn care encompasses, and attempting to coordinate it with the state Department of Agriculture for regulation of applying seed to home lawns."

A number of Maryland lawn care businessmen and others in the lawn care industry feel that the Home Improvement Commission should not be licensing them. The fee is \$75 per company, and \$15 for each salesman.

Susan Miller, president of Super Lawns, Inc., Rockville, raises a number of points on the issue.

"Any governing of turf should be carried out by people knowledgeable in the field," she told LAWN CARE INDUSTRY. "The people with the Home Improvement Commission do not have knowledge of our industry."

She is also concerned about retroactivity of the situation. Under Commission regulation, the homeowner has three years to come back to the lawn care businessman and charge that a faulty job was done, and demand satisfaction or his money back.

She is also concerned about being liable to a \$5,000 fine and up to two years in jail for violation of the licensing laws.

Jerry Faulring, president of Hydro Lawns, Gaithersburg, Md. said that there could be problems if all work done in excess of \$200 had to be by signed contracts. "Most of my customers don't want signed contracts," he said.

J. S. "Strick" Newsom, Jr., Lofts/Maryland Div. of Lofts Pedigreed Seed, Inc., Landover, Md. said: "This can only add up to bad news for the landscaper or lawn care businessman. The industry would be regulated by people unsympathetic to its problems, and the door would be open to abuse by customers who have unrealistic expectations of what a lawn care company can do."

Gus Day, chief of turf and seed programs for the Maryland Department of Agriculture, said that his department is working with the Commission on an interpretation of under what jurisdiction lawn care businessmen doing seeding should fall. He is optimistic that a decision will be made bringing them under the jurisdiction of the Department of Agriculture, where he feels it logically should be. Or at least a situation where both governmental bodies would have some

jurisdiction.

"We are not sure licensing is even needed, but we will be working on it to come to some type of conclusion," he said.

NEW YORK STUDY from page 1

this is devoted to residential properties. The study also said that there are more than 3.8 million residential lawns in New York State.

At a low estimate figure of \$50 per lawn per year, the researchers arrived at a maintenance figure of more than \$190 million. At a high estimate of \$100 per lawn per year, they estimated the maintenance cost at more than \$380 million.

High and low estimate figures for institutional lands were estimated at \$24 million and \$37.9 million; for commercial lands, \$78.2 million and \$113.8 million; for public lands, \$20.5 million and \$61.7 million. For the residential properties, dollars spent by both professionals and homeowners were included in the estimate. Estimates from commercial lawn care companies made up a large part of the survey.

2,4,5-TP from page 1

based its decision on animal test results and the high level of miscarriages among women in the Alsea Basin area of Oregon shortly after the chemical was applied to forests there.

In the complaint, Dow and the others charged that the EPA ban is based on a "seriously flawed study." The EPA said that the ban is not permanent.

ENMUNDI

New bluegrass offers disease resistance

North American Plant Breeders (NAPB), Mission, Kansas has announced the introduction of Enmundi Kentucky bluegrass, which it claims is the most disease-resistant variety on the market.

Of 89 Kentucky bluegrass varieties and blends evaluated last year at Rutgers University in New Jersey, Enmundi showed the best resistance to *Fusarium* blight, the company said.

In the same test, the variety was one of the few classed as showing good resistance to striped smut. Another serious bluegrass disease, *Helminthosporium*, has not troubled the variety anywhere, and it has also exhibited resistance to rust and brown patch, the company told LAWN CARE INDUSTRY.

With respect to adaptation, NAPB said Enmundi's cold-hardiness extends its range throughout the American North and well into Canada. In the transition zone and southward, it has exhibited excellent heat and drought tolerance, the company said.

Limited stocks of Enmundi bluegrass seed are now moving into distribution channels.



**No mixing,
no burning,
no hassle.**

Introducing FOLIAN®... the easy-to-use liquid fertilizer that's safe and effective on any kind of turf.

FOLIAN is a complete fertilizer. Its special formulation of N-P-K, sulfur and iron gets nutrients directly into grass tissue. And FOLIAN will not cause tip burn when used as directed.

Convenient to use

FOLIAN is the only turf-builder you'll ever need. It saves you time because there's no mixing or agitation required before using FOLIAN. And FOLIAN can be applied in more concentrated form than most other liquids. As a result, you can service more lawns per truckload

with fewer wasted man-hours.

A clear solution of the highest quality, FOLIAN won't settle out in your tanks. It's compatible with most pesticides, too.

Greens lawns fast

Because of its patented formulation and foliar activity, FOLIAN greens up turf quickly—faster than dry fertilizers or suspensions. And at the recommended rates, FOLIAN supplies enough residual fertilizer in the soil to keep grass green and healthy for many weeks.

Good for your business

Your customers will love the results

FOLIAN gives. And you'll appreciate FOLIAN's convenience.

Best of all, FOLIAN makes your lawn care service more valuable. It means repeat business from satisfied customers and greater confidence in you.

Give FOLIAN a try and discover how it can mean more green for both of you.

To find out more about how to get started using FOLIAN, call toll-free 800-228-2178 Omaha, Neb., 800-446-1841/800-446-1845 Hopewell, Va. or write Allied Chemical Corporation, Dept. AG, Box 2120, Houston, TX 77001.



FOLIAN® complete liquid fertilizer.

Compatibility important to determine tank mixes

Can a lawn care businessman get by without a knowledge of chemistry and still determine what pesticides are compatible in the spray tank? A knowledge of chemistry is helpful, says Dr. Paul Sartoretto of W.A. Cleary Corp., Somerset, N.J. but not essential if one masters a few rules.

A lawn care businessman

DISEASE

New turf fungicide registered by EPA

The Agricultural Division of Rhone-Poulenc, Inc., Monmouth Junction, N. J. has announced that Chipco 26019, a new turf fungicide, has been registered by the federal Environmental Protection Agency (EPA).

It is a foliar-applied fungicide recommended for preventive and curative turfgrass disease control on golf courses, sod farms and institutional areas. Approval for use on home lawns is expected by the end of this year or early next year, the company told LAWN CARE INDUSTRY.

The long 14-21 day spray interval could change turfgrass managers whole way of thinking about broad-spectrum disease control and spray intervals, Jack Davies, general manager of the Agricultural Division said.

Spraying every seven days, and in some cases even at shorter intervals, has become the practice with currently available fungicides, Davies said.

"But now with Chipco 26019," he said, "turfgrass managers can put their disease control program back on a workable schedule and save time and labor."

It is expected that the longer spray interval could make the use of the fungicide treatments better fit into a typical lawn care program.

The fungicide is registered for control of dollar spot, brown patch and *Helminthosporium* leaf spot and melting out.

COMPANIES

ChemLawn Corp. asks for share doubling

Chemlawn Corp., Columbus, Ohio asked its shareholders to increase authorized common shares to 10 million from five million at its recent annual meeting.

The company said it wants the additional shares to be available for a possible public offering but hasn't any plans as yet to use them.

Currently, ChemLawn had about 2.3 million shares outstanding and 347,714 reserved for employee option plans. The company last year serviced more than 550,000 customers, representing 110,000 acres of land, and about almost \$65 million in gross sales.

must know that the pesticides he mixes in water will retain their own identity and not react with each other. The following four rules and exceptions are helpful in determining tank mixes. However, if there is any doubt, simple tests using a glass jar can be used to check compatibility.

- **Never tank mix emulsifiable concentrates.** Not only will you incur phytotoxicity from the aromatic solvent sitting on the grass blade, Dr. Sartoretto said, but the insecticides, according to the labels, must be sprayed with large volumes of waters (10 to 30 gallons), sometimes followed up with recommendations to water them in heavily to get them down to the grubs.

The wettable powder and flowable formulations will not burn but must still require watering for grub control. However, they can be used with a limited amount of water for surface treatment and can be treated as insolubles.

- **All insolubles can be tank mixed without incurring phytotoxicity, provided the products are sprayed at recommended rates.** This permits the tank mixing of a tremendous variety of chemicals, he said. Most important of all, it allows the applicator to spray three, four or more chemicals at the same time.

- **Only one soluble chemical can be tank mixed with any number of insolubles.** If two soluble chemicals are tank mixed with or without insolubles, the rate of each soluble should be cut in half to avoid phytotoxicity.

- Soluble fertilizers and trace elements can be added individually or mixed, provided that the amount will not exceed one ounce solid per gallon tank spray mix.

- Soluble fertilizers and trace elements can be added individually or mixed, provided that the amount will not exceed one ounce solid per gallon tank spray mix. Dr. Sartoretto says

that he has used two ounces per gallon, and has not experienced any burning at the higher rate, but prefers the lower rate.

The exceptions that fall into this rule are solubles such as urea, ammonium nitrate, ammonium sulfate, muriate of potash, ammonium phosphate, ferrous sulfate, chelated iron, epsom salts, etc.

Exceptions to the rule governing compatibility of solubles is as follows: Heavy cations such as mercury and cadmium fungicides and paraquat and diquat are incompatible with heavy anionic herbicides such as DSMA, MSMA, 2,4-D, MCPP, MCPA and dicamba. Precipitation will take place in the spray tank, he said. These combinations are not likely to be used because selective weed control does not involve non-selective weed killers such as paraquat or diquat, and the applicator is not likely to use a soluble fungicide such as cadmium or mercury.

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FORD TRACTORS



Revamped fertilizer program can help control disease

Kentucky bluegrass is the predominant turfgrass species grown on home lawns in the cool-season turfgrass area. There are basically two types of the common types — those susceptible to melting-out — and the improved types — those resistant to melting-out.

The easiest way to control disease of Kentucky bluegrass is through the use of cultivars which offer the best disease resistance to the three major diseases, and through the use of sound cultural practices with these resistant cultivars.

However, this deals with the future rather than the present, and does not really concern most of you since you are in the business of taking care of lawns with existing problems. The major diseases on existing lawns are melting-out, caused by *Helminthosporium vagans*; *Fusarium* blight, caused by *Fusarium roseum*; and stripe smut, caused by *Ustilago striiformis*.

The minor diseases are powdery mildew, caused by *Erysiphe graminis*; the rusts, caused by *Puccinia* spp.; and fairy ring, caused by various fungi, mostly in the class *Basidiomycetes*.

Minor diseases. First, let's dispose of the minor diseases. Powdery mildew is a problem on some Kentucky bluegrass varieties (i.e. Merion, Baron, Fylking) when they are grown in the shade. The solution is to overseed in the shade with resistant Kentucky bluegrass shade adapted cultivars like Warren's A-34 and Nugget. Other turfgrass species which can be grown in the shade are the fine leaf fescues which do well in open shade and *Poa trivialis* can be used under dense, moist shade especially in more southern regions of the cool season grass belt. The rusts are a problem on slow growing turfs and usually due to the lack of nitrogen fertility. The rust problem can be eliminated by increasing the amount of nitrogen or the frequency of nitrogen application so the turf is mowed at least once a week. If the Kentucky bluegrass fails to respond due to cool weather, an application of fungicide like Fore, Zineb or Tersan LSR should correct the problem. (Fore and

Zineb are marketed by Rohm & Haas Co., Philadelphia; Tersan LSR is marketed by Du Pont Co., Wilmington, Del. — *Editor*).

This leaves only fairy ring as an unsolved problem. Fairy ring is really not a disease problem in the sense of a pathogen attacking a grass host; it is simply a fungus growing in the thatch or organic matter, the fungus body (mycelium) which is hydrophobic, forming a water-impervious layer. Consequently, where the main body of the fungus is located, the turf dies from lack of water. The only controls are to remove the fairy ring along with the contaminated soil and replace it with clean soil, or else fumigate the area. Fairy rings are most often found in turf areas

where tree branches, roots or trunks have not been removed or where they have been used as fill. Avoiding such practices will help prevent the development of fairy rings.

Major diseases. If your customer has a *Helminthosporium* melting-out problem, his lawn must contain one of the common types of Kentucky bluegrass. The disease occurs during the cool, wet weather of the spring and fall. The disease is most severe on lawns where nitrogen fertility is applied in the spring of the year, the case with most lawn care companies.

To control melting-out, a fungicide program should be started in the fall when the cool, wet weather begins (temperature below 70°F.) with a fungicide like Daconil 2787, Dyrene, Acti-dione-Thiram, Tersan LSR or Fore on a 7-10 day basis (Daconil 2787 is marketed by Diamond Shamrock Corp., Cleveland; Dyrene is marketed by Chemagro Agricultural Div.,

Kansas City, Mo.; Acti-dione Thiram is marketed by TUCO Div. of Upjohn Co., Kalamazoo, Mich. — *Editor*).

An additional fungicide treatment should be made after the last mowing using one of the PCNB products. The PCNB products are the only fungicides which give protection for the entire winter period without having to be reapplied. The PCNB products, on the other hand, tend to be a little phytotoxic (will cause a yellowing) when used in warm weather. With the arrival of spring, one of the fungicides applied in the fall will have to be applied again on a 7-10 day basis until the warm weather of summer arrives. I think you can see that a fungicide program for the control of *Helminthosporium* can be very time consuming and costly, which all goes back to "do it right the first time", specifically, plant a blend of resistant Kentucky bluegrass cultivar.

Fusarium blight. *Fusarium* blight symptoms appear when

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The author of this article, Dr. Joseph M. Vargas, is associate professor in the Department of Botany and Plant Pathology at Michigan State University, East Lansing. Previous articles he has written for LAWN CARE INDUSTRY on turf disease control include: Turfgrass Disease Identification, page 20, May 1978, and Fertilization: Know Your N-P-K, page 1, July 1978.



An in

the affected plants are under drought stress. Light, frequent watering during dry periods will help suppress symptom development. Heavy, infrequent waterings are of little use because infected plants have short roots, usually no longer than an inch in length. *Fusarium* blight infected turf needs no more than 20 minutes of watering, but it needs it daily during warm weather and every two to three days during cool, dry weather. The ideal time to water would be at midday when it is the warmest. As with melting-out heavy spring applications of nitrogen will increase the severity of the disease.

Chemical control can be obtained with any of the benzimidazole systemic fungicides — Tersan 1991, Fung 50, Cleary's 3336 — provided they are applied properly (Fungo 50 is marketed by Mallinckrodt, Inc., St. Louis, Mo.; 3336 is marketed by W. A. Cleary Corp., Somerset, N.J. — Editor). This means

irrigating the area the night before and drenching the systemic fungicide in before it has a chance to dry on the foliage.

You are dealing with a crown and root rot problem, and that is where you need to get the fungicide. It will be translocated

"With the current Kentucky bluegrasses, it is difficult to give your customer the best possible lawn with heavy spring nitrogen applications..."

upward, but it is not translocated downward. This treatment is very expensive and because of the expense, many people have the idea that one treatment will cure their problem forever. It won't and you will need to treat their lawn every year if they don't want the problem to recur. It is no different than spraying roses or apples every year for their dis-

ease problems.

Resistance by some strains of *Fusarium* fungi to the benzimidazole systemic fungicides has been reported. This should not be surprising since the development of resistance to the benzimidazoles has been reported for every other major pathogen they

were used on exclusively. This means that you will be able to obtain *Fusarium* blight control with these fungicides for about 2 or 3 years.

Stripe smut. A turfgrass plant infected with stripe smut is infected for life. All plants arising from that infected mother plant will also be infected. It is a systemic disease that may remain dormant in the crown of the

plant during the warm weather of summer, or it can spread up the veins of the leaves during cool weather, eventually rupturing the epidermis and releasing many black spores which may attack other plants. Whether the spores are present or not, the plant is always in a weakened condition and the first stress that comes along will kill it. The most common stress is summer drought. Your customers may take good care of their lawns and water them religiously while they are home only to go on vacation and forget to have someone water the lawn or simply not be concerned about it; figuring they have a healthy lawn and the Kentucky bluegrass will simply go dormant and revive again once water is applied. However, a lawn infected with stripe smut will die if it is allowed to dry out during warm weather. It is important to warn your customer not to let their stripe smut infected lawn dry out, because if it dies you know who is going to be blamed! In addition, heavy nitrogen applications in the late spring period and during the summer will cause severe loss of turf on stripe smut infected Kentucky bluegrass lawns. For a detailed description of stripe smut symptoms see the May 1978 issue of LAWN CARE INDUSTRY.

Stripe smut can be "controlled" (more like arrested) with high rates (4-8 oz./1000 square foot) of the benzimidazole systemic fungicides. The best results are obtained when the systemic fungicides are applied as dormant drenches. However, applying the systemic fungicides as dormant drenches increases the amount of melting-out in the spring. Even *Helminthosporium*-resistant cultivars like Merion become susceptible after such treatments. This means that the stripe smut treatments must be accompanied by a melting-out treatment, and the PCNB fungicides are the only ones which gives this long term *Helminthosporium* control over the entire dormant period.

Early spring and early fall applications of the benzimidazole systemic fungicides are also effective against stripe smut, if they are applied when the grass is initiating new growth. Avoid applying them when grass growth is beginning to slow down because of warm or cold temperatures. While this is not as effective as dormant applications, it does avoid melting-out problems.

But what is the bottom line? The bottom line is that these are merely stop gap measures. The systemic fungicides, no matter when they are applied, do not eradicate the disease and it comes back every year. Resistance to the benzimidazole systemic fungicides has been reported for every major pathogen on which they have been used exclusively and resistance to the systemic fungicides in the smuts will also occur. So, you may be able to obtain control of stripe smut for a two or 3 year period.

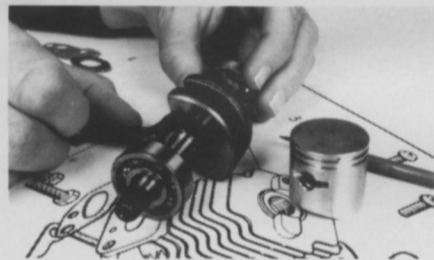
The answer to a Kentucky bluegrass turf infected with melting-out, *Fusarium* blight or stripe smut may be to have your

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side look at a classic.

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Fresh fuel is used for each start. Conventional "ignition kill" allows the fuel and oil mixture to remain in the chamber and carburetor where it can become

stale and even, with time, create a residue that prevents starting.

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DISEASE *from page 17*

customer renovate it and reseed or resod it with a blend of resistant cultivars.

Nitrogen fertility. In addition to chemical and cultural controls which are unique to each disease, there is a common cultural practice that increases the severity of *Fusarium* blight, stripe smut and *Helminthosporium* melting-out: spring nitrogen fertility. I realize that this is the traditional time to apply most of the nitrogen to a lawn. I also realize old habits are hard to break, but you do want to give your customer the best possible lawn and, with the current Kentucky bluegrasses that are on most lawns, it is difficult to do this with heavy spring nitrogen applications. The logistics may be a little difficult but not impossible. Broadleaf weed control can be moved from the spring to the fall although most of

you apply a little each time you spray a lawn. Preemergence weed control could be applied separately without nitrogen or make it the one application with nitrogen in the spring. It is certainly better than two or three spring and early summer applications of nitrogen.

In place of heavy spring nitrogen replace such a program with one pound of nitrogen in September and one pound of late season nitrogen after the last mowing (when vertical growth has stopped). Then one-half pound of nitrogen applications in June, July and August. You will notice I started the program in September. If this program is to be successful, it must be started then. If you try to start it in June, you will have dissatisfied customers all spring long from the lack of green grass due to a nitrogen deficiency. This, of course, is for the first season; after that it should not be a problem.

FUNGICIDES

Knowledge helps to establish firm quickly

Lawn care technicians who know what to look for and are able to recognize lawn insect, disease and weed problems are important to the long-range success of a lawn care business.

Such has been the case for a growing company out Burlington, Mass., Controlled Ecology Services. The previous golf course management experience of the six individuals involved in getting the fledgling lawn care company off the ground two years ago has been largely responsible for the company's success.

James Calderwood, who is responsible for coordinating the firm's activities, says: "That background gave us experience in knowing what to look for and

recognizing what we are seeing in customer lawns. All of us are licensed pesticide applicators, and many of us have degrees in turf management from the University of Massachusetts."

Controlled Ecology Services offer customers liquid and granular pesticide applications, fertilization, aerification, water management, slice-seeding and turf program design. Primary customers for this professional consulting firm are industrial firms and municipalities such as colleges, schools and governmental units.

"We doubled our business last year and expect a considerable increase again this year,"



Calderwood: "Trained, experienced people who know when to look for lawn pests, and what they are looking at have been responsible for our repeat business."

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Lawn care training: How the majors do it

by Dan Moreland

It's not surprising that a town nicknamed the "Tree City," Kent, Ohio, is the home of The Davey Tree Expert Co., the leader in the tree care field. Predictably, Kent has more than its fair share of tree cover. But if Roger Funk, vice president of Research and Development for Davey, has his way the town's city council may soon be compelled to rename Kent the "Lawn Care City."

At a recent training class at the Davey Technical Service Center in Kent, Funk told 20 new technicians that Davey wants to be the "best and largest company in the lawn care field." That, of course, is the ambition of many large lawn care companies across the United States ranging from Leisure Lawn, Inc., in Dayton, Ohio to Lawn Doctor, Inc. in Matawan, N.J.

However, Gordon Ober, general manager of Davey Lawnscape, doesn't see it as an unattainable goal. He explained that Davey had sales of \$2.8 million in 1978 and "we're looking for \$5 million this year and \$17 million over the next five years." That is quite an ambitious forecast for a company that opened its doors in 1975 and is currently ranked in the top 15 in overall sales within the industry, according to a survey published in the November issue of *LAWN CARE INDUSTRY*.



Funk

In its quest to overtake the undisputed lawn care leader, Chemlawn Corp., Columbus, Ohio, Davey has initiated what Funk calls the "most intensive training program in the industry." To get a first-hand look at its training program *LAWN CARE INDUSTRY* recently attended the first of Davey's three week-long technical training seminars in Kent.

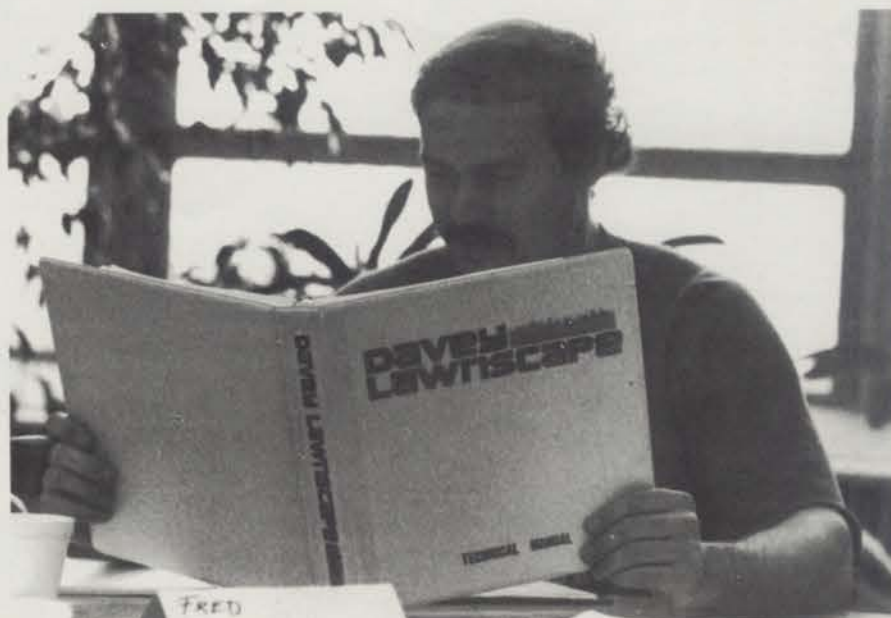
Further, to obtain a general overview of various training methods used throughout the industry, we contacted eight of the more successful lawn care companies in the United States and discussed their particular programs with them.

When the Davey Lawnscape Division was formed in 1975 only seven persons took part in the initial training program, but this

year more than 60 technicians participated in three separate week-long sessions. The complete program consists of one week of intensive classroom coursework and two weeks of hands-on training at the local level.

New recruits study technical information in a traditional classroom setting at the home office, while at the local level they learn their routes, develop spraying technique, polish their sales presentation, and are gradually emersed into the lawn care industry by the local sales representatives and branch

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Fred Breidigam, 23, studies the Davey Lawnscape Technical Manual during a break in class sessions. Breidigam graduated from Kent State University, Kent, Ohio, with a degree in Biology. The 177-page technical manual contains 18 chapter topics ranging from plant morphology to weed identification. Other topics include disease identification, shade, and soil pH. Recruits are urged to take good notes because they are required to carry the manual on their trucks while in the field.

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LAWN CARE INDUSTRY Marketplace

San Francisco/Oakland

Bay Area



San Francisco possesses the unenviable distinction of being the only lawn care market in the country with the unique capability to have the "bottom drop out" of it at any time; literally. Fortunately for Bay area residents that hasn't occurred since April 18, 1906, the day of the infamous San Francisco earthquake. Yet with or without a repeat performance of that catastrophic event, the San Francisco turf industry remains "up in the air."

The Bay area market features both a predominance of Japanese gardener operations, primarily serving the residential market, and a number of moderate to large businesses servicing the better-established commercial/industrial markets. The landscape contracting industry is also heavily involved in the Bay area, though their primary thrust is in landscape design and installation rather than maintenance.

However, the chemical lawn care market, which is flourishing throughout much of the Midwest and East, is struggling to gain a toehold in the Bay area. The result is a significant number of companies, possessing a wide variety of lawn care capabilities, are jockeying for

position in this relatively young market.

A myriad of competition isn't the only problem Bay area lawn care operators have encountered. They must also contend with an almost overwhelming number of pesticide and fertilizer regulations before they can begin treating lawns. California is the most regulated of the 50 states.

Therefore, why would anybody attempt to enter this difficult market? The reason is the San Francisco Bay area, along with Santa Clara County 30 miles to the south, are potential lawn care gold mines. The area boasts one of the highest standards of living in the United States and the environment is virtually ideal for the lawn care industry.

If the economic picture of Santa Clara County is any indication, the future of lawn care in the Bay area appears bright. According to *Advertising Age* magazine, in 1977, San Francisco and surrounding Santa Clara County ranked first among the nine Bay area counties in population, value of new construction, and total effective net buying income.

San Francisco's economic outlook is also bright. Personal in-

come in the fifteenth largest city in the United States increased 10 percent from 1974 to 1975 and office construction has increased dramatically in recent years. Although San Francisco's population decreased 7.1 percent between 1970 and 1976, a projected increase of 1.9 percent is expected for the San Francisco/Oakland area by 1982.

The area is also blessed with moderate weather. Winters are mild, summers are dry, and temperatures seldom drop below 40 degrees or rise above 90 degrees. Further, the mild weather is a primary ingredient in the success of a flourishing shrub and ornamental care market which provides another profit center for companies operating in the Bay area.

LAWN CARE INDUSTRY recently contacted seven lawn care representatives working in the San Francisco Bay area and discussed their perceptions of the market with them. The following are excerpts from those interviews.

Richard L. Larson, owner of **Larson Landscaping**, Menlo Park, Calif., said he was forced out of the lawn maintenance market about a year ago for a number of reasons. The primary

reason concerned his inability to compete with unlicensed landscape contractors. "The San Francisco market is very competitive and price conscious," he said, "and we had problems competing with the low prices charged by unlicensed contractors."

"We initially got into lawn maintenance to establish a cash flow throughout the winter," Larson said, "and we tried to keep our maintenance prices at a profitable level, but we just couldn't compete with them (unlicensed contractors)."

He added that unlicensed operators can often charge lower fees because some of them utilize illegal aliens from Mexico to supplement their labor force. "There are no controls over them and they can do and price as they please," he added.

A second factor was the general lack of customer interest in residential lawn maintenance programs. "The lawn care market hasn't had the impact here like it has in the East and Midwest," he said. "In the San Francisco area customers are primarily interested in garden-type maintenance rather than typical lawn maintenance."

A third reason concerned the lack of a qualified labor force in the San Francisco area, according to Larson. "It's very difficult to find quality people here even though the colleges in the area are geared to train people in the (turf management) field," he said. "The problem is once students graduate from college they can't afford to live here and they have to move away. One of the primary reasons we got out of the lawn maintenance business is because we couldn't find enough quality people to stay competitive."

Larson Landscaping was formed in 1972 and the company grossed \$40,000 per year in lawn maintenance business before leaving the field in 1977. The company is currently involved solely in landscape installation and design.

Larson added that the future of lawn care companies in the San Francisco area looks bright, but he warned that success or failure could depend on the availability of water. "Two years ago when we were having our bad drought both lawns and lawn care companies suffered and we (contractors) were cutting down on the size of lawns. The future really depends on our weather patterns and the availability of water," he said.

Although his initial experience in the lawn maintenance field was unsuccessful, Larson, 30, said he is seriously contemplating re-entering the market. "It's really difficult to keep cash coming in during the winter time and lawn maintenance accounts help solve that problem," he said.

Larson isn't the only person concerned with the quality of competition in the Bay area. Bruce Wilson, branch manager of **Green Valley Landscaping, Inc.**, San Jose, said, "The most

irritating problem we face is incompetent competition. A lot of lawn care companies in the area don't know how to bid or bid too low and end up doing a lousy job." Wilson added that the only way to increase the level of professionalism in the San Francisco lawn care market is to convince more maintenance contractors to join trade organizations.

Green Valley, a division of **Environmental Industries**, Encino, Calif., was formed in 1962 and grosses about \$3 million per year. It provides complete maintenance services including fertilization, pruning, horticultural supervision, and flower replacement. "We do anything necessary to take care of a landscape," Wilson said.

About 83 percent of the company's accounts are based in the industrial and public works market, 10 percent are commercially-based, and the remaining seven percent comes from condominium and apartment complex customers.

"We focus on the industrial/commercial market because the biggest volume of work is there and our business is structured for that market," Wilson added.

Green Valley employs about 150 persons during the "peak" summer season and about 135 persons during winter months. "Our ability to find quality employees depends largely on fluctuations in the unemployment rate," Wilson said. "If unemployment is low it's much harder to get good employees, but if a lot of people are looking for jobs, it's easier." All employees participate in an in-house training program and field supervision is provided by 13 trained horticulturists.

Company equipment includes two 35-horsepower tractors (Massey-Ferguson and Ford Motor Co.), 12 "intermediate size" rotary mowers (Yazoo and Grasshopper), about 100 commercial mowers manufactured by a number of companies, and a wide variety of other lawn care equipment.

Wilson said the commercial and industrial lawn care market in the Bay area is "extremely good," but the residential market has not developed. "The residential lawn spraying market isn't too good from what I have gathered talking to people in the business," he said. "From what I understand most residential lawns are too small to make spraying profitable."

One of the many companies which has spurned the residential lawn care market is **L & L Maintenance**, Santa Clara, Calif. According to general manager Steve Glover, L & L doesn't pursue the residential market because it is less profitable than the commercial/industrial market.

L & L grosses about \$500,000 per year, employs 25 persons, and carries about 35 accounts. Business consists of a wide range of accounts ranging from a ceme-

tery to several restaurants in the Bay area.

Like many lawn care companies in the Bay area, Glover has also experienced difficulty finding quality employees. "Getting good help is always a problem," he said. "I usually work through the universities and the local colleges, but that hasn't been too successful." He has had most of his success through advertising in newspapers.

Further, because many of those Glover recruits have no previous turf background, training is an important part of his business. "Most of our training is on-the-job, but we also encourage our employees to take classes at local colleges to increase their knowledge about lawn care," he said.

Glover described the San Francisco Bay area market in the



following manner. "There are a few large companies, a number of intermediate-sized companies, and a lot of small jokers who just mow lawns." However, he added that lawn care businessmen have become much more professional as the market has developed in recent years. "We're getting away from the weekend gardeners who decide it would be a good idea to get into the lawn care business," he said.

What does he look for in the future? "The sky's the limit for lawn care here. All you have to do is go out and beat the bushes."

One of the companies which is "beating the bushes" very successfully is **Northwest Landscape Maintenance Co.**, San Jose, Calif. The majority of Northwest's \$500,000 annual gross comes from servicing condominiums in popular Santa Clara Valley. Douglas Nakamura, who jointly owns the company with his two brothers, said they prefer servicing of condominiums because it's a "reliable" market. Northwest services about 3,500 units.

"The profitability of servicing condominiums versus commercial accounts is much lower, but the cash flow is better," he said. "We have dealt with the Homeowner's Association for about six years now and as long as the owners have

belonged to the association we have had no collection problems."

Northwest, like L & L Landscaping in Santa Clara, has had difficulty developing quality personnel. "It really is very difficult getting good employees," Nakamura said. "They think they have to work too hard for what they get paid and they often quit and go to somebody else," he added, "but they come back when they find out our benefit package is better than most in the industry."

Northwest's "delayed" benefit package consists of three paid holidays after one year of employment and one week paid vacation after two years of service. Employees also qualify for a health plan after three months with the company.



Nakamura, 31, described the average pay as "depressed," but typical of lawn care salaries in the area. Hourly rates range from \$3 to \$4.50 per hour. "We've gone through a lot of people, but the people who have worked for us for several years generally stay with us," he added. The company employs a total of 27 to 30 full-time workers.

Northwest, which is also a licensed contracting firm, utilizes a number of "experts" to augment its full-time personnel. "If we have a problem we are not

familiar with we go directly to an expert. We've dealt with landscape horticulturists, professional labs, and agricultural advisers," he said. "It generally only costs a phone call to find out the cause of a problem."

"We've really worked hard on developing a good reputation so it has been worth it for us to take the time to know what we are doing before we act on a problem," he added.

Northwest's program consists of fertilizer applications four to five times per year, broadleaf weed control treatments once or twice a year, and a pre-emergent weed control application in the spring. "We use a selective herbicide in either a concentrated herbicide form or wettable powder form once or twice a year depending

TOP LEFT: Steve Glover, general manager of L&L Maintenance in Santa Clara, doesn't pursue the residential market because it is less profitable than the commercial/industrial market. The company grosses about \$500,000 per year. Glover added that as the San Francisco market has developed in size, the level of professionalism among lawn care operators in the area has increased. TOP RIGHT: Northwest Landscape Maintenance Co. in San Jose grosses about \$500,000 per year. Left to right: Doug Nakamura, secretary/treasurer, Warren Nakamura, president, Paul Nakamura, senior vice-president, and Steve Nelson, vice-president, Landscape Division. The Nakamura brothers inherited the business in 1974 after their father passed away. RIGHT: Warren Nakamura, president of Northwest Landscape Maintenance Co.

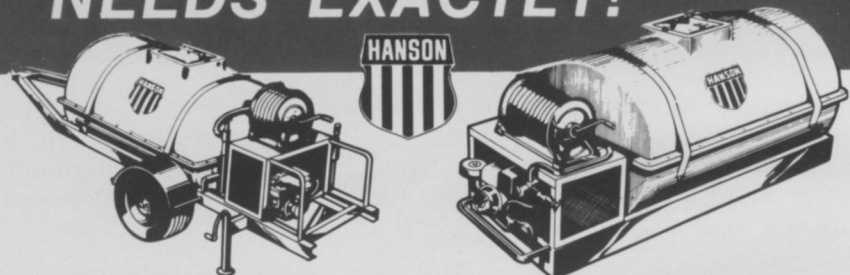
on the situation (to control broadleaf weeds)."

Company equipment includes six Toro Frontrunner mowers, a wide variety of rotary mowers, about a dozen edgers, and two 150-gallon spray rigs. Nakamura, who has a degree in industrial design, said they have had difficulty finding a commercial mower which will stand up to constant use. "They all last about a year and wear out," he said. "If you put 25 hours a week on a rotary mower it's going to wear

COMING

The May issue of LAWN CARE INDUSTRY will feature a story on the lawn care market in Boston. The Washington, D.C. market will be profiled in the June issue; Pittsburgh in July; and Seattle in August.

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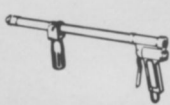
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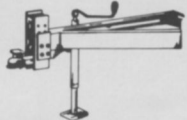
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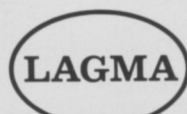
AN OPEN MESSAGE TO LAWN AND GARDEN MANUFACTURERS

From C. Edward Scofield, Executive Vice President, RA-PID-GRO Corporation



“I've helped the lawn and garden industry to grow to an \$11 billion giant! It has been my privilege to frequently be a part of some of the great new changes and developments. I've also experienced my share of disappointments and mistakes. Without strong trade organizations, dedicated pioneers and competent leaders our industry would only be a fraction of what it is today. Your business would still be struggling, your outlook uncertain, were it not for the great work done by many trade organizations. Now we need one strong, overall lawn and garden association to knit manufacturers, producers and growers into a cohesive group. As President of LAGMA, I promise any time and money you invest in this association will pay off handsomely.”

Help develop and support a strong, effective trade association. For information on membership and benefits for your firm, ask Ed Scofield or contact:



THE LAWN AND GARDEN MANUFACTURERS ASSOCIATION
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TOOLS, TIPS & TECHNIQUES

Mowing safety stops injuries, downtime

Commercial power mowers are designed not only to cut grass, but to trim the time it takes to do so.

Unfortunately, even lawn care professionals are numbered among the 160,000 persons injured annually while trying to short-cut their mowing chores by ignoring simple safety procedures. Carelessness undermines efforts by many manufacturers to meet stringent safety standards set by the non-profit Outdoor Power Equipment Institute.

Lost time due to employe injuries, and also equipment downtime due to careless handling of power mowers can cost lawn care companies money if employes ignore safety.

Today's commercial mower is safer to operate than ever before. It features design improvements ranging from smaller discharge openings to flexible shields that deflect debris downward and away from the operator.

But lawn care professionals still man the controls. At least



Refuel commercial mowers out-of-doors rather than inside maintenance sheds to guard against combustible fumes. More than 160,000 persons — including lawn care professionals — are needlessly injured each year by ignoring common-sense safety rules.

80 percent of injuries occur when people clear the discharge chute without stopping the engine, slip while mowing or are hit by thrown objects such as rocks.

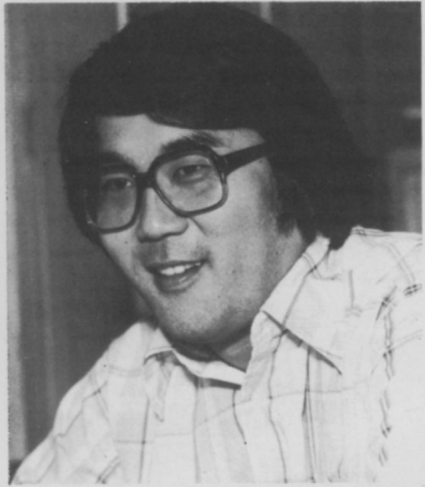
According to Dr. Al Turgeon, associate professor of turf-grass science at the University of Illinois, those accidents could be avoided by adopting the following common-sense safety routine:

- Take a few minutes to clear away foreign objects. A rock, nail or piece of glass — if left hidden in the grass — can become a dangerous missile in the path of a whirling mower blade.
- Push, never pull, your mower to avoid losing control of it.
- Never wear loose fitting clothes that could get caught in mowing parts. Wear sturdy leather-soled shoes or work boots to assure solid footing.
- Start and operate the mower with feet and hands away from the blade or any rotating parts. Stay away from the discharge side of the mower while mowing.
- Mow across steep slopes with a walk-behind mower to assure maximum stability. Riding mower operators should mow slopes up and down (rather than across) to avoid tipping. Avoid sharp turns, not only because they are hard on grass, but because you can slip or slide under the rotating blade.
- Before unclogging the discharge chute, shut the engine off and wait until the blade comes to a complete stop. Stop the engine before going across roads, walks or anytime you leave the mower. This rule frequently is broken by professional grounds keepers.
- Gasoline demands respect, so refuel before mowing and never while the engine is hot to avoid starting a flash fire. Refuel the mower out-of-doors rather than inside maintenance sheds to guard against combustible fumes.
- Always stop the engine and disconnect the spark plug before making repairs or transporting the mower. Otherwise, the engine could be started accidentally. Leaking gas and oil can kill grass, so avoid checking the mechanical functioning of your mower on the grass.

out. They're just not designed for long term use."

According to Nakamura, the key to the company's business success has been controlled growth and quality service. "We've seen a lot of companies shoot past us and gross a million dollars in two years and then collapse because they expanded too quickly," he said. "We are more conservative and invest in our expansion before we go out and solicit the work."

Nakamura said the market also has a number of companies which enter several fields



Douglas Nakamura, secretary/treasurer for Northwest Landscape Maintenance Co., said, "The profitability of servicing condominiums versus commercial accounts is much lower, but the cash flow is better." Nakamura added that he has had little difficulty working with homeowner's associations in San Francisco.

(irrigation, industrial clean-up, etc.) in order to make a quick profit. "They're trying to make as much money as they can as quickly as they can, but they generally don't succeed. Because we are more conservative and don't expand until we know we can handle the work; we think we will be around a lot longer than our competition," he said.

Even though there are several "quick profit" companies depressing the quality and prices of lawn services, Nakamura thinks the overall market forecast is good. "Santa Clara County is growing like a wild fire and there is no indication that it is going to slow down. The competition here is intense, but there is enough work for everybody," he said. "I really don't worry about next year because I know we'll get our share of the accounts we bid on."

Ken Gerlack, president of Contra-Costa Landscaping, Inc., Martinez, Calif., said he expects the market to improve within the next few years for one primary reason: Proposition 13. "I think government agencies are going to look to outside lawn care contractors as a more efficient way to get the work done in the future," he said.

Contra Costa provides complete horticultural maintenance service including irrigation repairs, thatch control, aerification, soil analysis, and the application of herbicides and pesticides. "Our three primary profit centers are maintenance, hydroseeding, and construction," he said. The company grosses about \$175,000 per year

servicing solely commercial accounts.

Gerlack, who has a degree in horticulture from Cal Poly in San Francisco, added that his company has had more difficulty training employees than recruiting them. "We have to train them for our own operation because we are more finicky than most companies," he said. Contra Costa carries about 12 employees in the summer and five or six during the winter. Average pay is \$4.50 an hour and \$1,200 a month for salaried workers.

Because of the mild weather, Gerlack said his company has encountered few serious lawn care problems in the Bay area. "Once we get a turf established it is almost free of fungus," he said. "We very seldom get an infestation of insects and we really don't do much spraying other than for broadleaf weed control," he said.

Overall, Gerlack is pleased with the way the San Francisco market has developed. "I haven't heard any of the contractors in this area complain about a lack of work," he said.

One lawn care company which has entered the less popular residential market is ChemLawn Corp., Columbus, Ohio. ChemLawn entered the north-eastern San Francisco market in 1977 and currently employs four persons at its Concord, Calif. headquarters. John Wright, ChemLawn vice president, said, "We are very much in the learning process out there, but we felt we needed to have at least one Pacific coast operation simply to learn the territory."

Wright said ChemLawn selected to open a branch in the Bay area because they felt "comfortable" with the cultural conditions there. "It's not that significantly different from our other markets," he said. "It's primarily a bluegrass area and it has weed and insect problems similar to our other markets." However, in 1977, San Francisco's cultural conditions were far from typical. California was suffering through one of the worst droughts in its history. "Far and away the most difficult thing we encountered when we entered the market was the drought," Wright said. "Even though people continued to come on our program, we were made aware very quickly of how something like that can impact our business."

With all its similarities, there are also many differences between the Bay area market and other markets throughout the United States. "Probably the biggest difference is in the size of the lawns," Wright said. "The average lawn in the Bay area is only 3,000 square feet."

"Another difference is the need for more tree and shrub maintenance" Wright said. "That is why we came in very early with our Chemscape (shrub and ornamental service) program." Wright would not discuss his company's annual gross in the Bay area although he did say about one half of its business comes directly from Chemscape accounts.

Perhaps the most significant obstacles ChemLawn will have to overcome in order to succeed

in the Bay area is the general lack of public awareness concerning chemical lawn care. "The concept of residential lawn care, as we know it in the Midwest, is just not in the Bay area yet," Wright said. "I have no doubts that it will be some day, but it's going to take time."

Regarding future plans, Wright said ChemLawn is still in the "early stages of development" on the West Coast and therefore would not expand its operations there in 1979.

Noel Martin, owner of Martin Landscaping, San Francisco, Calif., doesn't service the commercial market, the residential market, or the industrial market. You may be asking yourself what else is there? Martin provides lawn care services to the largest purchaser of goods and services in the United States; the government. About 75 percent of his \$300,000 annual gross comes from servicing government accounts. The remaining 25 percent is commercially based.

Although he only has two government contracts they keep him quite busy. "We provide lawn care to Treasure Island Naval Base and an army base in San Francisco," he said. "I like dealing with the government because they are larger than commercial contracts and so far the government hasn't gone broke so the money is there when you need it."

Martin employs 20 persons, pays about \$5.75 per hour, and does his recruiting through local colleges and newspaper advertising. The company provides three maintenance services: mowing, fertilizing, and aerifying. Martin added that he was initially involved in the residential market, but "got away from it about 10 years ago" because his business is better equipped for large scale maintenance.

Martin visits his clients every week beginning in April and two times a month during the winter

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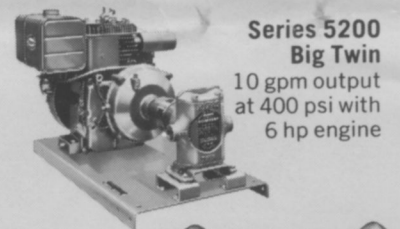
months. "We also apply fertilizers and pesticides, but the restrictions are getting very strict now so we sub out anything large," he said. "It doesn't pay for us to buy the equipment for the few times we do it."

The Bay area market appears to be capable of significant growth in the near future. The commercial/industrial field is popular among lawn care operators, but it is far from being saturated. And the residential market is a potential gold mine. So why aren't more companies flocking to the Bay area? It could be the small size of residential lawns. Or the general lack of a qualified labor force? Or perhaps lawn care businessmen have chosen to invest in the Sacramento or Reno markets. After all, we are more likely to be surfing over San Francisco than taking care of lawns there if there is a re-enactment of the events of April 18, 1906 in the near future.

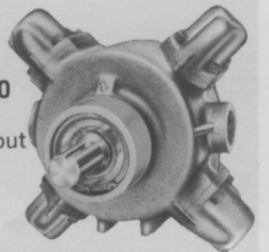
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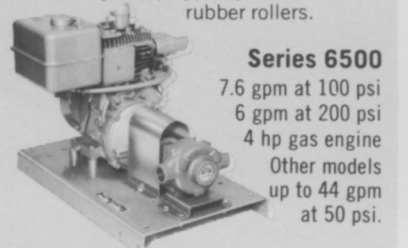


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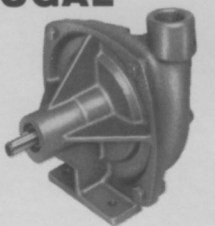
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MARKETING IDEA FILE

Analysis of lawn care advertising

Early on in operation of their 16-year-old Lawn-A-Mat Chemical & Equipment Corp. franchise, based in Bellmore, N.Y., it became apparent to Sheldon Ofshe and Leo Gelfond that in order to make judgments as to the effectiveness of their advertising, it would be necessary to keep as accurate records as possible as to the source of their new business.

"We wanted to know where the leads came from, the cost of putting on new customers, the effectiveness of different advertising media, the rate of closing sales, etc.," Ofshe told LAWN CARE INDUSTRY recently. "So we started evolving record-keeping systems on our advertising."

The two were able to determine when and where to put their advertising dollars to provide them with maximum return on their advertising investment. It helped them determine the cost of obtaining new business each season. It provided the number of leads, the number of closed sales, the total dollar amount of new business each year, and the advertising cost of obtaining that business. Comparisons of

Month	NUMBER OF LEADS					Five-year total
	1st year	2nd year	3rd year	4th year	5th year	
February (all month)	10	8	6	14	11	49
March						
1st week	8	14	4	10	14	50
2nd week	30	35	11	21	14	111
3rd week	16	27	40	23	46	152
4th week	34	100	76	45	81	336
April						
1st week	60	69	48	64	72	353
2nd week	56	60	73	95	51	335
3rd week	38	63	46	83	61	292
4th week	52	26	33	67	51	226
May						
1st week	21	10	21	34	24	110
2nd week	15	1	7	9	9	41
3rd week	13	0	0	5	6	24
4th week	7	0	3	2	3	15
June						
1st week	4	0	3	0	3	10
2nd week	1	0	4	0	9	14
3rd week	0	0	0	0	1	1
4th week	0	0	0	0	3	3
July						
1st week	2	0	5	0	2	9
2nd week	2	0	1	0	1	4
3rd week	2	2	2	0	4	10
4th week	0	3	2	6	6	17
August						
1st week	2	0	7	9	14	32
2nd week	9	6	10	13	19	57
3rd week	7	29	18	8	30	92
4th week	19	39	42	21	41	162
September						
1st week	22	16	20	28	40	126
2nd week	24	33	29	47	32	165
3rd week	24	29	27	19	34	133
4th week	25	36	33	25	45	164
October						
1st week	3	10	19	15	34	76
2nd week	4	0	1	12	13	30
Yearly total	510	616	593	675	774	
Advertising budget	\$6,300	6,500	7,200	8,200	10,000	
% cost of new business	22%	12%	12%	12¼%	12¼%	

MEDIA	SPRING					FALL				
	Cost	# Leads	# Sold	\$ Amount	% Cost	Cost	# Leads	# Sold	\$ Amount	% Cost
Pennysavers	\$1,655	95	70	\$9,741	17%	\$1,249	59	40	\$6,797	19%
Local town paper	267	18	14	1,557	17	160	8	6	892	8
2nd local paper	190	11	7	1,230	16	141	4	4	833	17
Direct mail (30,000)	1,731	80	66	9,996	17¼	577	12	12	1,935	30
						(8,000)				
Long Island Newsday	622	23	16	2,295	27	428	16	13	2,200	19½
Long Island Press	245	6	3	378	65	116	2	2	621	19
Referrals	—	84	63	9,284	—	—	48	37	6,718	—
Old Customers	—	37	33	3,707	—	—	15	14	1,434	—
Miscellaneous	499	60	44	6,593	8	437	16	13	1,990	21
Total	\$5,149	414	316	\$44,770	11½%	\$3,108	180	141	\$23,567	13¼%

figures from year to year enable them to measure growth.

Chart No. 1 is a compilation of the amount of leads per week over a five-year period, which they use as a guide to timing the insertion of their advertisements. Conclusions can be drawn as to how long into each season it is profitable to keep advertising and still expect a decent return. Also, the relationship of the amount of leads in the spring versus the fall is established and this information is reflected in the advertising budget for each season.

Chart No. 2 is a condensation of the information from a recent year. Advertising in the metropolitan newspapers *Long Island Newsday* and *Long Island Press* represents cooperative advertising with other Lawn-A-Mat dealers.

"One very basic fact that became apparent as we reviewed the conclusions from year to year was the necessity of that review," Ofshe said. "A media that was successful for a year or two would not necessarily get good results on a continuous basis year after year. For example, as the cost of direct mail increased with rising postal rates and cost of printing, the results indicated a change. We eliminated direct mail, but increased our pennysaver (shopper newspapers) budget.

"Our media mix is constantly changing," he said. "Non-profitable forms of advertising are eliminated and we are continuously looking for new and different ways to advertise our name and our services."



In 1963, Leo Gelfond (right) and Sheldon Ofshe each bought a Lawn-A-Mat Chemical & Equipment Corp. franchise on Long Island in New York.

Their separate areas were right next to each other, and with no previous experience in the lawn care industry they found it to their mutual advantage to work together and help each other.

After two years of separate operation, they decided to merge and formed a partnership.

They now operate four franchise areas. In addition to lawn care, they have branched out into tree spraying, sprinkler systems, landscape planning, tree work and shrub trimming.

They operate two tree-spraying trucks, six panel trucks, four trailers and four Lawn-A-Mat tractors and combines.

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VanWaters & Rogers
1363 South Bonnie Beach Place
Los Angeles, CA 90023
Attn: Paul Sanders

Moyer Chemical Co.
1310 Bayshore Highway
P.O. Box 945
San Jose, CA 95112
Attn: Donald Meyer

VanWaters & Rogers
2256 Junction Avenue
San Jose, CA 95131
Attn: Bevan Cates

Moyer Chemical
230 East Dyer Road Unit
Santa Ana, CA 92707
Attn: Pat Sano

Wilbur-Ellis Co.
14111 Freeway Drive
Santa Fe Springs, CA 90670
Attn: Mike Bell

Walter W. Fuchs
Turf Products Limited
2N255 County Farm Road
West Chicago, IL 60185

Riley Lawn & Golf Equip. Corp.
6810 Guion Road
Indianapolis, IN 46268
Attn: Robert Scobee

The Dalton's Incorporated
U.S. 30 East
P.O. Box 246
Warsaw, IN 46580
Attn: Don Dalton

W. F. Miller Co.
1593 South Woodward
Birmingham, MI 48011
Attn: Russ Hancock

R. L. Gould Company
3711 Lexington Avenue North
St. Paul, MN 55112
Attn: Gordon Miller

Turf Supply Company
2970 Dodd Road
St. Paul, MN 55121
Attn: John Kolb

VanWaters & Rogers
3950 Northwest Yeon Avenue
Portland, OR 97210
Attn: Romeyn Kruiwyk

Wilbur-Ellis Co.
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Portland, OR 97208
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Seattle, WA 98109
Attn: Jack Fisher

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Elm Grove, WI 53122
Attn: Ed Devinger

managers. All training is standardized and formulated at the Kent office. Formal training sessions for technicians are conducted in February, about a month before the Midwest lawn care season begins.

The actual classroom coursework is covered in an imposing five day, 40-hour work week. Students are given a 177-page technical manual containing 18 chapter topics ranging from plant morphology to irrigation. Other topics covered include plant and weed identification, pesticides, insects, diseases, soils and soil pH, fertilizers, mowing, and aeration. Thatch, shade, winter dormancy, lawn establishment, diagnosis, and overseeding are also discussed. Recruits are urged to take good notes because they are required to carry the manual on their



Twenty recruits took part in the Davey Lawnscape training session attended by LAWN CARE INDUSTRY. In 1979, Davey conducted three week-long training sessions for more than 60 new technicians. All training sessions were conducted in a traditional classroom setting.

trucks while in the field.

Three experienced instructors teach the majority of the coursework. Dr. Roger Funk, a graduate of West Virginia University with a Ph.D. in plant

physiology, is the primary instructor. Richard Rathjens, who has a Master's Degree in turf management from Cook College, Rutgers University, and Dr. Balakrishna Rao, who has a

Ph.D. in plant pathology from Ohio State University also teach several classes.

Funk, 34, said course material ranges from undergraduate level work up to Ph.D. level coursework. "It spans the complete range of turfgrass studies, but it focuses on our industry," he said. "I've merely trimmed all the excess fat from a typical university course and provided our students with the basics."

Rao added, "It's very different from a university education simply because you have to take many courses to get a college degree, but all those courses are condensed here to achieve one goal and that goal is to make our technicians better turf managers." Further, Rao said Davey is more interested in teaching technicians "practical information" than academic or theoretically-based material.

One wonders if such a wealth of information can be retained by prospective technicians, many of whom have no previous turf background. Funk thinks it can be. "The teaching is directed in such a way that regardless of a



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student's background he can grasp it. In other words, it's not boring for students with Master's degrees in turf management and it's not over the heads of those with no turf background," he said.

Rao agrees. "We have confidence that the type of people we recruit are quite capable of grasping the information."

Ober, a graduate of Kent State University, said recruiting individuals with turf backgrounds is not a prerequisite for developing good technicians. "We assume that people taking the course have no knowledge of turf. Therefore, we haven't limited the type of people we can recruit."

Twenty students from the Akron, Philadelphia, and Pittsburgh offices participated in the seminar LAWN CARE INDUSTRY attended and a quick review of their backgrounds verifies Ober's observations. Educational backgrounds ranged from high school graduates to college graduates with degrees in psychology, business, and conservation.

Former students, teachers,





John Reeves, sales coordinator for Davey Lawnscape, discusses the marketing and sales side of the business with the new recruits. Reeves, 31, had previously worked as a technician and sales representative for Davey before becoming their sales coordinator.

factory workers, and salesmen all complete on the same level to grasp the basics of turf management. Ages of those participating is as varied as their educational backgrounds, ranging from 19 to 30 with the average 25.

Funk said the purpose of the accelerated program is to provide recruits with a "basic level

of understanding" about turf management. "Technicians must have this base level of understanding to present a professional image to the client. The customer is going to view the entire company through the performance of its technicians," he said.

"Obviously the customer could put their lawns in my hands and I could do a good job," Funk added, "but they don't see me. So I've got to get them to trust the people they come into contact with and that's the technicians."

Keeping the students interested for the entire 40-hour week is also a problem, but Funk's teaching background has been beneficial. "If you've been given a teacher's training there are a lot of things you can do to create enthusiasm," he said.

"You have to mentally reach out and grab them," he said, "and if you do that then you can

to page 30

MONEYWISE

Lease or buy?



Leasing is another way for lawn care businessmen to provide the trucks that they need to run their business, according to Steve Martin, lease manager for Paul Sherry Chevrolet, Piqua, Ohio.

"Leasing is a practical alternative to buying," Martin told LAWN CARE INDUSTRY recently. "Essentially, it is acquiring the precise transportation needed for a pre-set fee and length of time, without any investment in ownership," which can be a problem for any lawn care business starting out or expanding.

There are basically two types of leases, Martin said, open-end and closed-end. Each kind has its particular advantages depending on a company's situation.

The open-end lease, for a comparable duration, generally offers the lowest monthly rate, with the customer assuming the risk for vehicle depreciation. Usually there is an adjustment at lease end, in the form of either a credit to the customer or a surcharge, reflecting depreciation factors.

In leasing, a security deposit is required at the beginning of the lease. The amount of the deposit will vary according to the value of the vehicle, but generally will be equal to at least one month's lease payment. For two or more vehicles, the conservation of cash can become quite appreciable when compared with most purchase agreements; therefore, switching from ownership to leasing often results in an immediate improvement in a cash flow, another problem that many lawn care businessmen have.

Martin said other advantages to leasing are: Depreciation is pro-rated into the monthly lease payment, and in closed-end leases it is limited to the duration of the lease. This is unlike ownership, where the responsibility is total, and not subject to any prediction or control. When leasing, a company also is not involved in the costly and time consuming efforts of shopping for vehicles and deals, negotiating trade-ins, or worrying about delivery. When a company leases, Martin said, lease experts take care of all of that. Finally, at lease end, the leasing company disposes of the vehicles for their customers in a businesslike and professional manner.

"Today there are many companies, some very small, that choose to lease instead of buy and do so for very practical reasons," Martin said. "The leasing of trucks eliminates a company's investment in depreciating assets. Outright purchase or financing of vehicles, for example, can tie up capital funds that could be put to more profitable use elsewhere in the business.

He said that lease payments are also handled as an operational expense, in contrast to being treated as a fixed asset on company books. A lawn care company may find it more advantageous to pay for its transportation costs out of current income, in predictable increments, rather than at irregular intervals and in varying amounts that affect budget control.

He said that leasing can also make a favorable impact on the overall cost and efficiency of operating a lawn care fleet. Spaced lease renewals can provide brand new vehicles at optimum intervals — reducing downtime, lost time, and the growing expense of repair maintenance of high mileage vehicles.

There are also definite convenience advantages to a company when leasing. For example, there are no complicated depreciation schedules to set up or to justify. Lease billings provide simple and convenient documentation of transportation expenses for tax and record-keeping purposes. Finally, transportation cost forecasting is more accurate. There is a good measure of predictability even with an open-end lease, or choose a closed-end lease to know exactly what those expenses will be over a stipulated period.

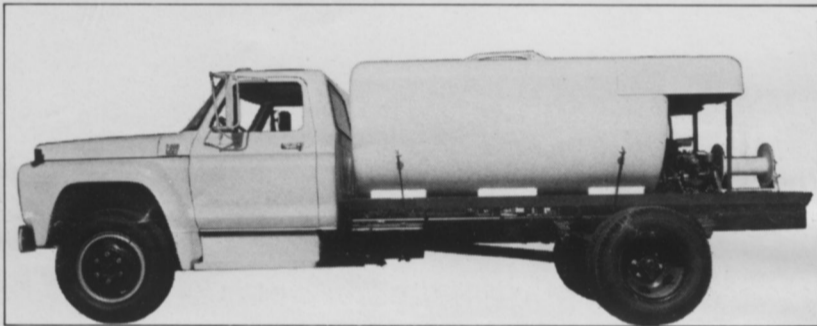
Martin's company has experience in working with the lawn care industry. One of its larger lease clients is Easy Lawn, Inc., Dayton, Ohio. In conjunction with Consolidated Services, Piqua, manufacturers of lawn care beds, tanks, hose reels, etc., Paul Sherry Chevrolet has provided Easy Lawn with tailor-made lawn spraying rigs at a competitive price.

At last year's Ohio Turfgrass Conference held in Columbus, Ohio, Martin distributed the following lease payment table in the Consolidated Services booth for a fully-equipped 30 Series Cab and chassis:

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transmit a tremendous amount of knowledge in a very short time."

Large scale training is generally only practical for established lawn care companies because of the obvious cost factors, but Funk maintains that training is necessary if the lawn care industry is going to "build a professional reputation."

Funk said although he has not come up with a specific figure for training Lawnscape personnel, the cost of training Davey tree technicians is between \$1,600 and \$2,000 per person. "If we would ever come up with a specific figure for training Lawnscape technicians we would probably scare the corporate managers half to death."

Education is generally viewed positively, but one of the negative aspects of sophisticated training is the possible loss of quality employees once they gain a high level of lawn care expertise. "A general fear of companies that spend significant amounts of money on training is that their employees will leave after they are trained and the company will essentially be training their competition," Funk said. "However, no company is going to develop unless they train their personnel. That is the chance they have to take." He added that employee attrition on the technician level has not been a problem at Davey.



Art Ramirez, 24, investigates some of the turf specimens present in the training classroom. A number of visual aids are present throughout the classroom including photographs, specimens, and a variety of textbooks. Ramirez will work out of Davey's Akron office.

A recent survey in the November issue of *LAWN CARE INDUSTRY* stated that 77 percent of all lawn care companies surveyed utilize in-house training programs. Half of the respondents said they send their employees to state turf conferences and another 30 percent send them to seminars. Evidently, executives at most lawn care companies agree with Funk that education is the key to growth in the industry.

John Moser, regional agronomist for ChemLawn Corp., Columbus, Ohio, said training is essential to keep employees informed of new developments in the ever-changing lawn care field. "The main reason we train our personnel is to impress upon our customers that our people are knowledgeable and therefore can help them," he said.

ChemLawn's training program, which started in 1975, is primarily agronomic in nature although corporate operations

are also discussed. "What we try to do is review the things the homeowner needs to keep their lawn looking good," he said. "That involves discussing everything from A to Z."

ChemLawn, the largest lawn care company in the United States, grossed about \$65 million last year and has more than 90 branches in 28 states and Canada.

The company classifies its employees in three categories and its training is divided accordingly. "Our new people are classified in level one and they are supplied with basic lawn care information," Moser said. "Level two contains more complex material and is designed for employees with two to eight years experience." Both levels one and two are primarily technician oriented.

Level three is for ChemLawn's key branch management personnel and focuses on sales, management,



Moser

and additional technical information.

The company's corporate office standardizes training for each of its 12 sales regions. "We standardize our training because we

want to achieve certain objectives in each of the three levels," Moser said. "You can go to any region throughout the company and hear basically the same information being taught."

The formal training sessions for technicians takes four days. Class size varies throughout the regions from 15 to 75 students and each region has its own agronomist who is the primary instructor. Agronomists also receive assistance from ChemLawn's technical personnel throughout the country.

In addition to agronomic training students receive supplementary in-branch and pesticide training. They are also supplied with a ChemLawn training manual along with a less technical agronomic workbook they keep with them while in the field.

Secretaries are also required to participate in the training program. "We try to keep our secretaries abreast of new



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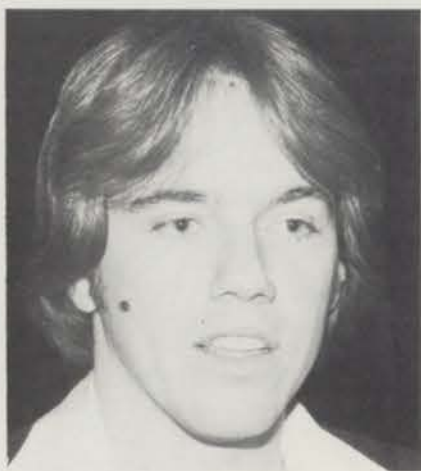


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developments in the field because they have a lot of customer contact by phone," Moser said. "We think it's important for them to have a basic understanding of what we do in terms of lawn care."

James Fothergill, fulfillment manager for Techniturf, Inc., South Berlin, Mass., said his company utilizes a variety of training techniques including turf conferences, in-house and on-the-job training, slides, and descriptive fact sheets. Techniturf was formed in 1956 and grosses about \$600,000 per year.

In past years employees have attended a number of shows including the New Jersey, University of Massachusetts, and Penn State Turf conferences. However, the most widely used training technique at Techniturf has been on-the-job training. "When we hire a new employee we send him out with an experi-



Fothergill

enced operator and they work together for however long it takes to train him sufficiently," Fothergill said. "It may take two or three weeks or it may take half a season."

Most of the training is done on-the-job because lectures and book training are of limited value, according to Fothergill.

"You can only learn so much out of a book, but until you actually see something it isn't going to sink in."

Fothergill added that Techniturf has encountered some difficulty recruiting quality personnel because the industry hasn't developed as quickly in Massachusetts as it has in the Midwest. "The industry hasn't caught on as much here and unfortunately our schools are turning out golf course superintendents rather than lawn service people."

To help alleviate the problems caused by a general lack of lawn care graduates in the New England area, Techniturf has gradually increased its level of training during the past three years. This year's training is going to be the most intensive yet, according to Fothergill.

Like Techniturf, most of the training at Chem-Care Lawn Service of Alabama, Inc., is done on-the-job. Ronnie Zwiebel, 31,

president of Chem-Care, said, "Our company is not large enough to justify a structured classroom-type program. I wouldn't say we don't have a structured training program; we're just not spoon feeding the information to our employees."

Chem-Care, which was formed in 1972 and currently services about 2,500 accounts in Alabama, provides new employees with a training manual and 10 to 15 USDA and state publications. Employees are tested on the information in the manual.

Recruits also take part in field training as well as listen to guest lecturers. "Seminars is too formal a word to describe our training program," Zwiebel said. "We present our new employees with the information and then on a rainy or windy day we'll pull them off to the side and review it with them."

"But as far as one of our men lecturing the new workers in a classroom; we don't do that," Zwiebel added. "Let's be realistic that is taking two men's time. They can study the information on their own and if they have any questions they can come to us."

Regarding on-the-job training, Zwiebel said new employees travel with an experienced

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John Niccolls, 24, 'brushes up' on grub identification by studying one of several slide presentations. Niccolls is a graduate of Muskingum College in New Concord, Ohio. He graduated with a degree in Psychology.

technician for a specified period of time before they are allowed to spray lawns on their own. "They observe the procedure and are allowed to operate the sprayer under the supervision of an experienced technician for several days. After about two weeks they are allowed to go out on their own," he said.

Spring-Green Lawn Care Corp., Naperville, Ill., also utilizes extensive on-the-job training for its recruits. William Fischer, president of the company, said, "The new employee will go out with one of our qualified technicians and get a general feel for the operation. After the trained technician sprays several lawns he gives the spray gun to him and he is trained right on the job."

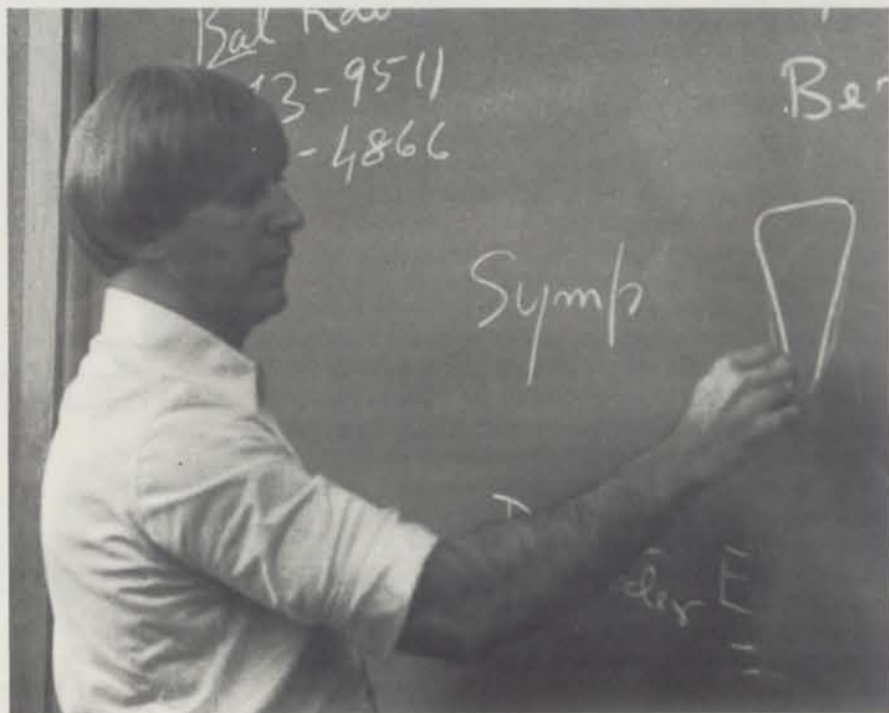
New employees are also tested on information contained

'It wasn't a cakewalk'

When Dr. Roger Funk, vice president of Research And Development for The Davey Tree Expert Co., invited me to take part in the annual lawn care training program I was skeptical. After all, what could be so difficult about learning to spray lawns? I soon discovered that there is a great deal more to proper lawn care than simply spraying a lawn with a liquid fertilizer every four months.

While driving through Kent, Ohio, home of the Davey Co., I noticed that the perennially heavy February snows had blanketed the entire community. From past experience I knew that there were a number of lawns underneath the snow and it was just a matter of time before they reappeared. Yet, while immersed in another rugged Ohio winter I had difficulty focusing my thoughts on the task ahead.

However, within 10 minutes of entering the classroom, the Davey Co. ensured that I, along with the 20 other students, would have little difficulty concentrating on the subject at hand. Students were seated in a traditional classroom setting in front of a central table. Each student was provided with a 177-page tome entitled the "Davey Lawn Care Training Manual," the Bible of the training program.



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in the training manual. Fischer said the training takes about one week and it has been very successful.

Fred Diegtel, vice president of operations for Lawn Doctor, Inc., Matawan, N.J., said his company conducts about 20 training sessions per year. Ten four-day sessions are designed for technicians, five two-day classes are held for sales managers, and five four-day sessions are used to train foremen.

Technician's training focuses on turf management, equipment, and customer handling, along with hands-on field training. Class size varies from eight to 30 students, depending on the time of year, and one staff agronomist travels throughout the various sales regions conducting the classes. Training sessions run from February through October.

Lawn Doctor has about 200 franchise outlets and employs 1,200 persons. Gross sales for 1978 were estimated by the company at more than \$12 million on service to about 90,000 customers.

Leisure Lawn Inc., Dayton, Ohio has, "without question, the finest training program in the country," according to Doug Baker, vice-president and general manager of the company.

Leisure Lawn, which grossed more than \$1 million in 1978, provides a two-week training program for its new employees. The first week involves technical training on the local level while the second week features presentations by distinguished guest lecturers at the home office.

During the first week students are pre-tested so the company can determine each recruit's existing knowledge regarding turf. Virtually all topics relating to turf management are also discussed including weed and insect control, cultural practices, fertilizers, and customer communications. On the final day students view a slide presentation, discuss paperwork procedures, have a general review, and take a final exam.

"The pre-test and final test identifies the amount of knowledge gained and identifies prob-



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My initial impression of the training program as something moderately more challenging than a high school gym class was further dispatched when Funk passed out the class schedule. It called for a grueling 40 hours of coursework within a five day period. I now viewed the program not as a "cakewalk", but as an intellectual boot camp for lawn care technicians. And I desperately hoped that I would not be dishonorably discharged.

Fortunately for myself and the other students in the program Funk is an experienced instructor who possesses a unique gift. He is a teacher in the finest sense of the word who has the ability to take the most complicated material and effectively transmit that information to the layman. "The mistake many universities and companies make is they promote their best instructors out of what they are good at," Funk told LAWN CARE INDUSTRY, "but fortunately I've been able to get promoted and retain my teaching responsibilities." The other instructors who participated in the program were also highly qualified, competent instructors, but they lacked the overall classroom presence of Funk.

The quality of the program was also enhanced by the fact that all instructors were readily accessible throughout the week. Further, a wide variety of teaching aids were available at the training facility including turf specimens, lawn care reference materials, an autotutorial identification board, and

educational slide shows.

During the first day of coursework students appeared apprehensive and associated almost exclusively with trainees from their home offices. However, as the week progressed students began to mix freely and trade information, thus developing an excellent atmosphere for productive learning.

As the day of the final exam approached both I and the other students began to become more apprehensive. There really was no reason for me to be nervous because it didn't matter if I passed or failed the exam. Everyone receives a diploma regardless of their scores). However, there was more pressure on the Davey trainees because a permanent record of their scores are kept at the Kent office and promotions are partially determined by these scores.

It took approximately one hour to complete the exam which contained more than 80 questions. The average test score was 82 percent with a high of 97 percent. Joe Mikutel, 27 was the class valedictorian and he received a commemorative plastic wagon from Funk during lighthearted banquet ceremonies after the exam.

Fortunately for the reputation of both myself and LAWN CARE INDUSTRY I passed the exam, but more importantly I participated in one of the most intensive learning experiences I have ever encountered and enjoyed every minute of it. Well, almost every minute. — Dan Moreland.

lem areas," Baker said. "If they have a problem area they go back into session until they learn it."

An important part of the initial week's training also involves role playing. Recruits are subjected to hypothetical situations whereby they must interact with a customer and satisfactorily deal with a typical lawn care problem. Baker said this educational tool helps prospective technicians better cope with clients once they enter the real market.

"We want them (technicians) to gain confidence in themselves while they are here so they can better communicate with the customer in the field," he said. "We really put the heat on them here because we would rather have them make mistakes now



John Linkhart, vice-president of Perf-A-Lawn Corp., New Carlisle, Ohio, says, "Training is important because the technician has to have a general knowledge of what he is doing or he is going to cause a lot of headaches."

than when they are out on the lawns."

During the second week of training recruits listen to guest lectures by some of the leading figures in the lawn care field. Speakers for this year's program included Dr. Harry D. Niemczyk, a professor at the Ohio Agricultural Research and Development Center, Wooster, Ohio, Dr. David P. Martin, an extension agronomist at Ohio State Univer-

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cause the technician has to have a general knowledge of what he is doing or he is going to cause a lot of headaches," Linkhart added. "The worst thing in the world for a lawn care company to do is give bad advice to a customer and we're trying to establish ourselves as the ones who only give good advice."

Perf-A-Lawn, which currently has 16 franchises and grossed more than \$3 million in 1978, initiated its structured training program in 1976. Previously they conducted only limited training, "but when you've got more than 100 employees you've got to make sure everyone is trained," Linkhart said.

He added that one of the more difficult training problems is making the material readily understandable for recruits, many of which have no turf background. "The material gets pretty complicated sometimes and you



Art Ramirez admires the Lawn Sciences diploma presented to every technician who takes part in the week-long training session.

have to bring it down to a layman's level," Linkhart said. "Fortunately, our instructors are very good at simplifying the material."

Surprisingly, students at the Davey Lawnscape training program had little difficulty understanding the wealth of material presented to them during class sessions. Alberto Ramos, 26, said, "It's not really that difficult. It's just a lot of information at one time. If you had it over an entire semester it would be easier, but it really isn't overly difficult."

Dan Yoho, 27, added, "I haven't had any forced learning since I was in high school in 1969 so I think it's a little more difficult for me than it is for the other guys, but I'm still really enjoying the program."

The overwhelming reaction of those contacted by LAWN CARE INDUSTRY regarding training is that most programs are beneficial and will continue to



Dr. Balakrishna Rao, plant pathologist at the Davey Horticultural Institute.

develop as the industry becomes more sophisticated. It's simply a matter of survival. "It's a competitive field and we're (Davey) trying to get our technicians to do a better job than another company's technicians," Rao said. "And we can only get them to do a better job through education."

LIQUID/DRY *From page 9*

- Repeated, frequent applications are necessary to provide ample nutrient supply. Generally, applications every one to two weeks are required.

- Since the leaf tissues are the absorption sites, nutrient uptake will be adversely affected by anything which reduces leaf area or physiological health of the leaves. Close-cut turfs and turf exhibiting nutrient deficiencies are less effective nutrient absorbers than high-cut, healthy grasses. In many situations, a spreader or sticker aids in good coverage of the leaf.

- Once on the leaves, nutrients enter the plant through stomata and to some extent through the cuticle. For maximum uptake, the leaf environment must be moist and the stomata open. Hot temperatures and low humidity can decrease uptake by inducing stomatal closure and drying out the leaf surfaces before uptake can occur. Such conditions also promote volatilization losses of nutrients.

- Nutrients are not absorbed at the same rate by leaf tissues. For example, nitrogen is absorbed much more rapidly than phosphorus, which can result in nutrient imbalances.


Powdered formulation. In recent years ureaformaldehyde has been available in a powdered formulation which can be applied through a spray system. Many lawn care companies have had success with this material since it has low foliar burn, does not leach, and has a longer residual than water-soluble carriers (whether applied as a granular or liquid materials).

Dr. Carrow said that very little research has been conducted on powdered ureaformaldehyde, however, much research has been conducted on granular ureaformaldehyde. Since the powdered ureaformaldehyde has a much greater surface area, it would not be expected to have as long a soil residual as granular ureaformaldehyde. Thus, turf response to the granular and powdered formulations may not be identical, he said.

High Pressure Power washer

Discover the power of 1000 lbs. of pressure. Broyhill's mobile high-performance washers are the ideal all-purpose cleaners—at home, on the farm or for industrial use. Simple to operate—just hook-up to your garden hose. Rotate nozzle to change soap and rinse cycles.

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PRODUCTS

Commercial/industrial irrigation controller

The wide range of programs and other functions that can be handled by a series of computerized controllers for commercial and industrial turf/landscaping irrigation applications is highlighted in a new data sheet issued by Johns-Mansville. Ac-

curate station timing and a selection of programs or schedules to suit particular watering needs are a few of the assorted timing, scheduling and reliability features made possible by the controller's use of solid-state microprocessor technology. The data sheet (IR-181) is free.

Circle 202 on free information card

Perennial ryegrass brochure is available

A four-color brochure detailing the development, adaptability, seeding rates, fertilization requirements and other pertinent information on Derby turf-type perennial ryegrass is now available from International Seeds, Inc., according to product manager Harry Stalford. The brochure also contains recent test data comparing Derby's performance against other well-known turf-type ryegrasses both in permanent turf and as a win-

ter grass in the South.

Circle 201 on free information card

Suspension aid for liquid formulations

Attaflow FL is a free-flowing liquid thickening and suspending aid designed for liquid flowable formulations. It is also useful in preparing flowable pesticides and fungicides. Detailed information on the product is available from Engelhard Minerals and Chemicals Corporation.

Circle 205 on free information card

COST CUTTINGS

Computers beneficial for 1,000 accounts



In the spring of 1977, Tom Brune, owner of Atwood Lawn Spray, Sterling Heights, Mich., suddenly found his company paying very high prices for fertilizer, due in part to the international petroleum crisis. At the time, he had about 800 accounts, and with that many customers to serve, he was rapidly outgrowing his accounting system, routing methods and general office procedures.

"It was clear that in view of the profit squeeze and the continued growth in business, we had not only to operate more efficiently, but we also had to get organized," he told LAWN CARE INDUSTRY recently.

"At the same time, we had received notice of federal and state regulations on restricted use products," he said. "While it was not definitely known which products were to be placed on the restricted list, it was perfectly clear that an accurate record-keeping system would be required. I dreaded the thought that our spray men would have to do any more paperwork on the job."

From the point of view of profits, it was plain to Brune that his company could not increase customer prices in direct proportion to increased product costs. Not with labor and other costs going up as well. The pressure was on to operate more efficiently to reduce the cost of getting the work done.

"The idea of a computer seemed to be a good possibility here," he said.

"From the point of getting organized, we knew that our office procedures needed an overhauling," he said. "We weren't exactly working out of a shoebox on a truck, but we did feel that new systems should be initiated that would absorb growth more easily. Conceivably, systems could be devised that would allow our business to grow considerably with no problems."

Brune decided that when he looked at his operation, that the money was made when the lawns were sprayed, when a customer was billed. The more time a driver actually spent spraying, the more efficient his operation might be. The problem was, Brune said, that the driver had too much paperwork to do. He had a route book to work in, and he had an invoice to write up. And what about the prospect of having to calculate the amount of product put down on the job? Some of the items were repetitious and took time over and above the spraying.

"The pay-off was that when the office copy of the invoice came in, who could read it?" Brune said. "This was an extremely aggravating item, poor penmanship. But if the man is in a hurry, what else can you expect?"

Another problem that Brune had to face all along was the overdue account. Naturally, he was unwilling to spray a job if the previous job had not been paid for. But often the driver had no way of knowing which accounts were current and which ones were overdue.

"I came up with the idea that somehow a system could be devised where each customer had a computer card that we could stack in the order that his job should be done in the route," he said. "When it came time to do a route, all we would have to do was run these cards through a machine and it would print invoices in the order that we wanted them — not alphabetically. Pre-printing would save considerable time on the job."

Brune had a long meeting with a representative from Burroughs Corp., a computer manufacturer based in Detroit. He then purchased a used Burroughs L-5 computer.

From the beginning, it was felt that the installation of a computer would delay, for a time, the need to hire another girl in the office. When he began using the machine, he had one office girl and 1,200 accounts. He now services 3,000 accounts with the same girl.

Brune's program starts with a ledger card for each customer. In order to combine a routing system with accounts receivable, he does not file the ledger cards alphabetically, but rather according to route areas and in the sequence the driver should do each job.

Having the ledger card as the master in his routing system enables Brune to pre-print the invoices for the driver, in the order that he is to do the jobs. All the driver has to do is fill in his initials and mark the mode of payment and time of day. When the driver is ready to start in the morning, he is simply handed a stack of pre-printed invoices. The invoices have all the pertinent information transferred to them from the office master ledger cards. This includes street directions to the job.

"Let's assume then," Brune said, "that a driver has gone out with his pre-printed invoices for the day. He does the job and returns to the office. Next morning, the secretary goes to the machine, credits the accounts that were paid at the time of the application. She also removes a little metal tab from the top edge of the ledger card. That little tab is our signal that a customer owes us money. When removed, we know the customer is paid in full, up-to-date."

Brune allows only 10 days for payment of all accounts. His master route board tells him when any given route is 10 days old. At 15 days, he does a summary of the route to see how many customers are overdue and what they owe. As the summary is printed, by simply running the ledger cards that still have signal tabs on them, the machine is also printing a four-part overdue notice to each individual.

The customer is then sent the top copy of the four-part notice. The other copies of the notice are set aside. Additional and stronger reminders will be mailed at 30-day intervals if needed. Brune said that 50 percent of the overdues respond immediately to the first notice. That usually leaves about five to 10 percent of the customers in a route to deal with on subsequent notices. The additional notices are already printed, though, and have only to be dropped in the mail, if they are needed at all.

"Since going to this system through the computer, we have reduced our deadbeat accounts considerably," Brune said. "The amount we have to write off annually does not exceed one-tenth of one percent of gross sales, and I can live with that. And we are able to collect this amount strictly with in-house procedures. The secret, we feel, is prompt attention to the overdue account itself. Don't let it get stale. With the computer, we can do an account summary of say, 100 accounts, in a matter of minutes."

On a daily basis, Brune's computer time is divided three ways:

- Printing of invoices for the next day.
- Posting of payments brought in by the drivers, as well as mailed-in payments. This might mean a hundred or so items to be posted.
- There may be a group of account summaries to do along with the overdue notices to print. These latter two items are printed simultaneously. Account summaries are not done daily, more likely they would be done once or twice a week.

What else does Brune accomplish with the help of the computer? On an annual basis, he uses the machine to print two labels for each customer. These labels are used to mail out a three-fold renewal notice. One label goes on the outside of the mailer; the other goes on the return portion so that he has the identification he needs to process the account in the office.

"It used to take us several weeks to get our renewal mailings into the mail," he said. "We can do it now in a couple of days."

He said that there are many other functions a lawn care businessman could run through the computer. Payroll might be considered. So might the general ledger and accounts payable. A company could include inventory control. Brune does not include these in his system as of yet, but might when his business becomes larger.

The initial cost of the Burroughs L-5 was \$10,000. Also, it costs about \$1,300 per year for the service contract. Invoices run about \$42 per 1,000 self-carboned.

LAWN CARE INDUSTRY READER SERVICE CARD— APRIL 1979.(expires in 90 days)

Use this prepaid reader service card to get additional information on products or services mentioned in this issue (Card must be completed before processing)

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 - Manager
 - Technician
 - Other (specify) _____
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 - 500-1,000
 - 1,001-5,000
 - 5,001-10,000
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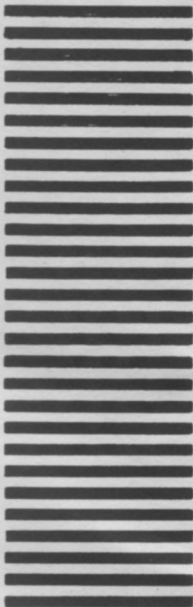




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 Other (specify) _____

3. Is your business:
 Independent
 Chain
 Franchise
 Other (specify) _____

5. Number of accounts:
 Less than 500
 500-1,000
 1,001-5,000
 5,001-10,000
 10,001-25,000
 25,000 or more

- Application
 Liquid
 Granular
 Both

4. Title:
 President
 Owner
 Manager
 Technician
 Other (specify) _____

6. Estimated annual sales volume:
 Less than \$50,000
 \$50,001-100,000
 \$100,001-250,000
 \$250,001-500,000
 \$500,001-1,000,000
 \$1,000,000 or more

2. Is your business location:
 Headquarters
 Branch office

D Signature _____ Date _____

72-inch mower features liquid-cooled engine

A new model featuring a liquid-cooled industrial engine has been added to the Hustler line of commercial mowers for the lawn care businessman built by Excel Industries, Inc. Model



295 retains all the maneuvering agility that has characterized that firm's mowers since their introduction 14 years ago. The significant difference between the new model 295 and the acre-proven 285 is its engine. Unlike automotive-type engines commonly installed on mowers, this two-cylinder, long-stroke Continental engine develops high torque at lower revolutions per minute, which adds to engine life and delivers superior performance. Dual hydrostats move each drive wheel independently, with twin hand levers that control both the speed and direction of movement, including the start and stop as well as reverse. The big 72-inch mower can perform intricate turns with ease, the company said.

Circle 209 on free information card

Smooth-cutting utility mower

The Agricultural Machinery Division of FMC Corp. has introduced the Sidewinder SC-60,



a smooth-cutting utility mower, as the newest addition to its line of rear-mounted rotary cutters. The unit was designed for the lawn care businessman who maintains large lawn acreages. The unit is equipped with three updraft blades with an inch-and-a-half overlap that allow for even, controlled cut and a handsome lawn finish.

Circle 206 on free information card

Drift control sprayer

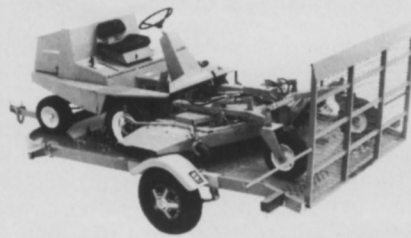
Tests by Kleco, Inc. show that lawn care businessmen can save up to 50 percent in pesticide costs because there is no waste due to blow-off under high wind conditions, with its sprayer. Photos in the company's literature show results eight days after a herbicide was applied in 14-mile-per-hour winds. A clearly defined path is evident where the sprayer passed and there is no evidence of chemical drift. The unit is available in six- and eight-

foot center sections. Pairs of fold-up extension wings are available in four-, six-, and eight-foot widths to extend coverage in various combinations up to 24 feet. Sprayer comes with a three-point hitch. Unit may be pulled by conventional tractors. Five colors are available to match equipment of major manufacturers.

Circle 207 on free information card

Utility trailer hauls up to 72-inch mower and larger vehicles

For the landscape maintenance businessman handling commercial/industrial accounts, Snowco division of Beatrice Foods Co. has revamped its line of utility trailer with loading ramps to make them more adaptable to a wider variety of uses. The line now includes a new tan-



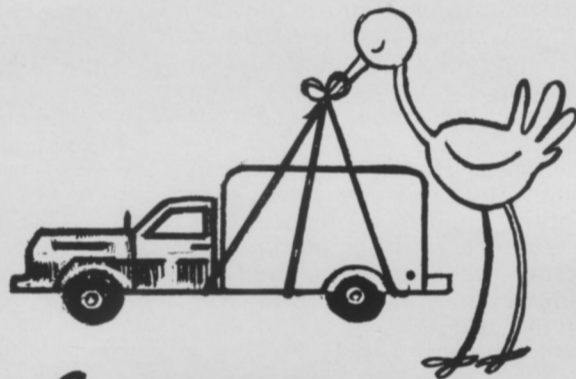
dem axle model with a capacity of 2,100 pounds. Deck dimensions are 54 inches by 199 inches. A redesigned single axle model with a capacity of 2,100 pounds has deck dimensions of 72 inches by 130 inches and will haul a 72-inch rotary mower. A smaller single axle trailer has a capacity of 1,150 pounds with deck dimensions of 48 inches by 96 inches. All have perforated steel decks.

Circle 208 on free information card

Chemical induction system

The new "Captain Crunch" chemical induction system from Captain Industries eliminates the risk of handling chemicals for the lawn care businessman. Stationary models and mobile units for use on spray trucks are available. A hydraulic cylinder pushes five-gallon pesticide containers onto stainless steel knives. The knife section cuts the bottom of the container, allowing contents to fall into a stainless steel holding tank. The operator then pulls a lever to pressure-rinse the container. The hydraulic cylinder then crushes the container to one-fifth its original size. The finished product is clean and compacted, and it can be recycled instead of discarded. Detailed information is available.

Circle 204 on free information card



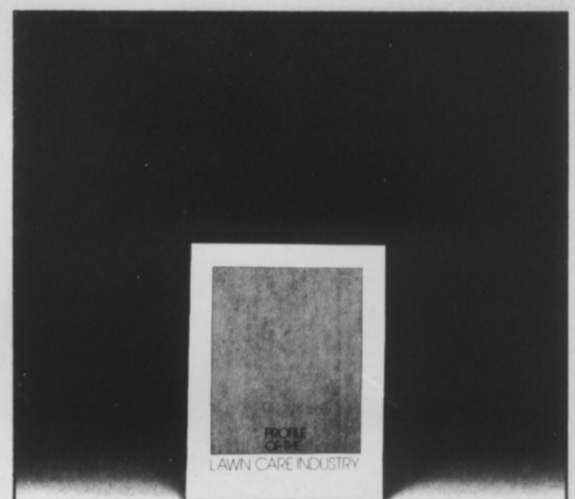
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Circle 134 on free information card



on the lawn care service industry by Lawn Care Industry research department. Profiles types of businesses comprised in the market universe; types of customer services performed; equipment inventories; buying habits and more. \$2.50 per copy.

Please send me _____ reports at \$2.50 per copy.

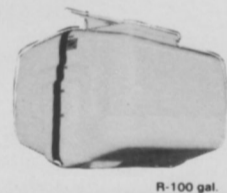
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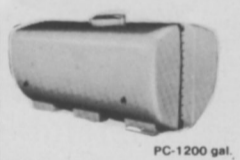
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R-100 gal.

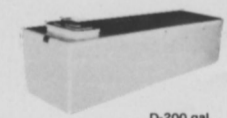
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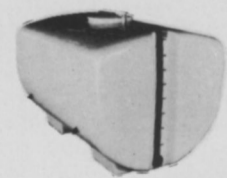
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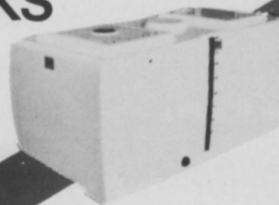


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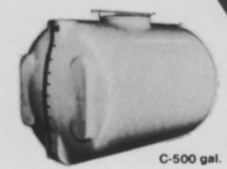


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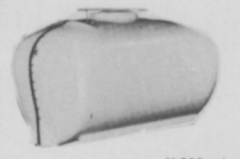
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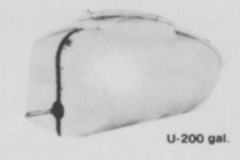
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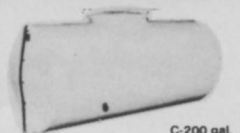
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U-600 gal.



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C-200 gal.

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BEHIND THIS ISSUE



Around the office, we call him Smiling Dan, but this month assistant editor Dan Moreland has some extra things to smile about.

He wrote two major features for this month's issue of **LAWN CARE INDUSTRY**. First he interviewed a number of lawn care businessmen in the Bay area of California, San Francisco, Oakland and Santa Clara County to the south. See his **MARKETPLACE**, beginning on page 22.

Second, he wrote *Lawn Care Training: How the Majors Do It*, beginning on page 19. He interviewed the people who run the training programs for some of the more progressive lawn care companies in the country, and even spent a week going through the Davey Lawnscape training program in Kent, Ohio.

We'll get to the main reason he's smiling after we tell you a bit about some of the other features in this month's **LAWN CARE INDUSTRY**.

Next time you are asked to give a speech at a garden club or local Kiwanis meeting, take along a copy of Dr. Robert Schery's *Lawns: A Concept Proven*, beginning on page 9, as background for your talk. He's the director of The Lawn Institute in Marysville, Ohio.

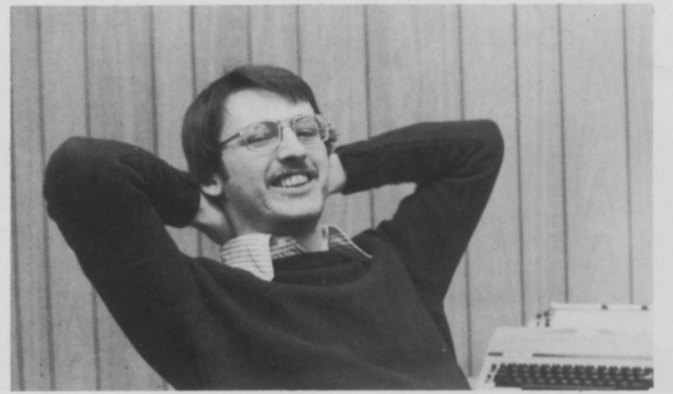
Government regulation. It's in the news for lawn care businessmen in Maryland and Indiana this month, both stories beginning on page 1.

In Indiana, lawn care businessmen are now required to comply with that state's Fertilizer Law of 1954, and many of them feel it is going to add substantially to their paperwork, perhaps even forcing some of the smaller companies out of business.

In Maryland, the state Home Improvement Commission at present requires any lawn care businessmen who applies seed to be licensed by that body, and be subject to fines and other penalties if they do not meet certain standards. Many lawn care businessmen in that state say this kind of licensing is unnecessary.

All this is not to say that state regulation of the lawn care industry is necessarily bad. In fact, state officials we talked to said their rulings came about in part because of consumer complaints against lawn care businessmen in both states.

But if the lawn care industry is going to be regulated, all lawn care businessmen should know the background and have input on any legislation put



Assistant editor Moreland: Why is he smiling?

forth in their state. You should be in contact with your state agriculture, pesticide and other appropriate agencies for information that applies to your industry.

So why is Dan smiling? As we said, he went through the same training program that all Davey Lawnscape technicians go through before they get out on lawns. At the end of the week-long program, he took the same test that all Davey employees take, dealing with identification and control of pests, fertilizers, equipment and all facets of the lawn care industry. After staying up the night before with a cold in a nearby hotel room for four extra hours studying his notes, he received a grade of 88 out of a possible 100, one of the higher scores in his class.

The next thing we know, he's going to be starting his own lawn care business on us.

Bob Early

In the Houston **MARKETPLACE** feature in the February issue, an incorrect company name was reported. Green Up, Inc. is the correct name of the company owned by Harold R. Zick and James H. Eckhardt.

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When answering ads where box number only is given, please address as follows: Box number, c/o **LAWN CARE INDUSTRY**, Dorothy Lowe, Box 6951 Cleveland, Ohio 44101.
Rates: 35¢ a word for line ads, 65¢ a word for display ads. Box numbers add \$1 for mailing. All classified ads must be received by the publisher before the 10th of the month preceding publication and be accompanied by cash or money order covering full payment.
Mail ad copy to Dorothy Lowe, **LAWN CARE INDUSTRY**, Box 6951, Cleveland, Ohio 44101.

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LAWN CARE — Landscaping company. Seeking a qualified landscape service. Applications and landscape service. Ground floor, private owned company, salary plus extras. Send resume to: Pro Green Inc., P.O. Box 143, New Castle, Ind. 47362.

LAWN SPRAYING AND HYDRO-SEEDING COMPANY needs service manager and foremans. Starting in April. Send resume to C & H Spraying Co., 4720 Hatchery Road, Drayton Plains, Michigan 48020.

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Arnold Palmer discusses his overseeding program
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